

IMPACTS FOR **D8** (through next 5 days)

Winds – **Medium**

Storm Surge – **Medium**

Rainfall/Flash Flooding – **Medium**

Tornadoes – **Medium**

Waves - **High**

IMPACTS FOR **D7** (through next 5 days)

Winds – **High**

Storm Surge – **Extreme**

Rainfall/Flash Flooding – **Extreme**

Tornadoes – **Medium**

Waves - **High**

TROPICAL STORM DEBBY BRIEFING

4:00 PM CDT/5:00 PM EDT

Sunday, August 4, 2024

Prepared by:

Amanda Reinhart

*Tropical Analysis and Forecast Branch
NWS National Hurricane Center*



NHC_TAFB

www.nhc.noaa.gov

Changes since Last Briefing

Tropical Storm Debby



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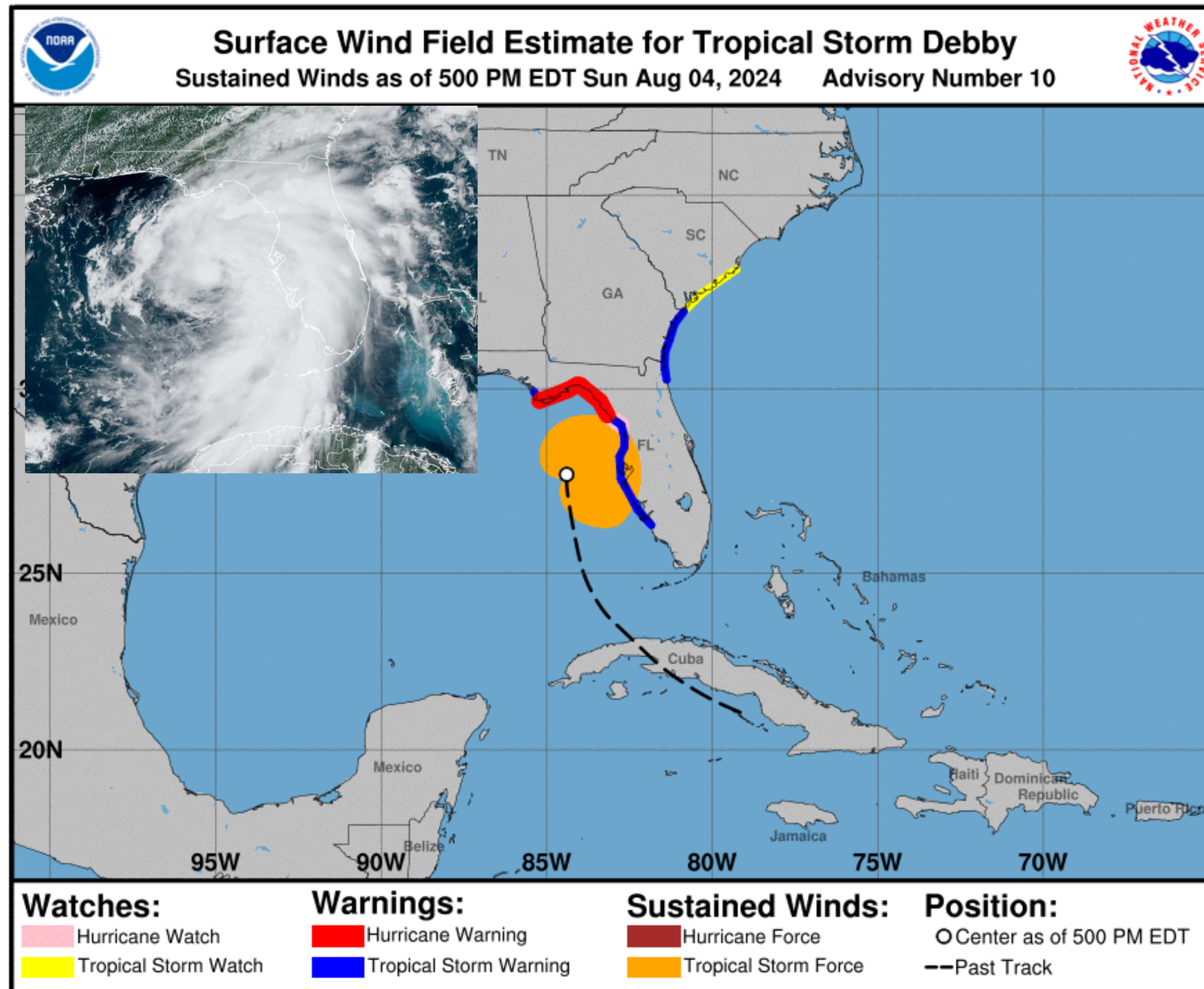
- Tropical Storm Warning issued for coastal Georgia and northeast Florida (Ponte Verde Beach to the Savannah River)
- Confidence continues to increase for historic rainfall over coastal Georgia and South Carolina, causing catastrophic flooding

Situation Overview

Tropical Storm Debby



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**...DEBBY EXPECTED TO BECOME A HURRICANE
TONIGHT AND MAKE LANDFALL IN THE
FLORIDA BIG BEND AREA ON MONDAY...**

**...WILL BRING A MAJOR FLOOD THREAT TO THE
SOUTHEASTERN UNITED STATES...**

Summary of 500 PM EDT Information

Location...27.7N 84.4W

About 105 nm W of Tampa Florida

About 110 nm SW of Cedar Key Florida

Maximum Sustained Winds...55 kt

Present movement...N at 10 kt

Peak Seas:

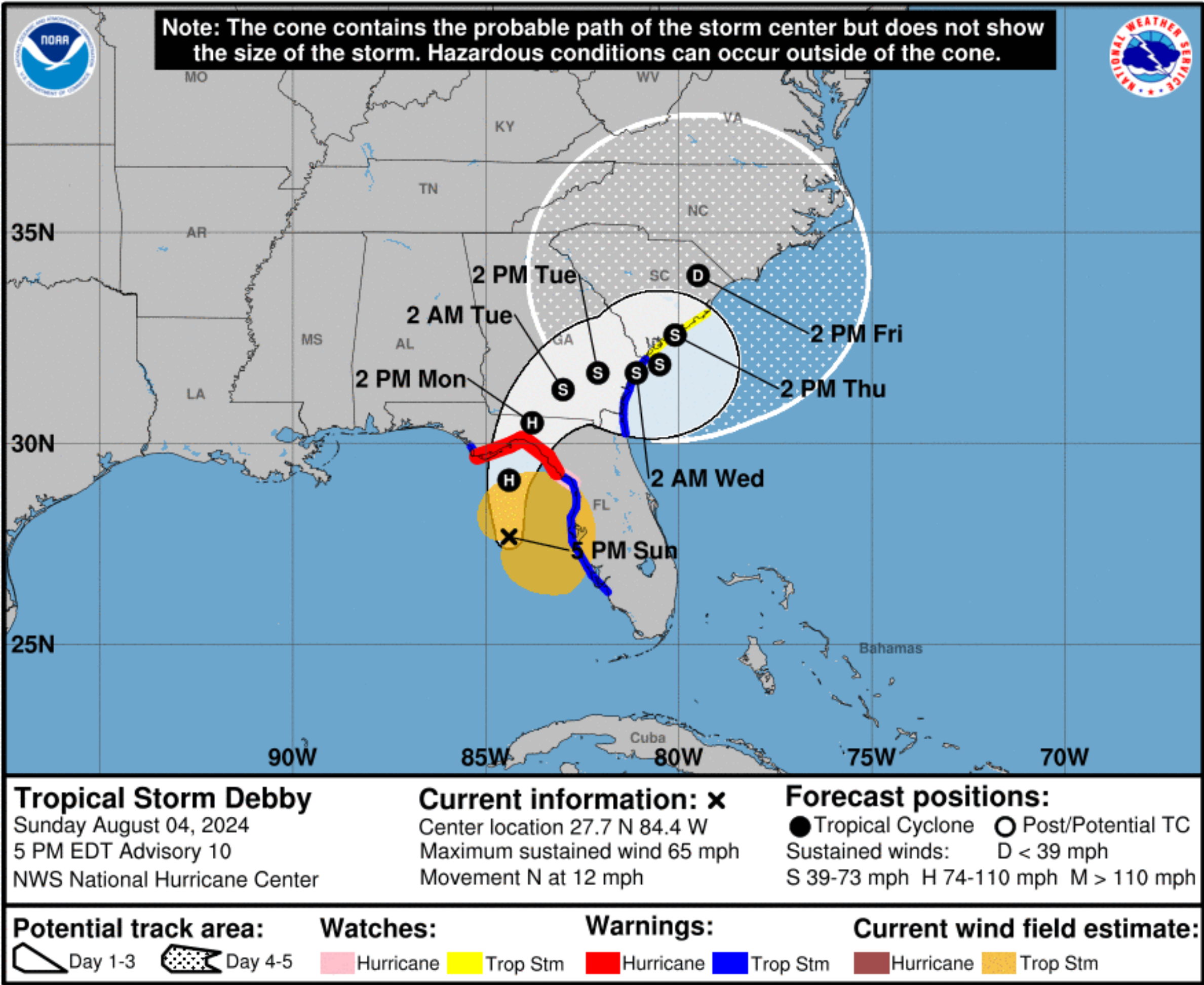
12 ft seas...120NE 150SE 60SW 60NW.

Forecast Information

Tropical Storm Debby



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- Tropical Storm Debby is moving northward across the eastern Gulf of Mexico
- High confidence that Debby will make landfall across the Florida Big Bend by mid-day Monday
- On the forecast track, Debby is forecast to move over favorable conditions and will strengthen to a Category 1 hurricane
 - There is the possibility of Debby strengthening into a Category 2 hurricane
- Uncertainty continues in the forecast once Debby moves over Georgia and South Carolina – forecast still continues to show Debby moving over water
 - If Debby moves over water, this will allow for re-intensification – but how much is *highly uncertain*
 - If Debby stays over land, expect the system to continue weakening
- High confidence that Debby will move slowly over the southeastern US – this will cause potentially historic rainfall with some areas receiving **catastrophic** flooding
- 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

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

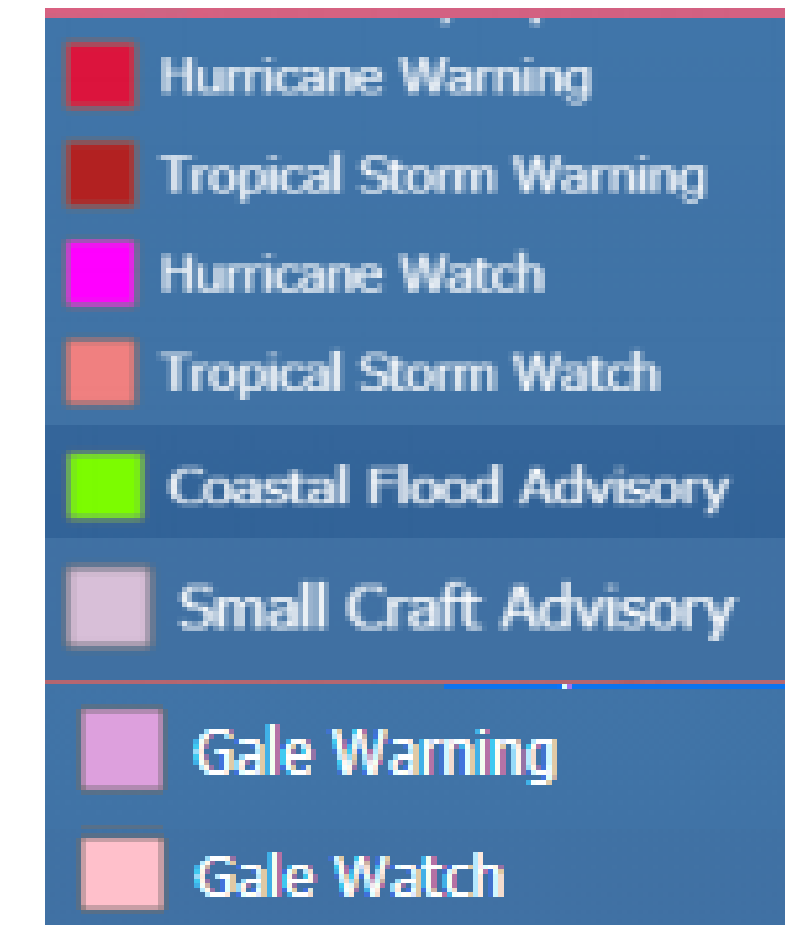
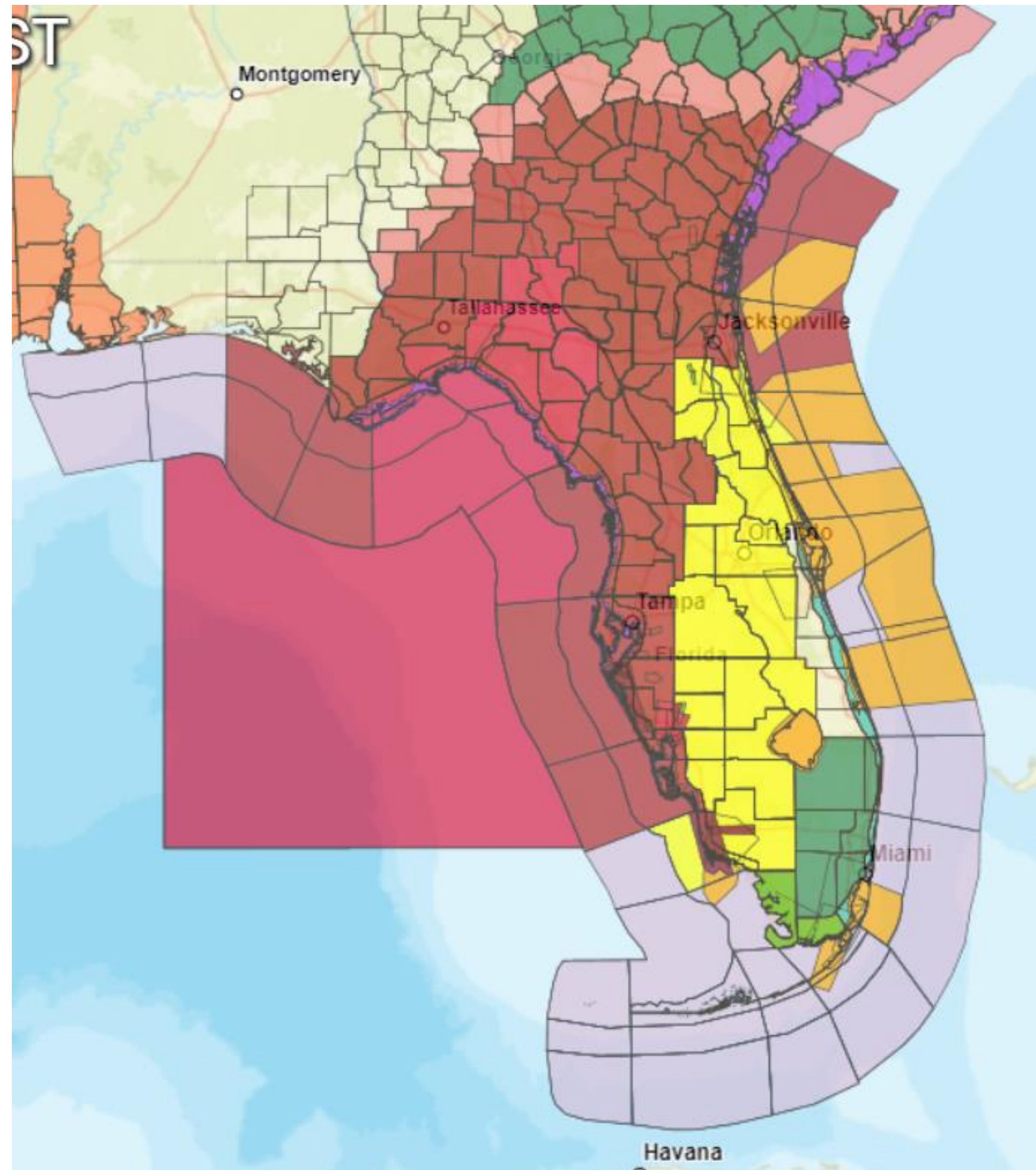
** Swaths are calculated using average track errors and actual track may be well inside, or possibly outside the potential track areas indicated.

Hazards Map

Tropical Storm Debby



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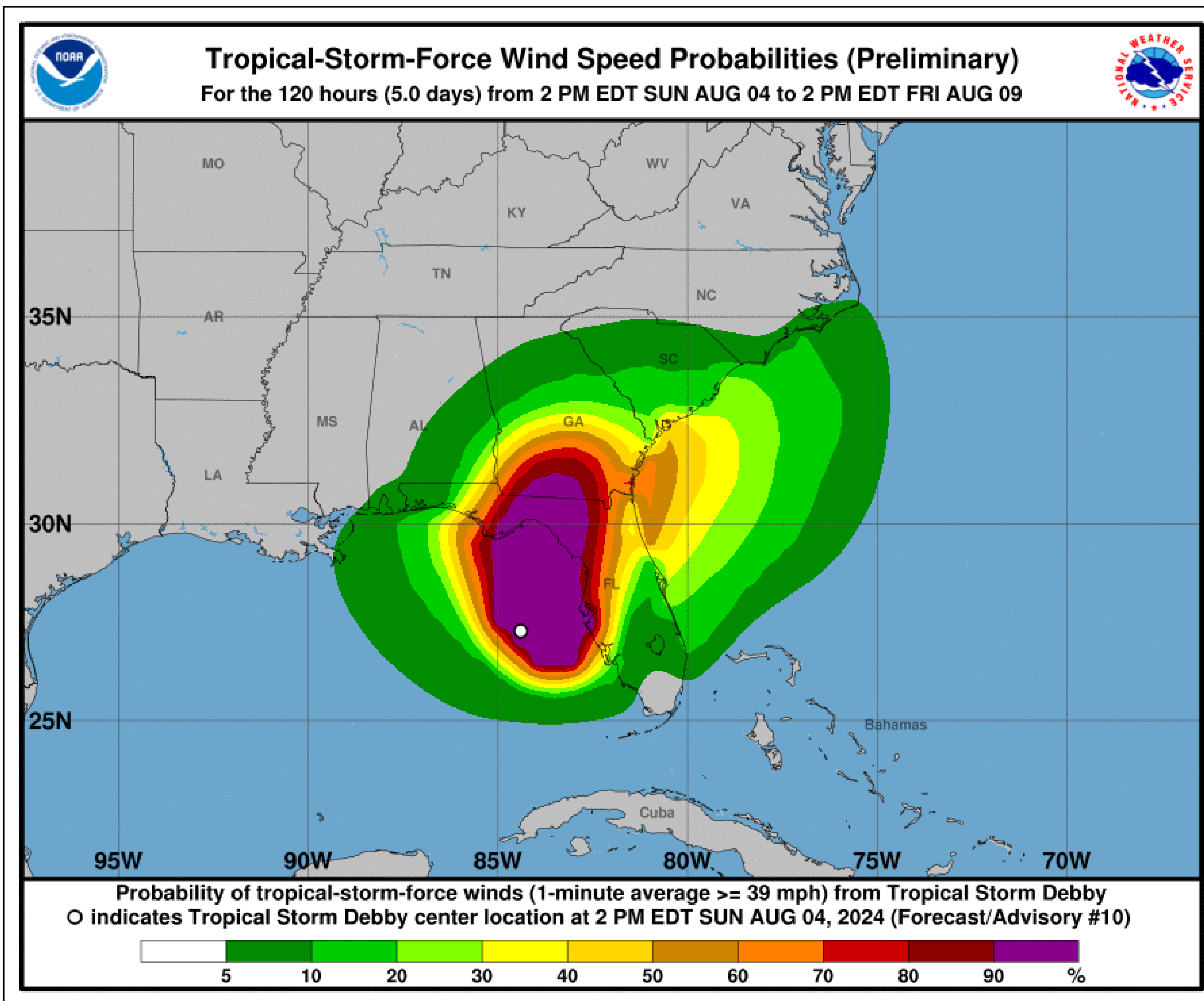


T.S. Wind Speed Probabilities

Tropical Storm Debby



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- **KEY WEST 5%**
- **TAMPA 85%**
- **TALLAHASSEE 95%**
- **CEDAR KEY FL 95%**
- **APALACHICOLA 95%**
- **ST MARKS 100%**
- **PANAMA CITY 75%**
- **JACKSONVILLE 55%**
- **SAVANNAH 30%**
- **BEAUFORT 50%**
- **CHARLESTON 35%**

-Green indicates probabilities have gone down since last briefing

-Red indicates probabilities have gone up since last briefing

-Black indicates probabilities remain the same

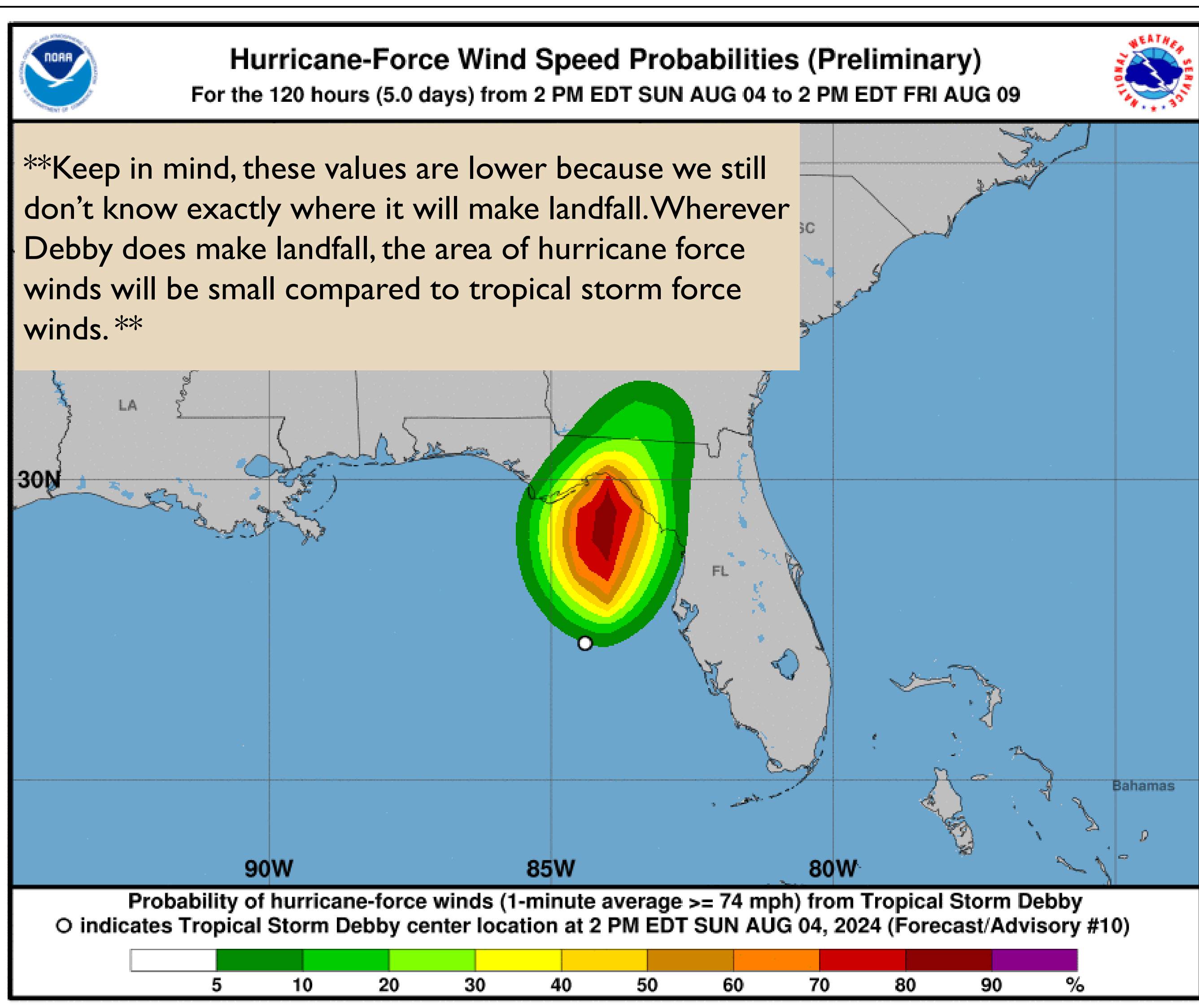
- Probabilities of sustained tropical storm force winds (34 kt to 63 kt) over the next 5 days, based off this cyclone's wind radii and track.
- Clear or dark green are the lowest chances of 0-30%.
- Yellow to orange is 31-70%
- Red through purple are the highest probabilities of 71%-100%
- See the color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

Hurricane Wind Speed Probabilities

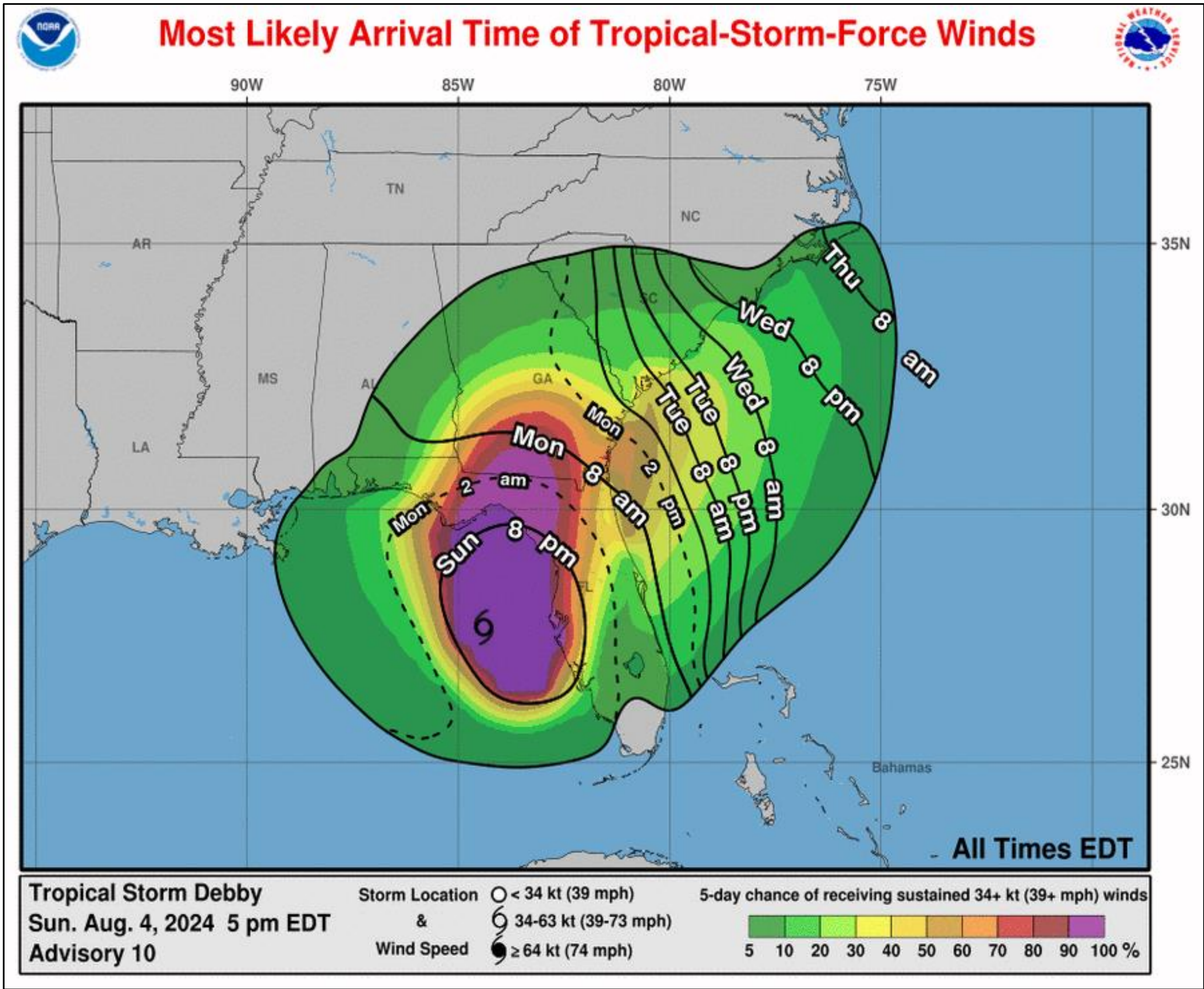
Tropical Storm Debby



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- **TALLAHASSEE 10%**
 - **CEDAR KEY FL 15%**
 - **APALACHICOLA 25%**
 - **ST MARKS 20%**
 - **PANAMA CITY 5%**
- Probabilities of sustained hurricane force winds (64 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.



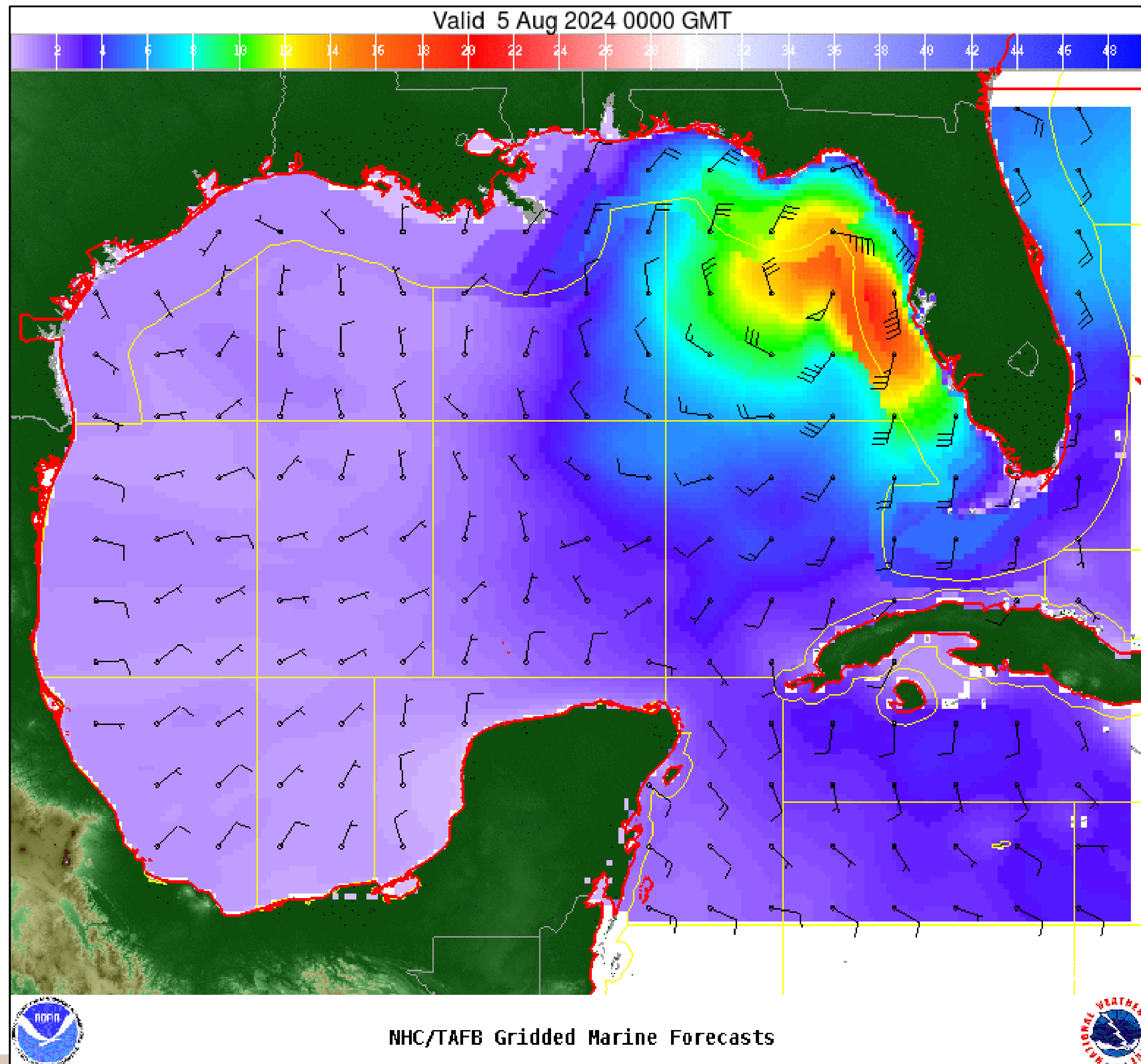
- Tampa Bay: Ongoing
- Florida Big Bend: Tonight
- Florida Panhandle: Tonight
- Jacksonville: Monday morning
- South Carolina: Monday afternoon
- The most likely time of arrival of Tropical Storm Force Winds (34kt to 63 kt) for this cyclone based off the current track and wind radii.
- Clear or dark 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

Sunday, August 4 at 7pm CDT/8pm EDT

Peak Winds: 60 kt

Peak Seas: 25 ft

- Wave heights are in feet



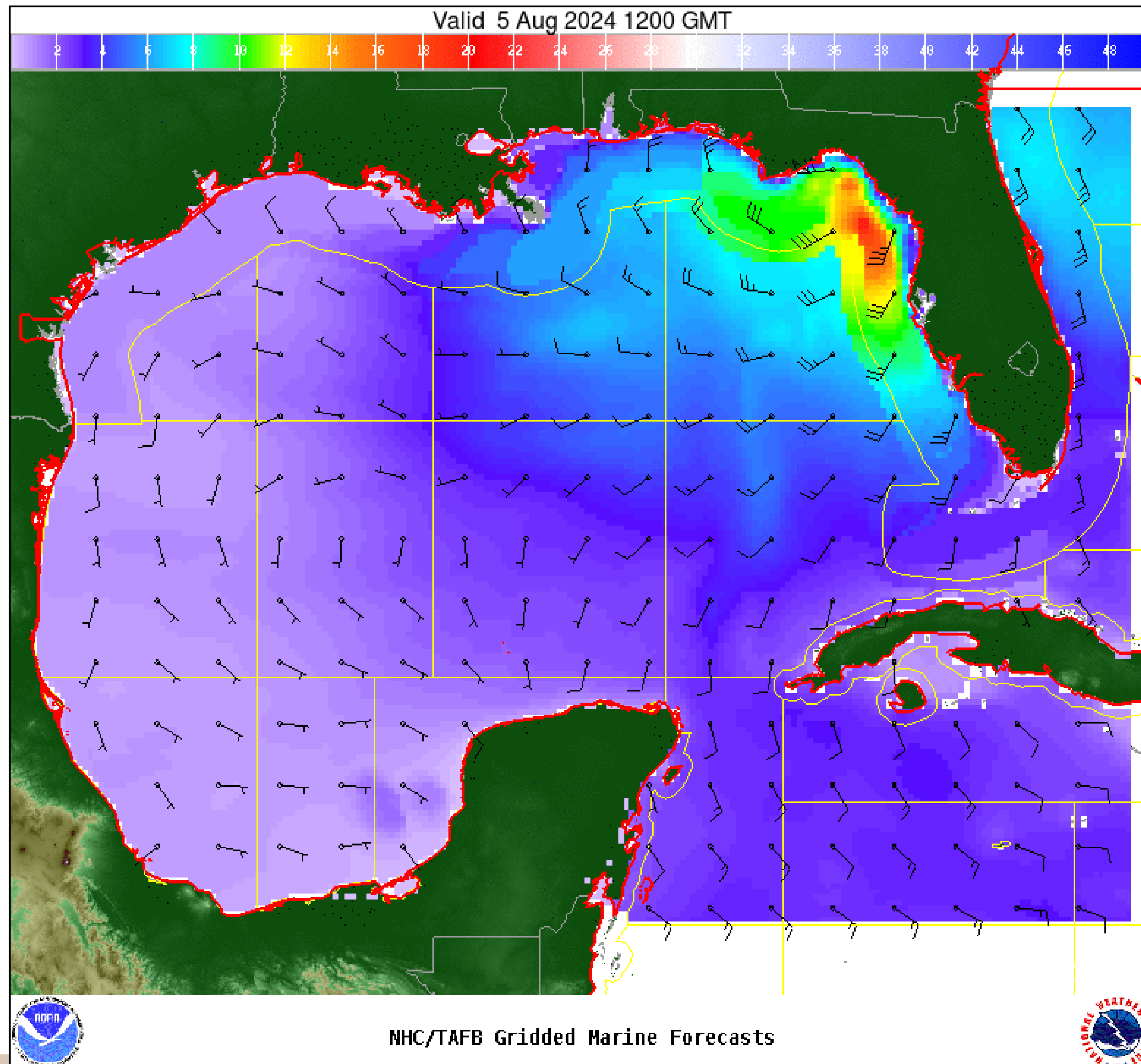
Significant Wave Height (ft)

Wind And Waves

Tropical Storm Debby



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24 Hour Forecast

Monday, August 5 at 7am CDT/8am EDT

Peak Winds: 70 kt

Peak Seas: 23 ft

- Wave heights are in feet



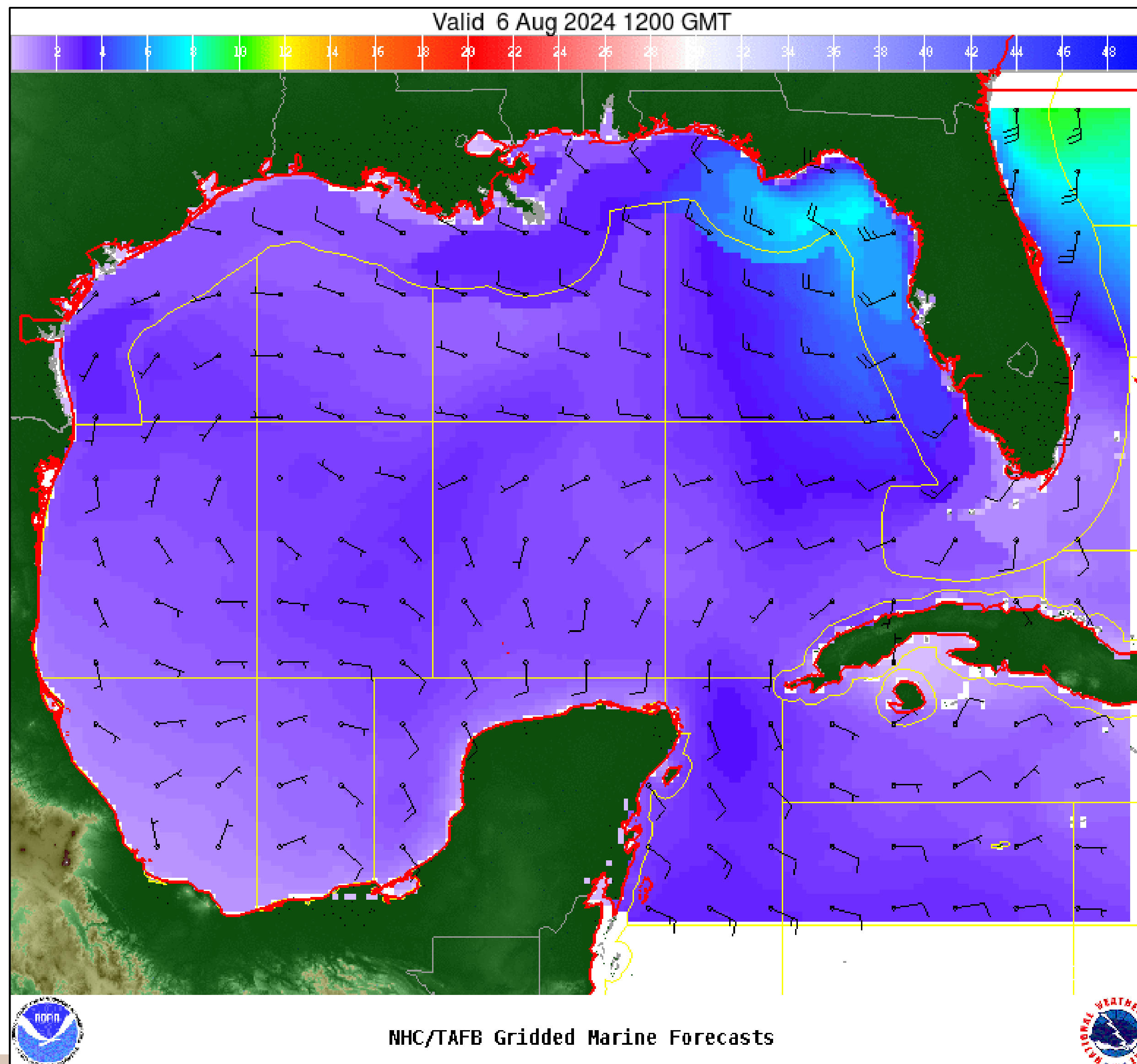
Significant Wave Height (ft)

Wind And Waves

Tropical Storm Debby



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48 Hour Forecast

Tuesday, August 6 at 7am CDT/8am EDT

Peak Winds: 25 kt

Peak Seas: 10 ft

■ Wave heights are in feet



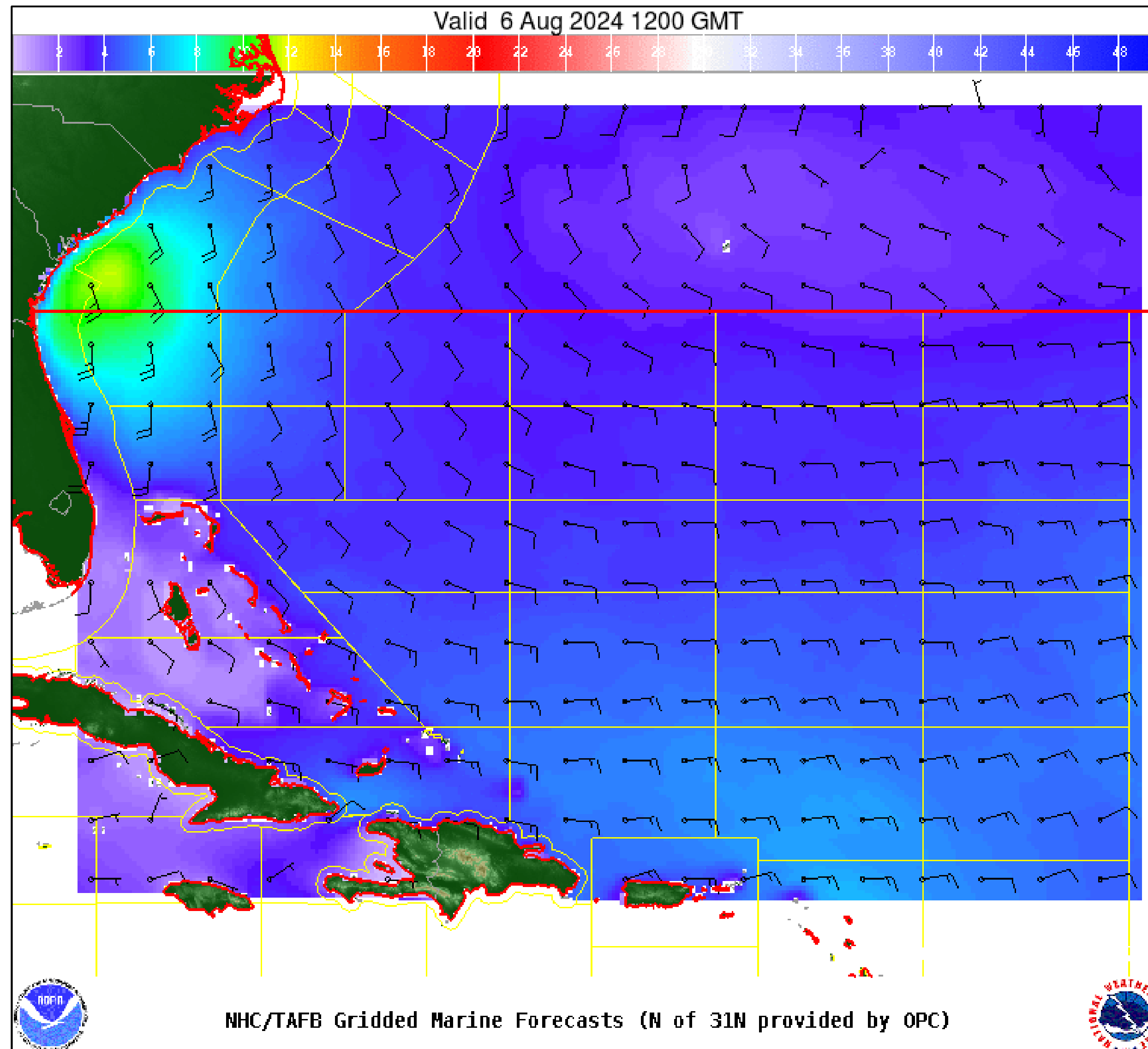
Significant Wave Height (ft)

Wind And Waves

Tropical Storm Debby



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48 Hour Forecast

Tuesday, August 6 at 8am EDT

Peak Winds: 30 kt

Peak Seas: 12 ft

- Wave heights are in feet



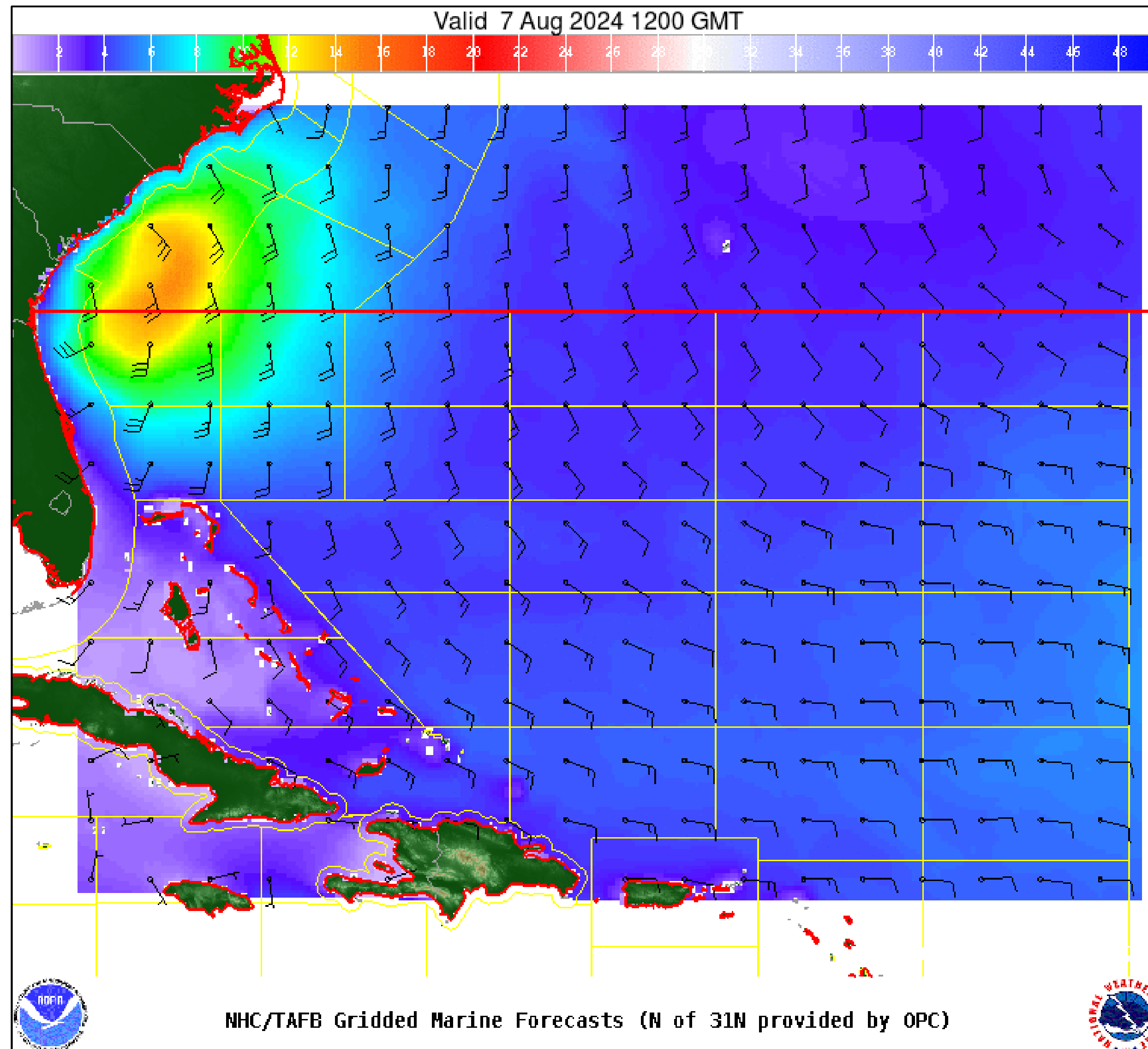
Significant Wave Height (ft)

Wind And Waves

Tropical Storm Debby



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72 Hour Forecast

Wednesday, August 7 at 8am EDT

Peak Winds: 40 kt

Peak Seas: 15 ft

- Wave heights are in feet



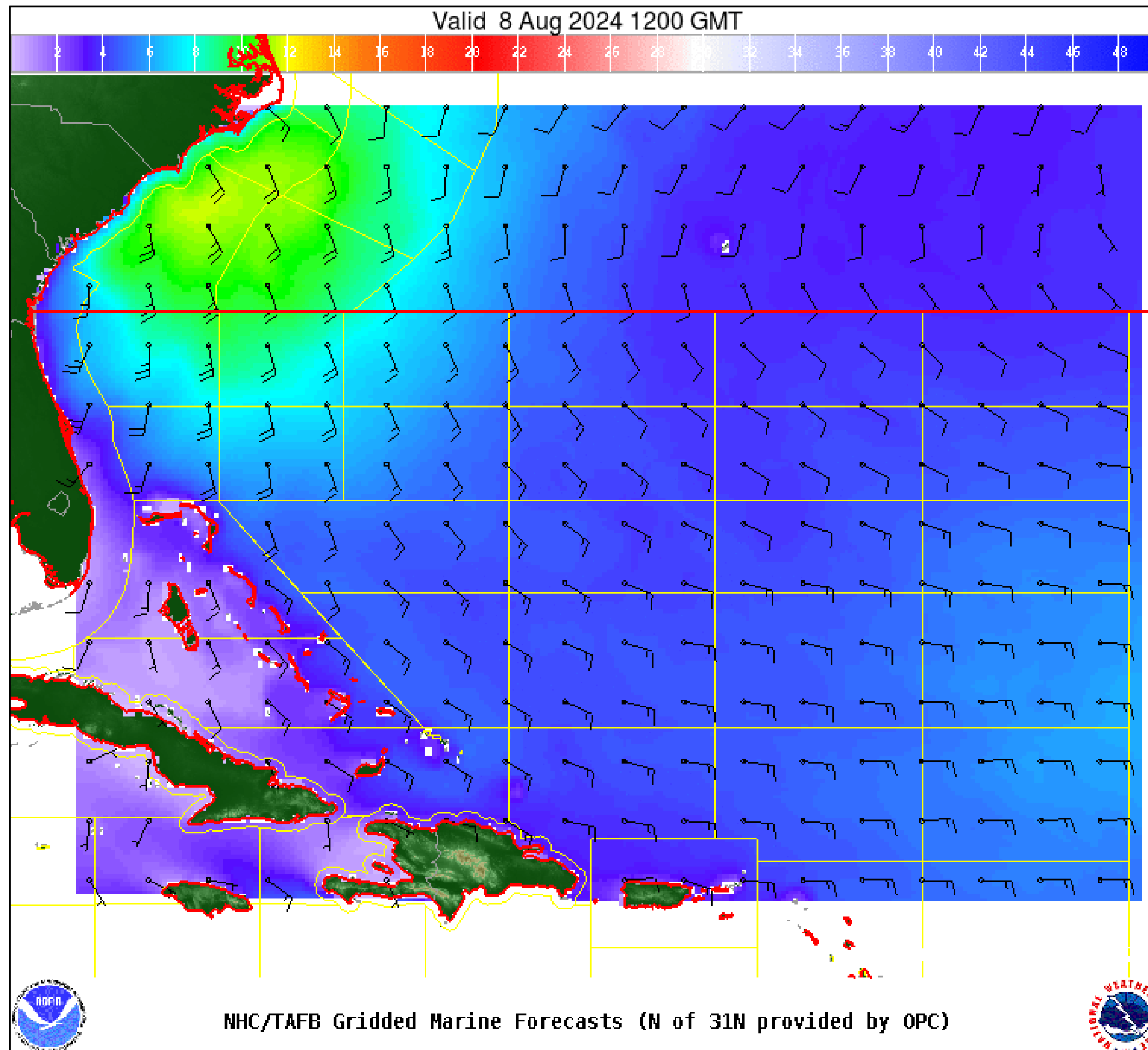
Significant Wave Height (ft)

Wind And Waves

Tropical Storm Debby



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96 Hour Forecast

Thursday, August 8 at 8am EDT

Peak Winds: 40 kt

Peak Seas: 12 ft

- Wave heights are in feet



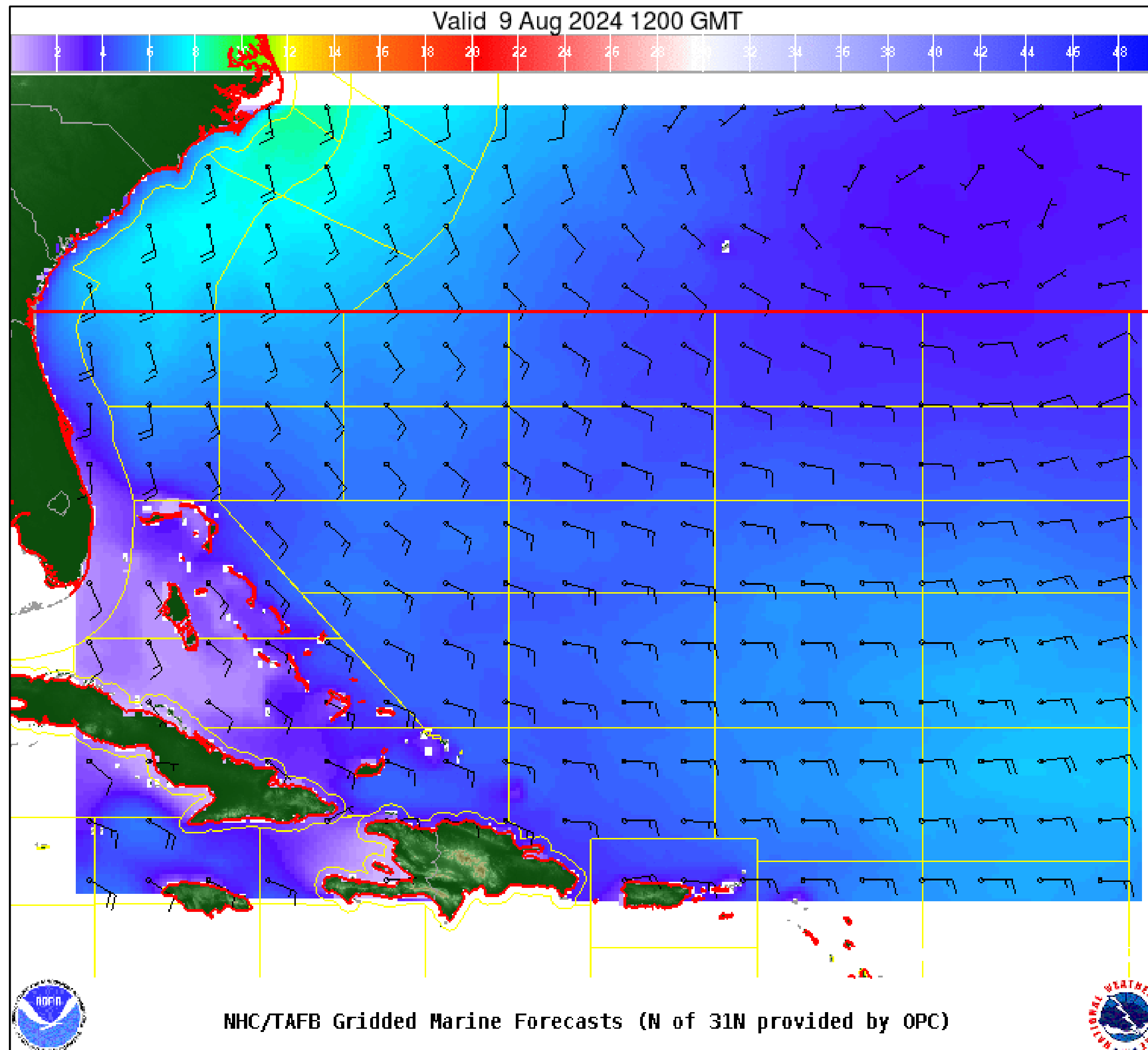
Significant Wave Height (ft)

Wind And Waves

Tropical Storm Debby



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120 Hour Forecast

Friday, August 9 at 8am EDT

Peak Winds: 30 kt

Peak Seas: 8 ft

- Wave heights are in feet



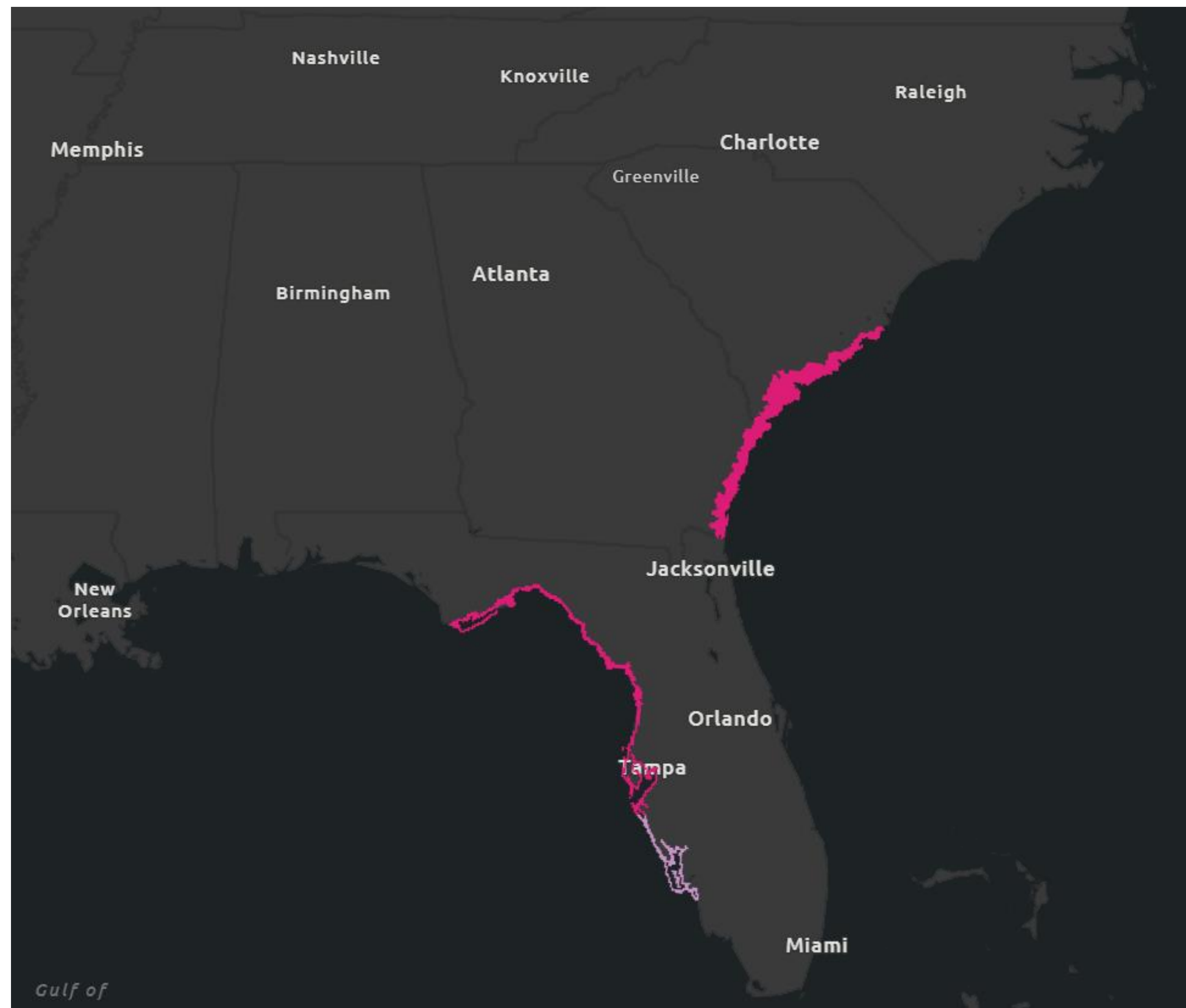
Significant Wave Height (ft)

Potential Storm Surge

Tropical Storm Debby



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There is an upgrade to a Storm Surge Warning in effect for...

*The Mouth of the St. Mary's River to South Santee River

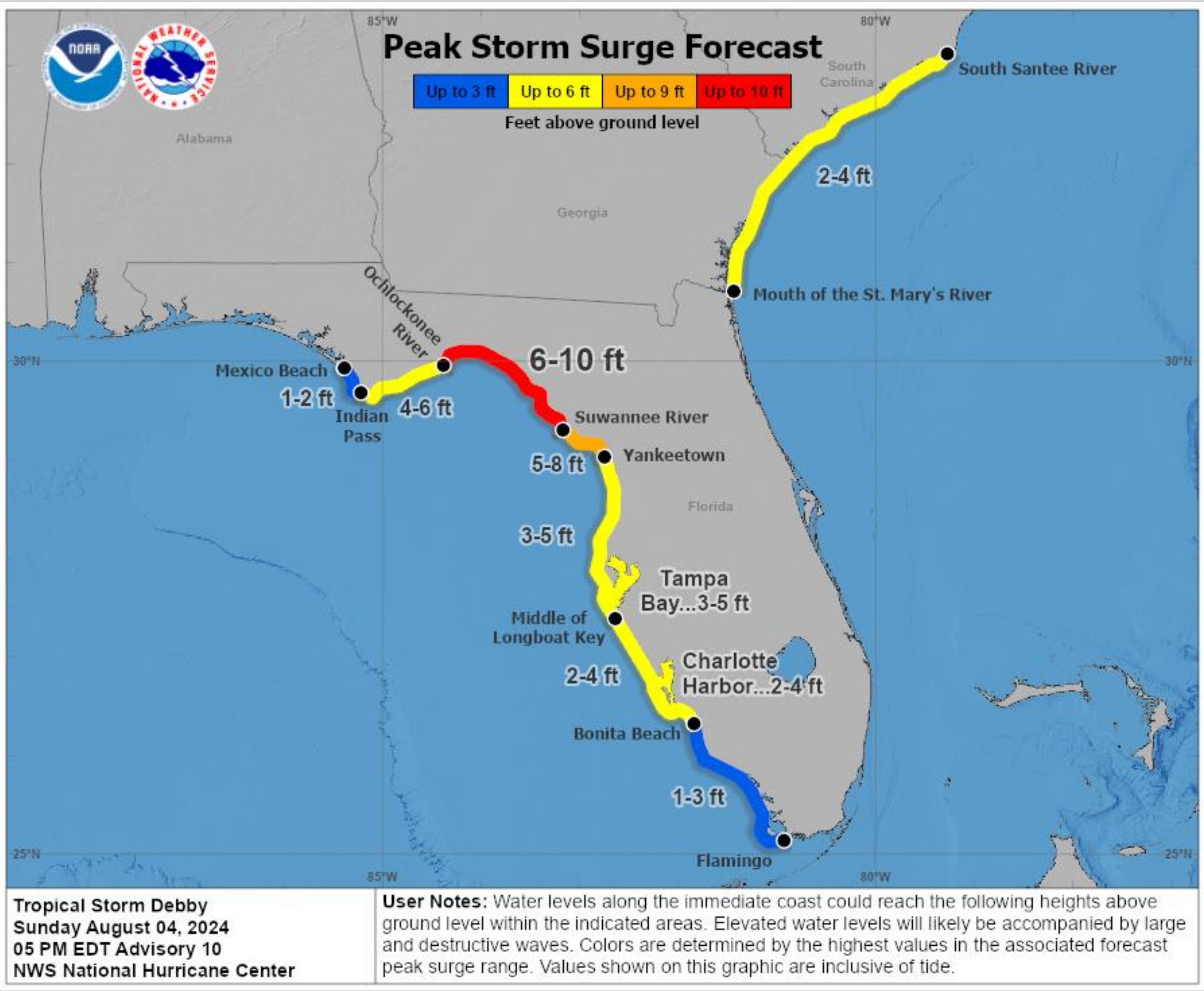
This upgrade accounts for the saltwater and freshwater flooding threat between surge and rainfall that will impact Georgia and South Carolina

Potential Peak Storm Surge / Watches and Warnings

Tropical Storm Debby



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Upgrade to 5-8 feet of surge from Yankeetown north to Suwannee River

The rest of the forecast holds steady at this time

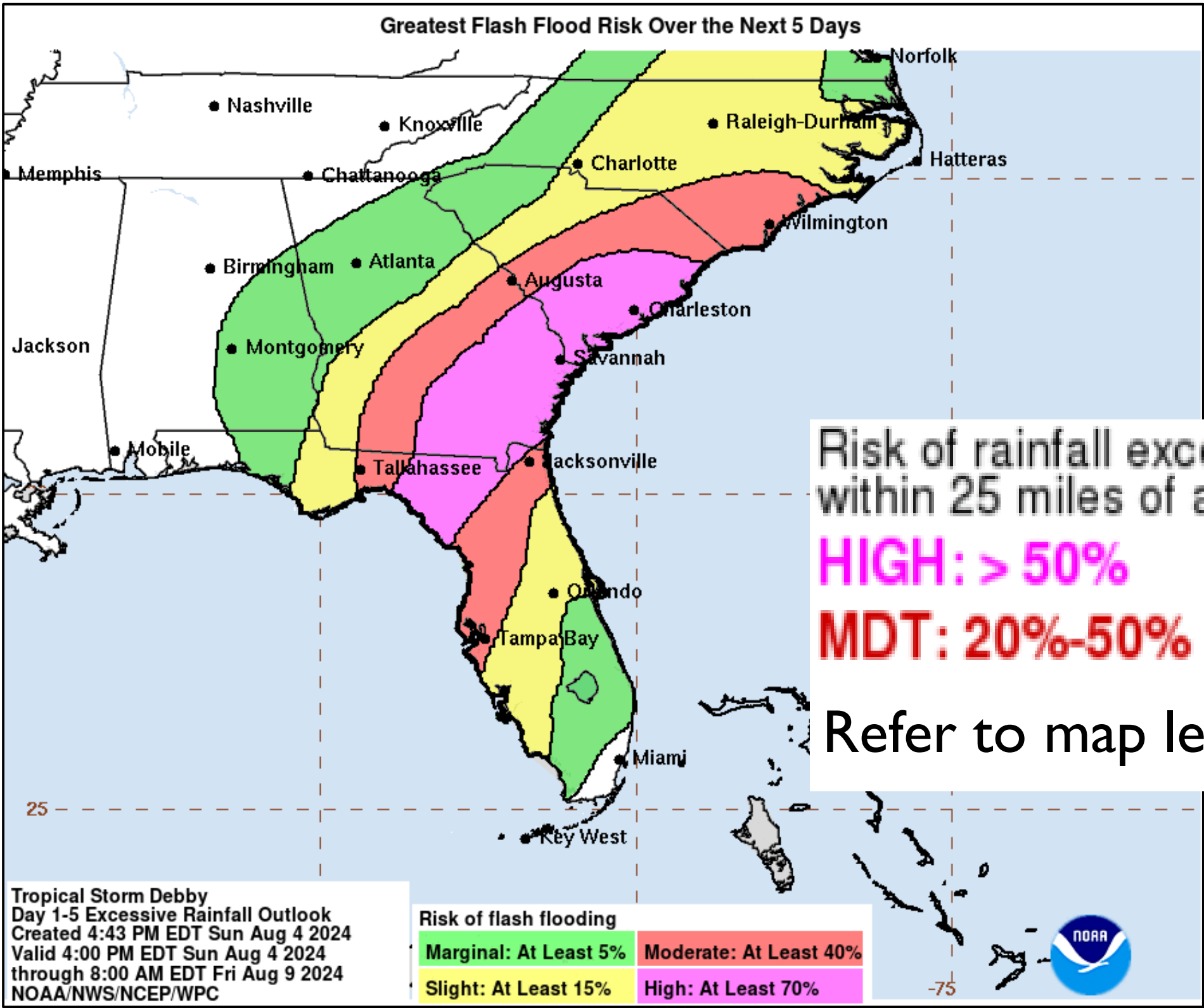
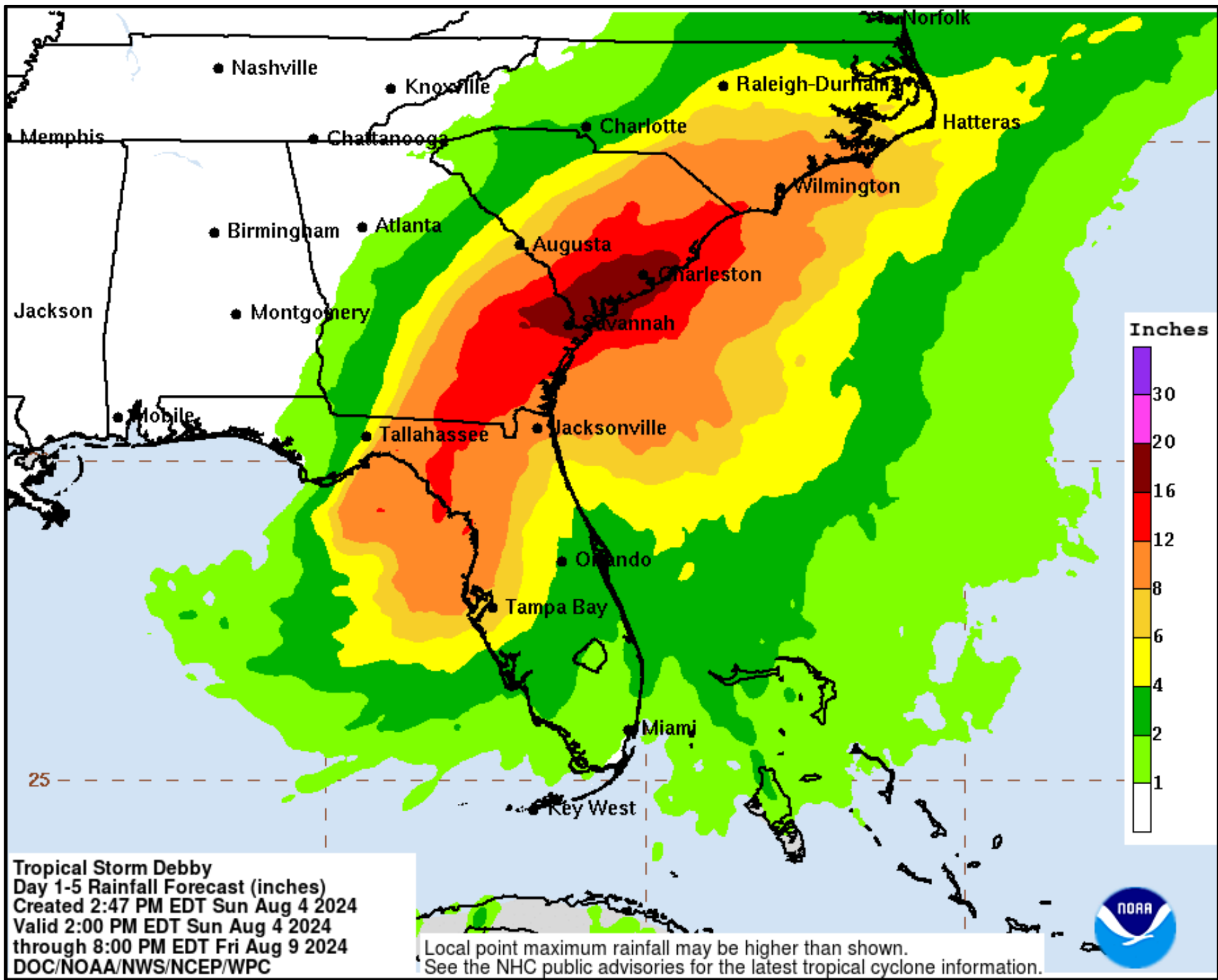
Expected Storm Total Rainfall and Chance of Rainfall Flooding



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NWS National Hurricane Center

Tropical Storm Debby

Images from NWS Weather Prediction Center



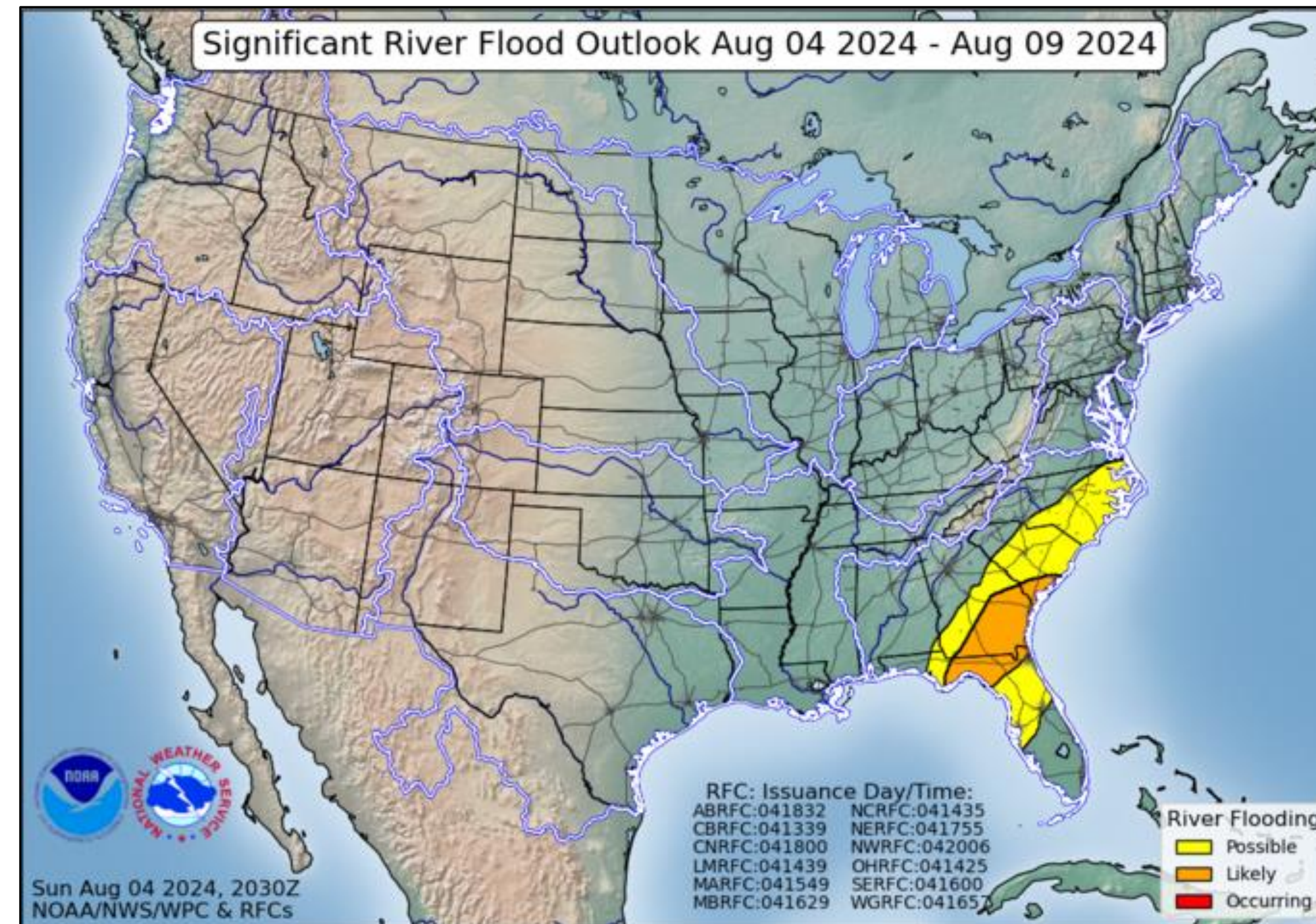
- Debby is expected to produce rainfall totals of 6 to 12 inches, with maximum amounts of 18 inches, across portions of northern Florida and southeastern North Carolina through Friday morning. This rainfall will likely result in areas of considerable flash and urban flooding, with significant river flooding expected.
- Across portions of southeast Georgia and South Carolina, 10 to 20 inches of rainfall, with local amounts to 30 inches, are expected through Friday morning. This potentially historic rainfall will likely result in areas of **catastrophic** flooding.

Flood Outlook

Tropical Storm Debby



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There is now a **LIKELY** chance of river flooding from north Florida to lowcountry South Carolina

Tornado Outlook – Day 1 & 2

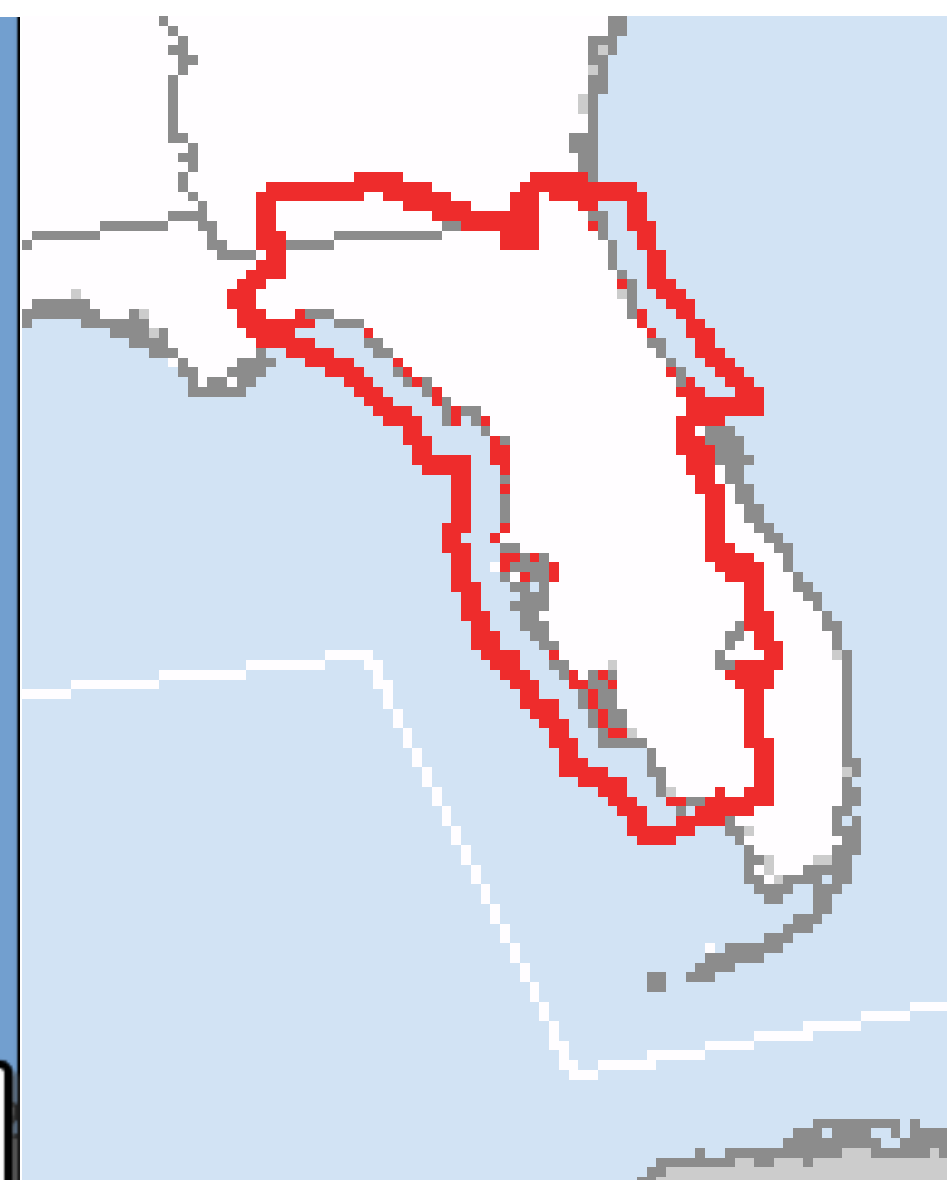
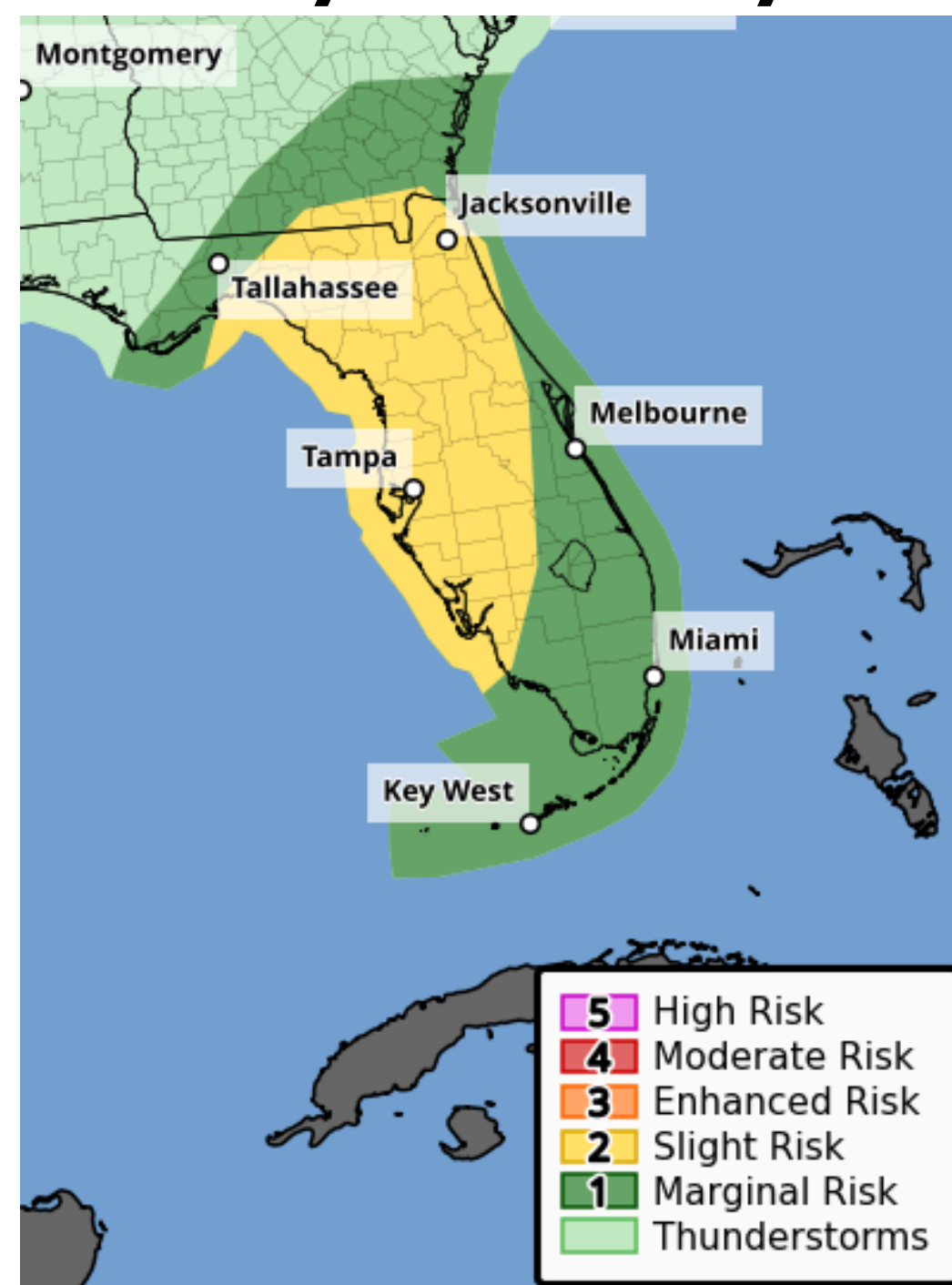
Tropical Storm Debby

Image from NWS Storm Prediction Center



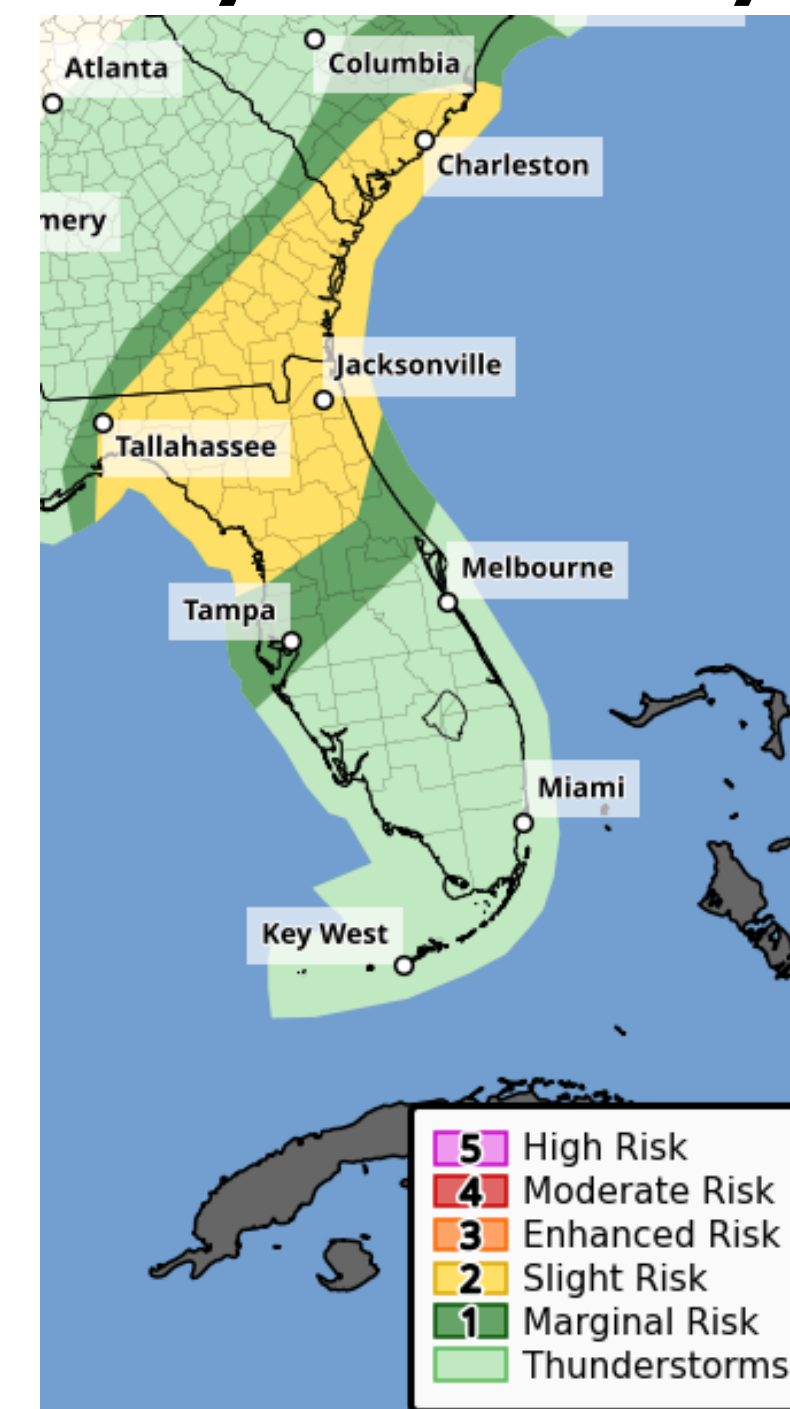
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Day 1 - Sunday



Tornado watch issued for most of Florida through 8pm ET

Day 2 - Monday





Although the Tornado Watch is expiring at 8pm ET tonight, Storm Prediction Center is likely to continue issuing watches overnight and into Monday

Key Messages

Tropical Storm Debby




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NWS National Hurricane Center



Key Messages for Tropical Storm Debby

Advisory 10: 5:00 PM EDT Sun Aug 04, 2024

1. Potentially historic heavy rainfall across southeast Georgia and South Carolina through Friday morning will likely result in areas of catastrophic flooding. Heavy rainfall will likely result in considerable flooding impacts from the Florida Big Bend region through southeast GA and the Coastal Plain of the Carolinas through Friday.
2. There is a danger of life-threatening storm surge along portions of the Gulf Coast of Florida, with 6 to 10 feet of inundation above ground level expected somewhere between Ochlockonee River and Suwannee River on Monday. Residents in the Storm Surge Warning area should follow any advice given by local officials.
3. Hurricane conditions are expected Monday along portions of the Florida Big Bend region where a Hurricane Warning is in effect, with tropical storm conditions beginning this evening. Tropical storm conditions are expected through Monday farther south within the Tropical Storm Warning along Florida's west coast, including the Tampa Bay area.
4. Dangerous storm surge and wind impacts are expected along portions of the southeast U.S. coast from northeastern Florida to North Carolina through the middle of the week, and storm surge warnings and tropical storm watches and warnings have been issued for portions of these areas.



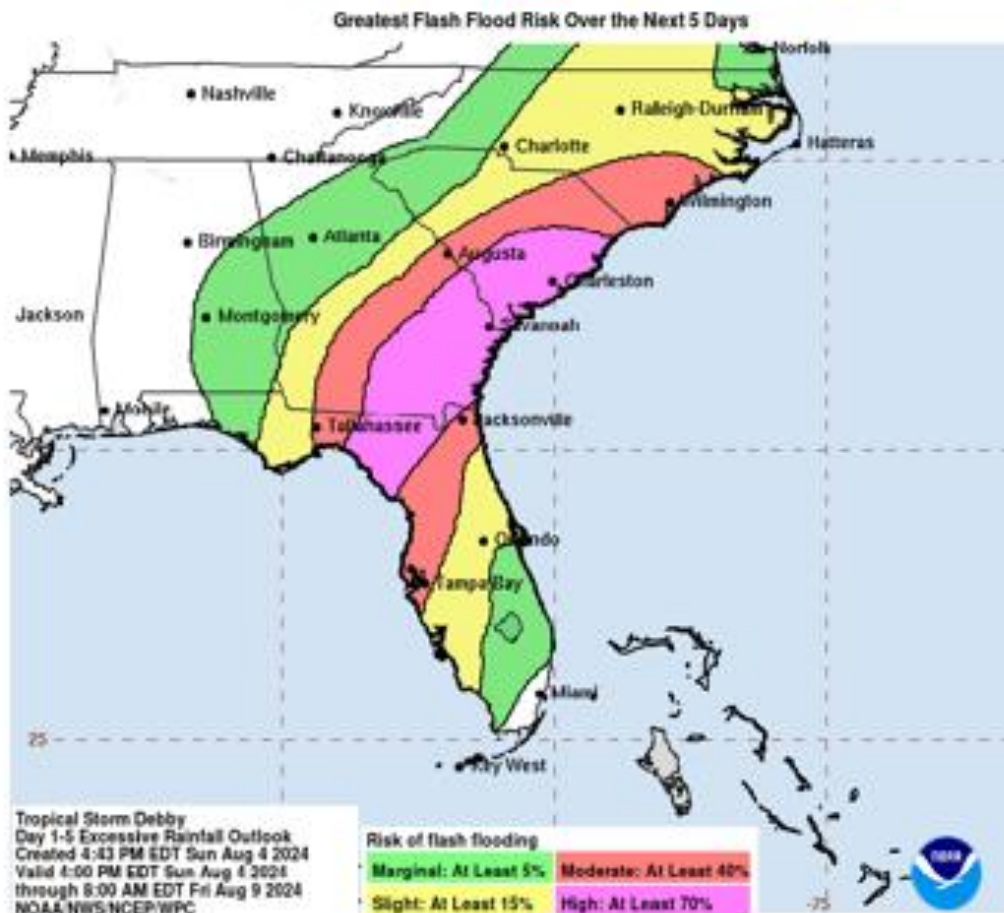
Tropical Storm Debby	Current information: x	Forecast positions:
Sunday August 04, 2024	Center location 27.7 N 84.4 W	● Tropical Cyclone ○ Post/Potential TC
5 PM EDT Advisory 10	Maximum sustained wind 65 mph	Sustained winds: D < 39 mph
NWS National Hurricane Center	Movement N at 12 mph	S 39-73 mph H 74-110 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



Tropical Storm Debby
Day 1-5 Excessive Rainfall Outlook
Created 4:43 PM EDT Sun Aug 4 2024
Valid 4:00 PM EDT Sun Aug 4 2024
through 6:00 AM EDT Fri Aug 9 2024
NOAA/NWS/NCEP/WPC

Risk of flash flooding
Marginal: At Least 5%
Slight: At Least 15%
Moderate: At Least 45%
High: At Least 70%

For more information go to hurricanes.gov

Marine Key Messages

- Seas will peak over 20 ft off the east coast of Florida tonight through Monday
- Conditions will improve across the Gulf Tuesday into Tuesday night
- Rough to very seas will impact the NE Florida Coast northward to South Carolina Tue through Thu as Debby meanders near the Georgia/South Carolina coast

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



This briefing was prepared by:
Amanda Reinhart
E-mail: Amanda.Reinhart@noaa.gov
Phone: 305-229-4450

TROPICAL STORM DEBBY BRIEFING

TIME of NEXT NHC Advisory:
3 UTC: 11 PM EDT / 10 PM CDT

The Next D7 Briefing Will Be:
Monday, 8:30 AM EDT

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



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