

IMPACTS FOR District 7

Winds/US Coast – Medium

Winds/SRR – High

Waves/US Coastal – Medium

Waves/SRR – High

through next 5 days

US Storm Surge – Low

US Rainfall/Flash Flooding – Low

US Tornadoes – Low

TROPICAL STORM RAFAEL BRIEFING



8:30 AM EST

Tuesday, November 5, 2024

Prepared by:

Stephen Konarik

*Tropical Analysis and Forecast Branch
NWS National Hurricane Center*



NHC_TAFB

www.nhc.noaa.gov

Changes Since Yesterday

Tropical Storm Rafael



Tropical Analysis and Forecast Branch
NWS National Hurricane Center

- Tropical Storm Rafael has formed
- Hurricane Warning western Cuba
- Tropical Storm Watch Lower and Middle Florida Keys

MAIN THREATS

Tropical Storm Rafael



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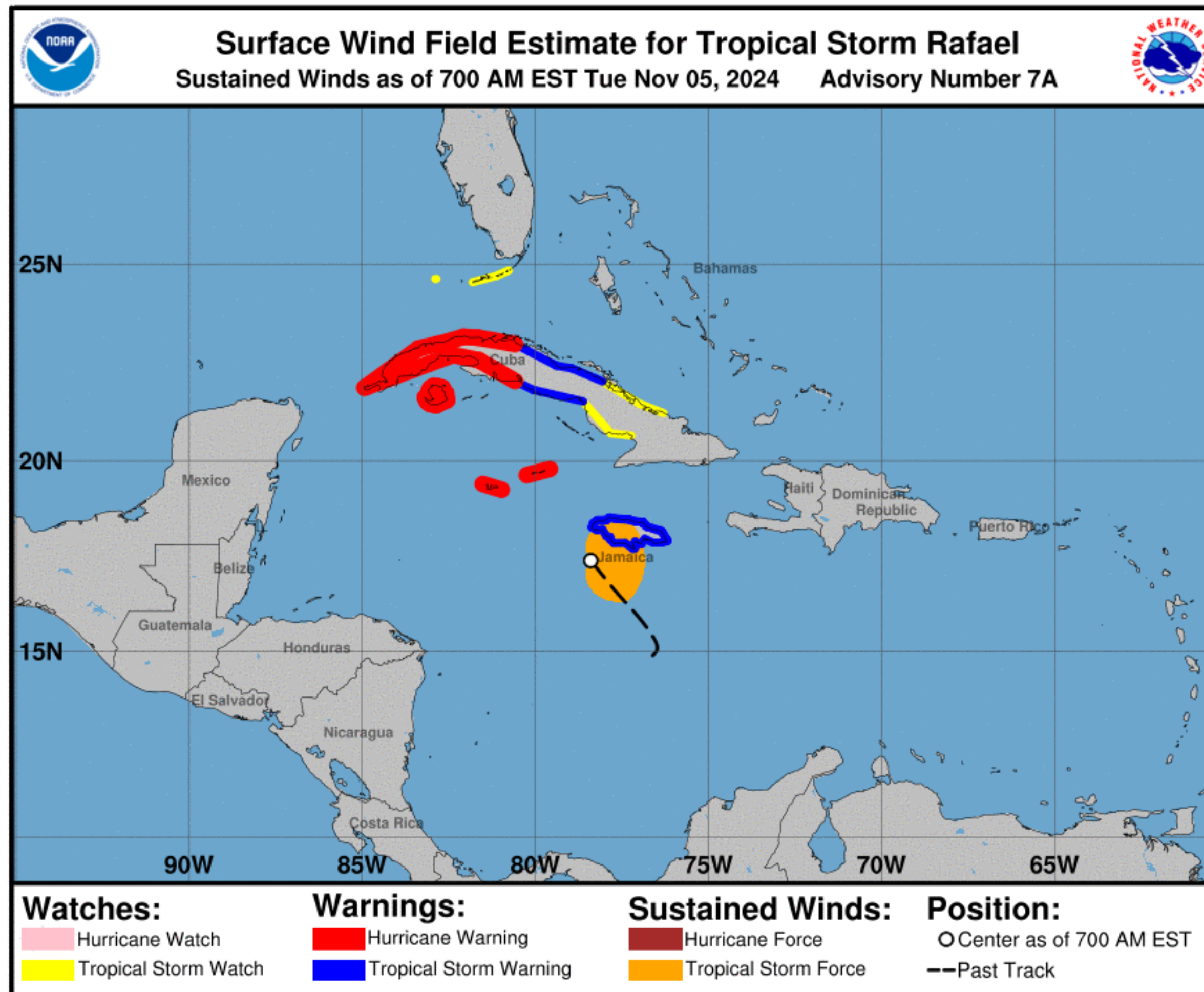
- Hurricane force winds and seas to 30 ft SE Gulf of Mexico Wed and Thu, worst conditions remaining offshore
- Greatest threat for onshore impacts Florida Keys/Key West

Situation Overview

Tropical Storm Rafael



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**...RAFAEL PASSING SOUTHWEST OF JAMAICA...
...EXPECTED TO BECOME A HURRICANE TONIGHT...**

SUMMARY OF 700 AM EST...1200 UTC...INFORMATION

LOCATION...17.4N 78.4W
ABOUT 200 NM SE OF GRAND CAYMAN
MAXIMUM SUSTAINED WINDS...50 KT
PRESENT MOVEMENT...NW AT 11 KT

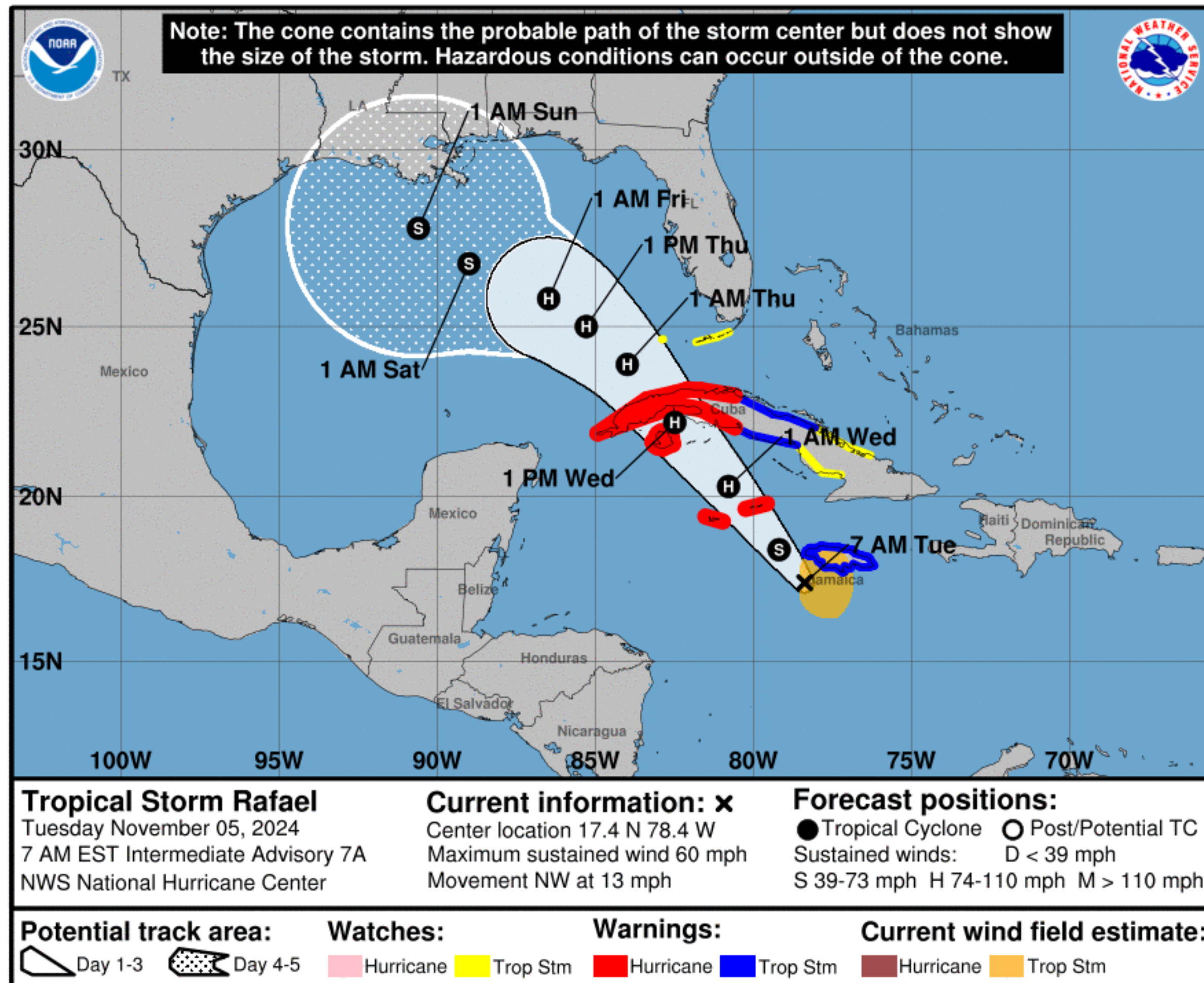
12 FT SEAS..120NE 120SE 0SW 0NW.

Forecast Information

Tropical Storm Rafael



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- GENERAL NW MOTION; CROSSING CUBA WED, THEN E GULF FOR REMAINDER OF THE WEEK
- RAPID INTENSIFICATION POSSIBLE UNTIL IT REACHES CUBA
- FORECAST TO BE A HURRICANE IN SE GULF; BUT BEYOND THURSDAY, HIGHER THAN NORMAL UNCERTAIN IN BOTH TRACK AND INTENSITY

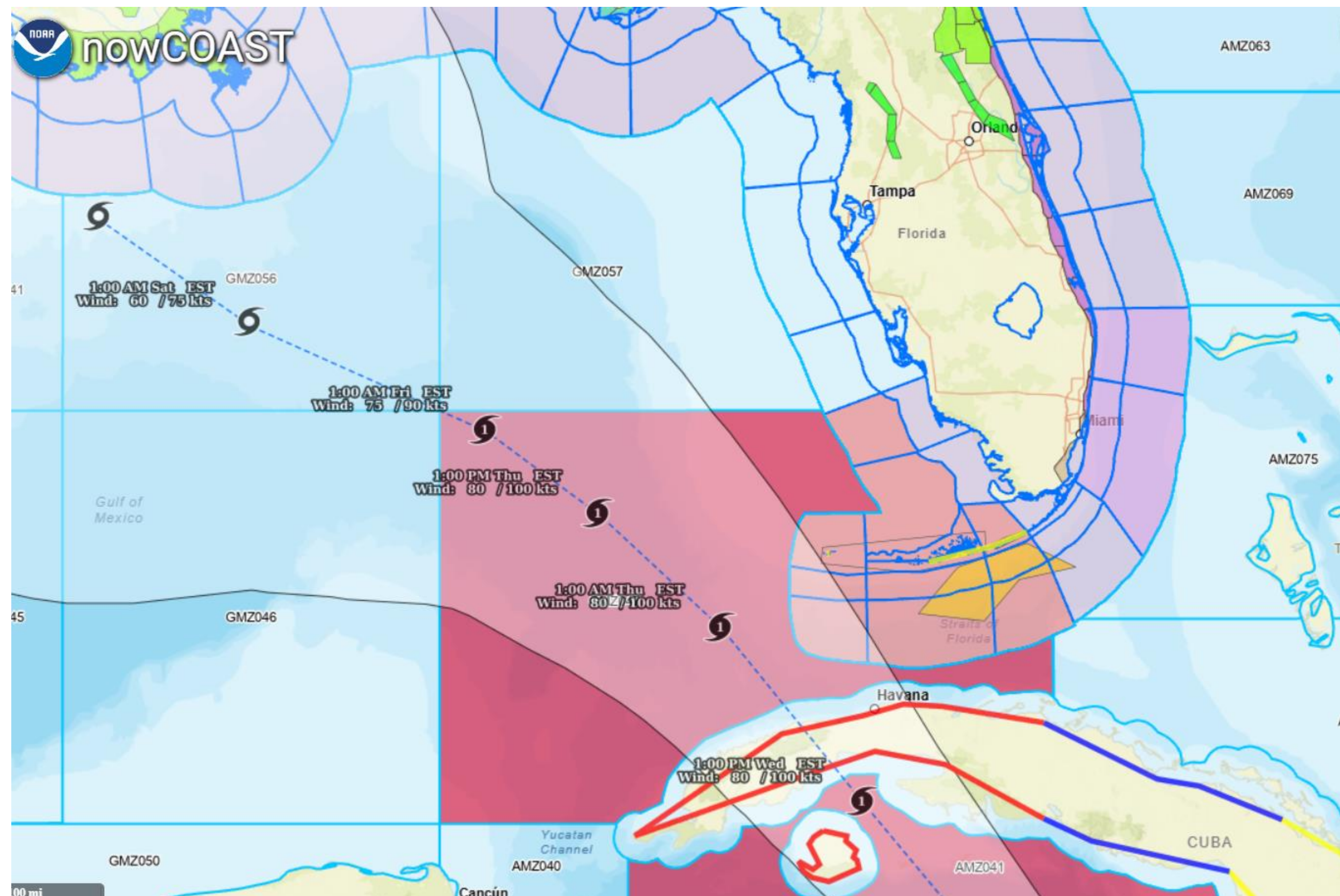
NOTE: Do not focus on the exact track. Impacts can occur well outside the area enclosed by the cone.

Hazards Map

Tropical Storm Rafael



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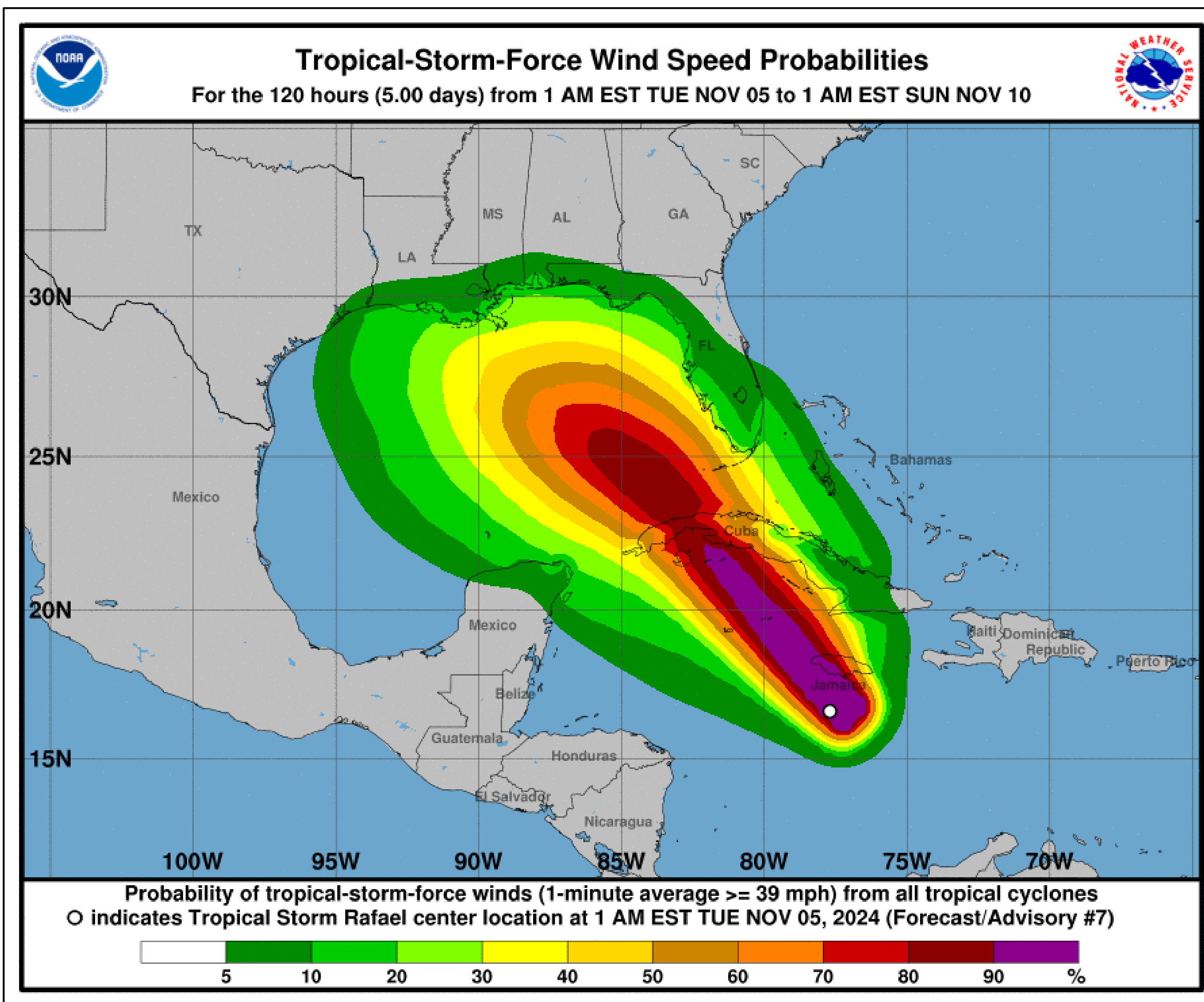
- High Surf Advisory (12)
- Coastal Flood Advisory (38)
- Tropical Storm Watch (15)
- Gale Warning (246)
- Special Marine Warning (3)
- Hurricane Warning (2)

T.S. Wind Speed Probabilities

Tropical Storm Rafael



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- **Miami 10%**
- **Homestead 20%**
- **Marathon 30%**
- **Key West 60%**
- **Naples 30%**
- Venice 25%
- Cedar Key 10%
- **Apalachicola 20%**

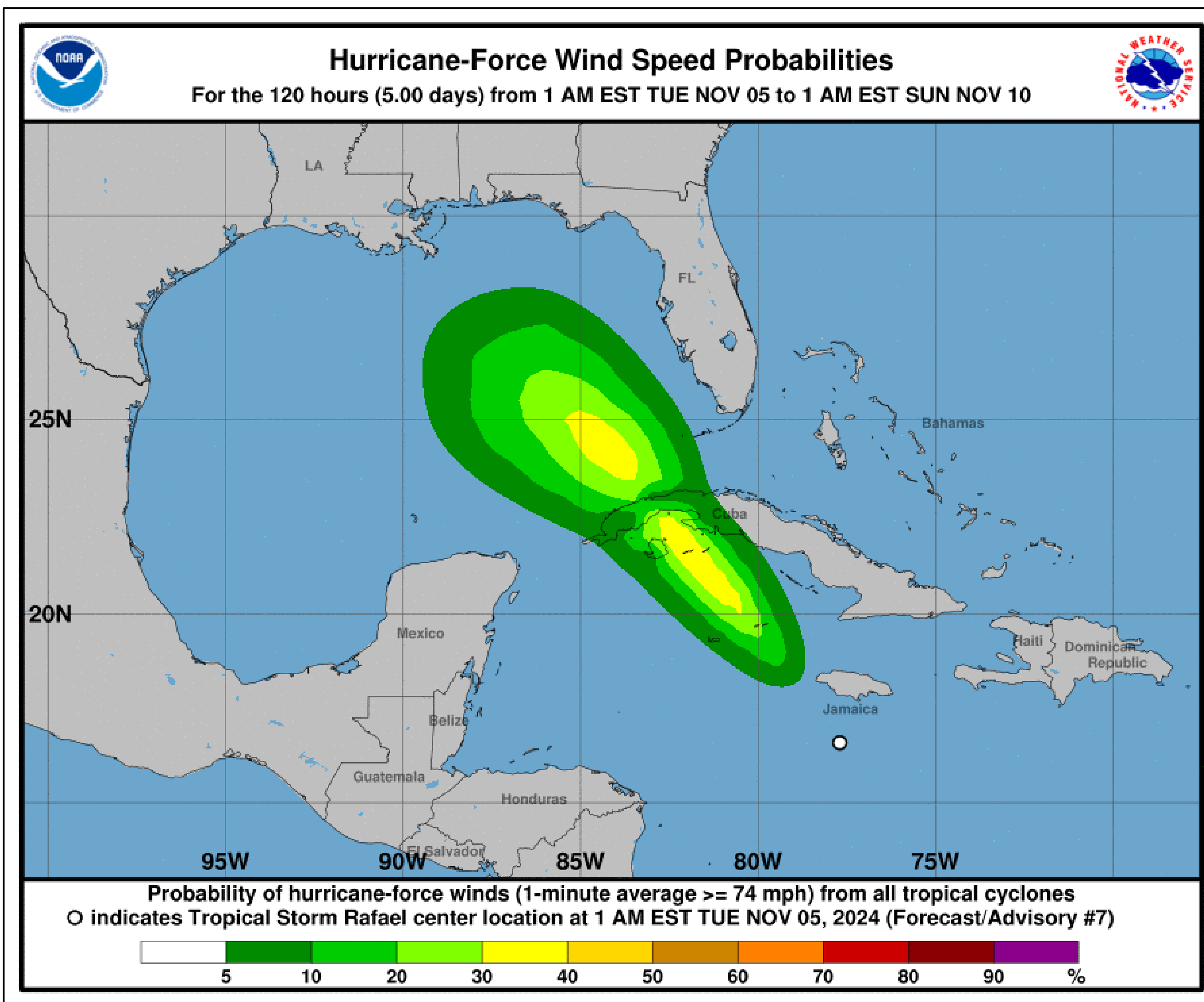
**RISK OF HURRICANE FORCE
WINDS ON LAND: less than 5%**

Hurricane Wind Speed Probabilities

Tropical Storm Rafael



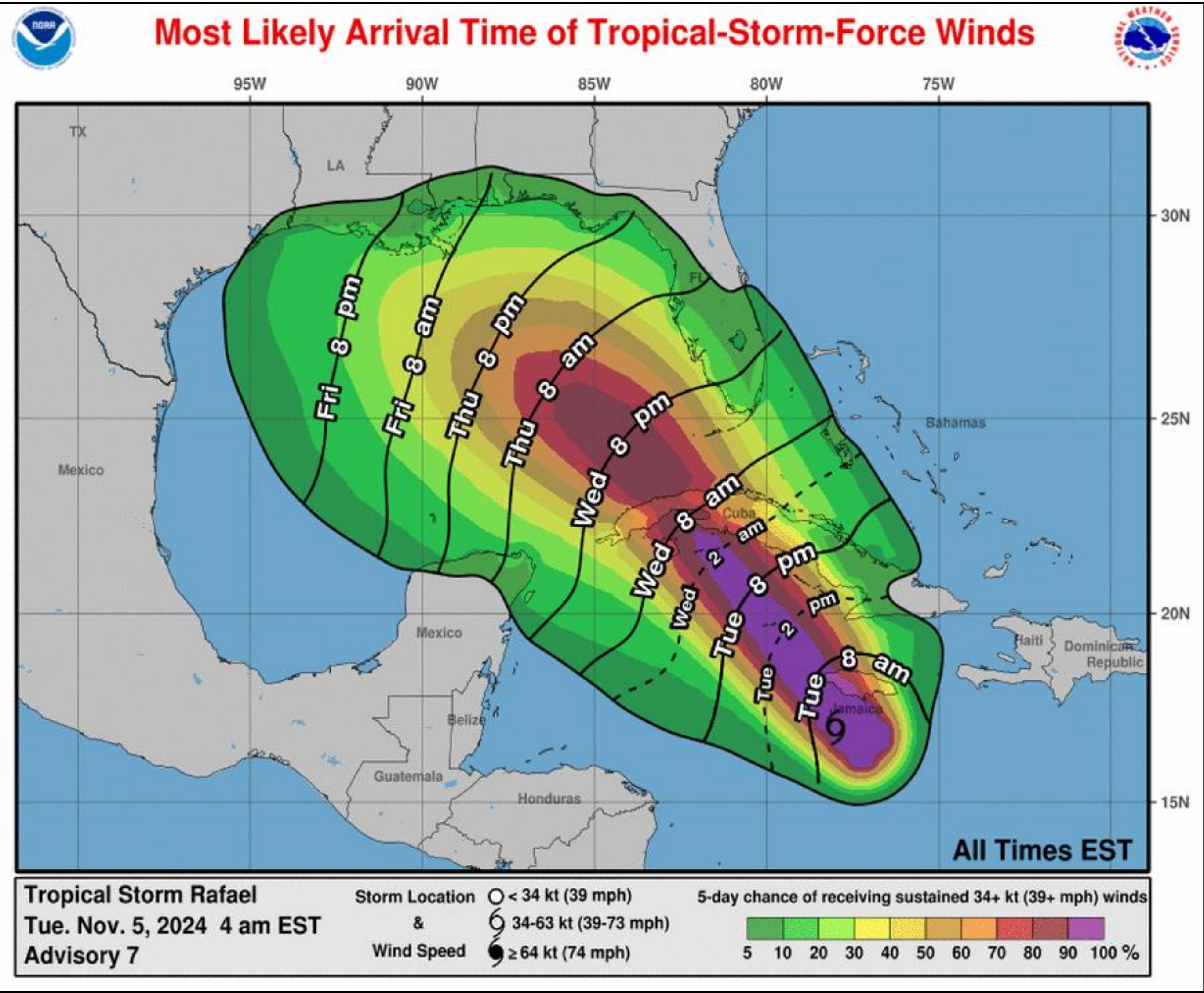
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**RISK OF HURRICANE FORCE
WINDS ON LAND: less than 5%**



Tropical Storm Rafael



■ Florida Keys and SE Florida – midday Wednesday

■ SW Florida – Wednesday evening

** slightly later/slower arrival than yesterday's forecast

** conditions should be improving by later Thursday

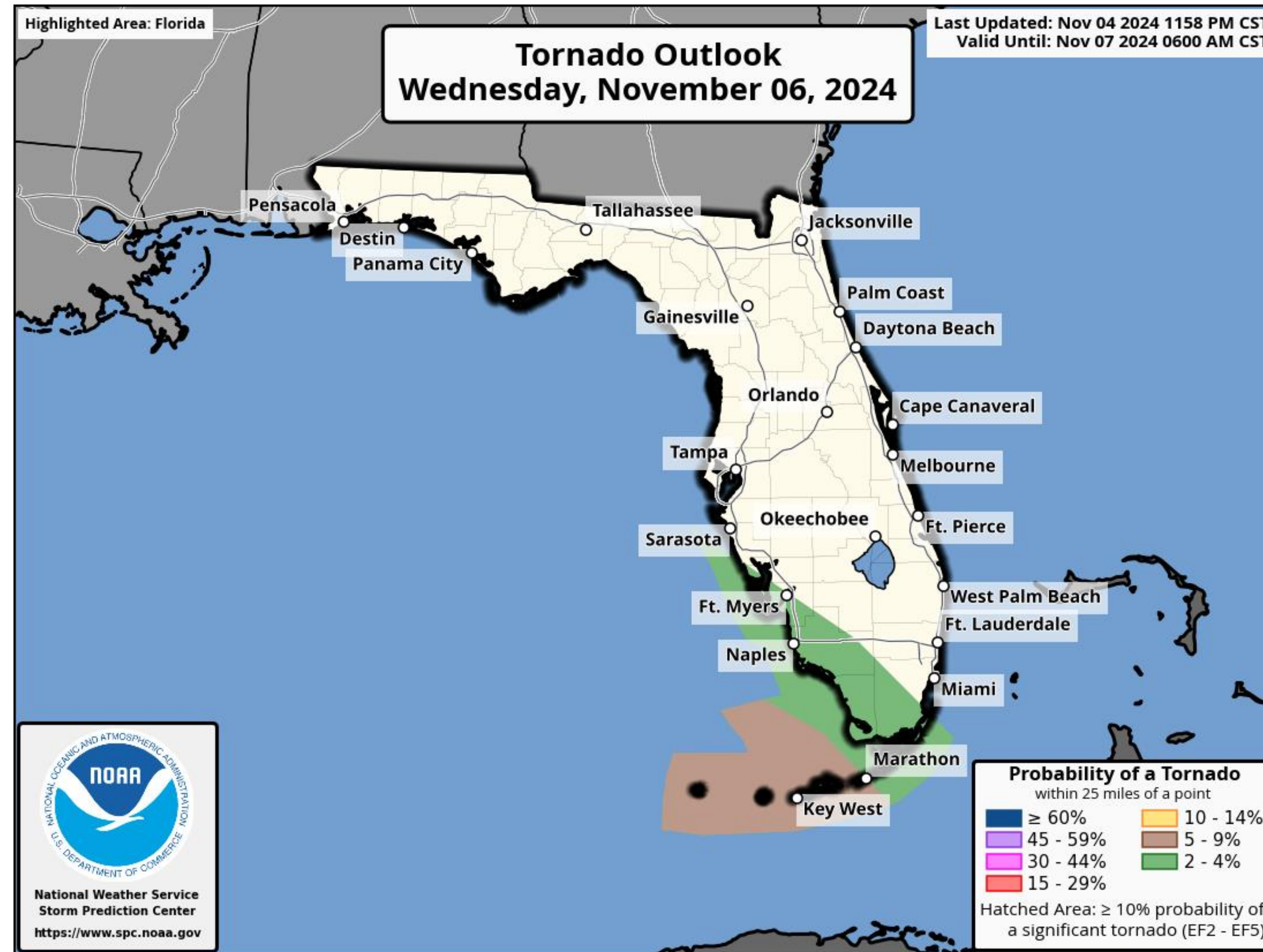
Tornado Outlook – Day 2

Tropical Storm Rafael

Image from NWS Storm Prediction Center



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NWS National Hurricane Center



Expected Storm Total Rainfall and Chance of Rainfall Flooding

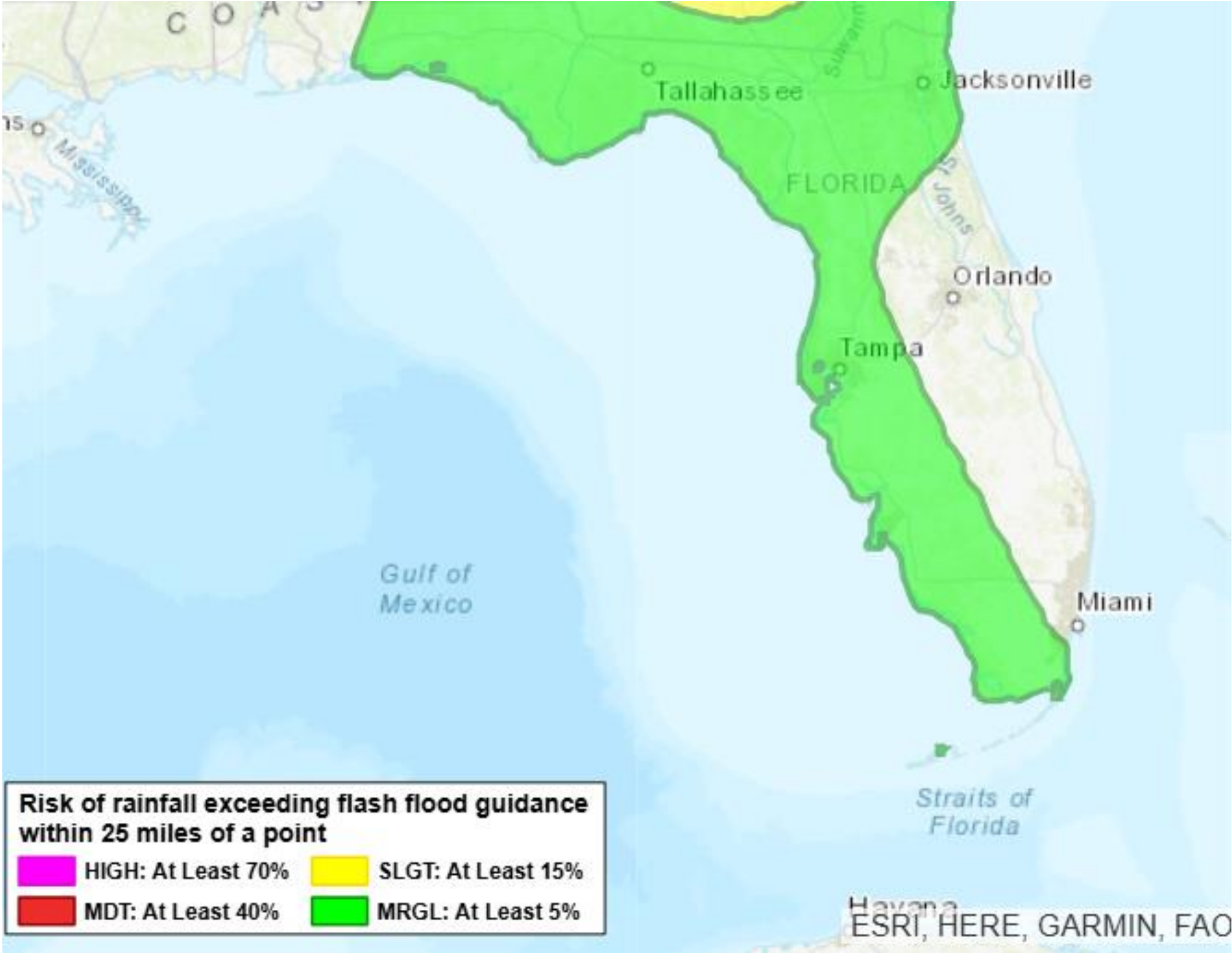
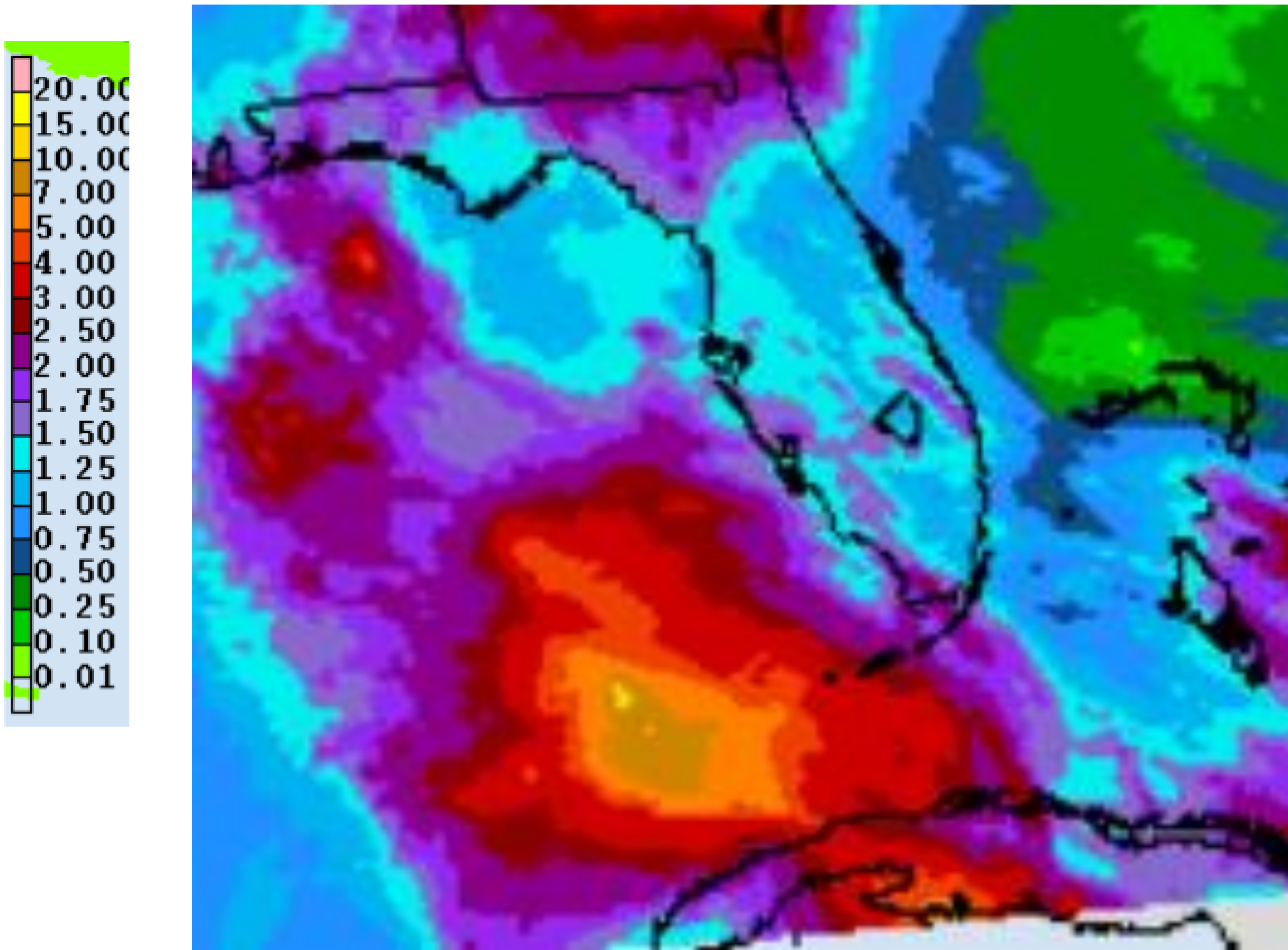
Tropical Storm Rafael

Images from NWS Weather Prediction Center



Tropical Analysis and Forecast Branch
NWS National Hurricane Center

7 day rainfall totals

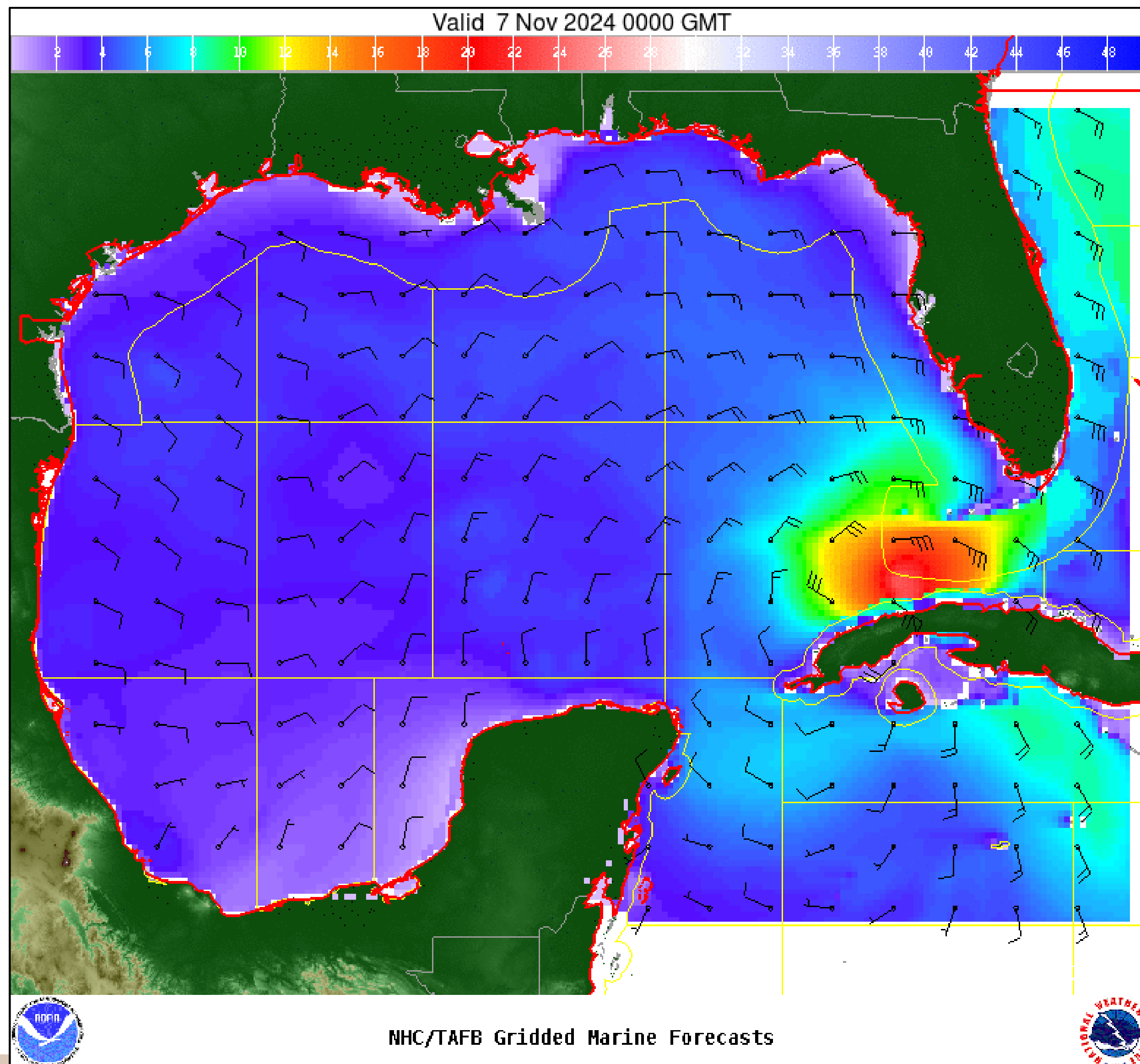


Wind And Waves

Tropical Storm Rafael



Tropical Analysis and Forecast Branch
NWS National Hurricane Center



7PM EST WEDNESDAY

Peak Winds: 80 kt

Peak Seas: 20 ft

■ Wave heights are in feet



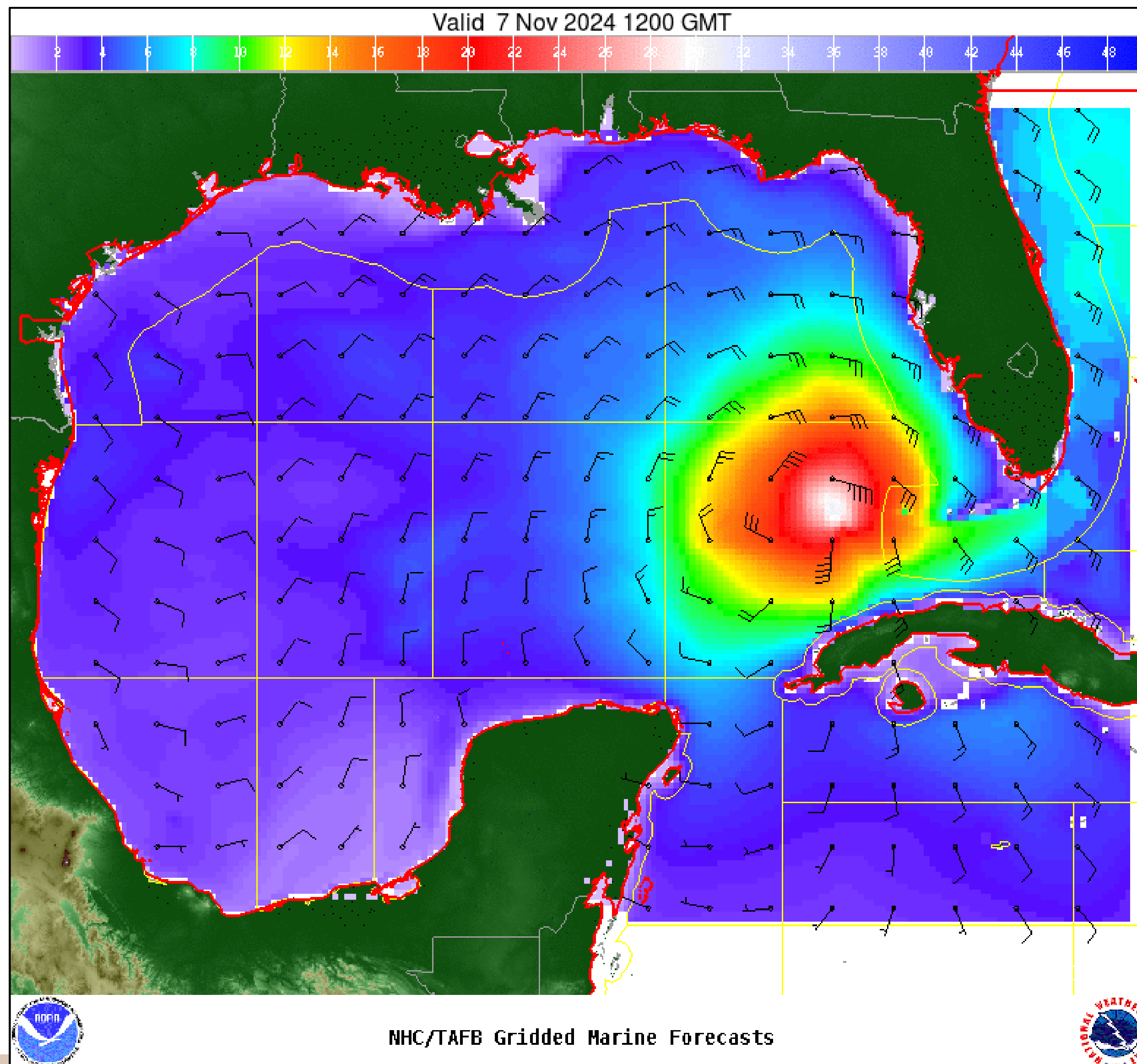
Significant Wave Height (ft)

Wind And Waves

Tropical Storm Rafael



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7AM EST THURSDAY

Peak Winds: 80 kt

Peak Seas: 30 ft

■ Wave heights are in feet



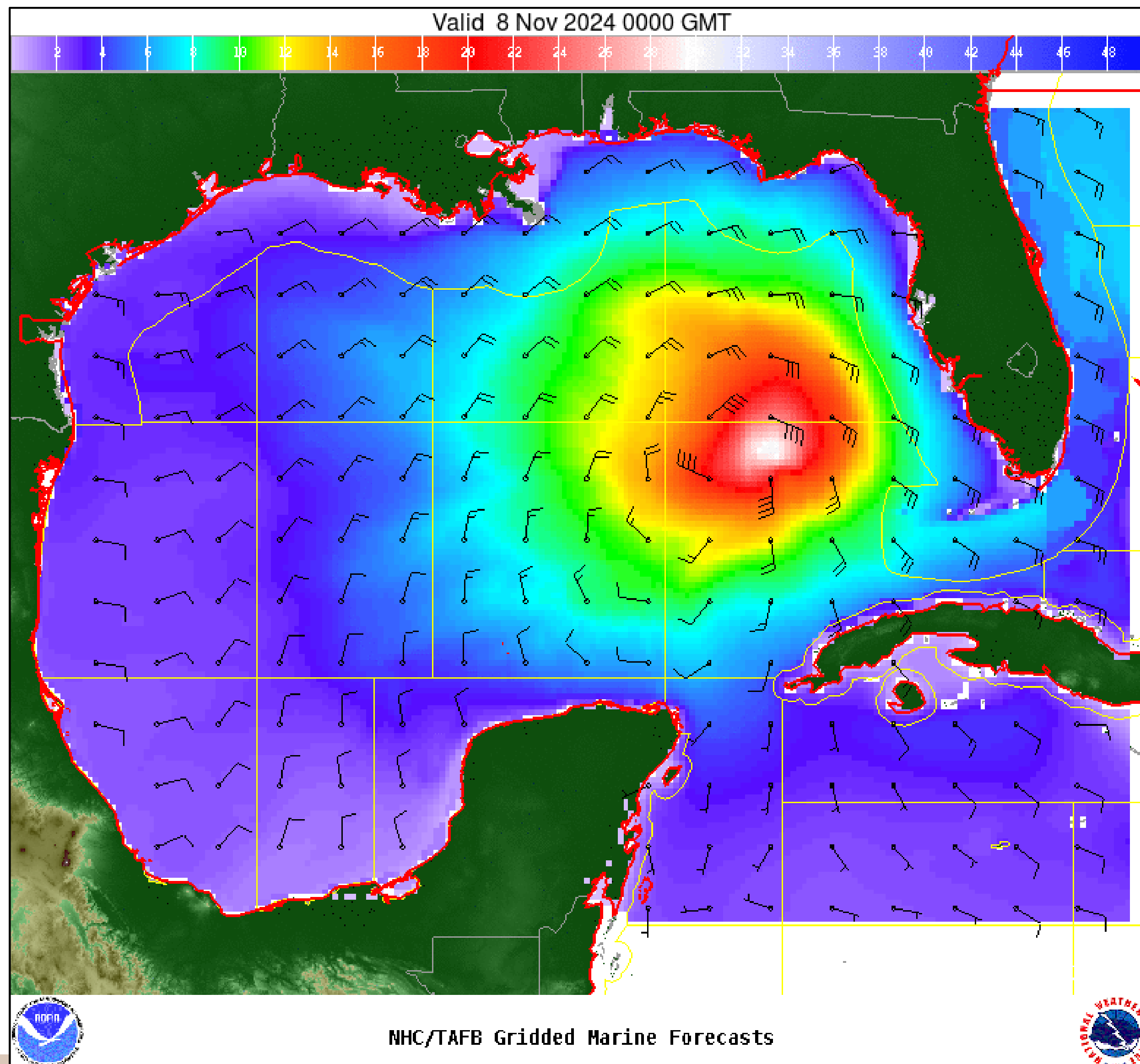
Significant Wave Height (ft)

Wind And Waves

Tropical Storm Rafael



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7PM EST THURSDAY

Peak Winds: 80 kt

Peak Seas: 30 ft

- Wave heights are in feet



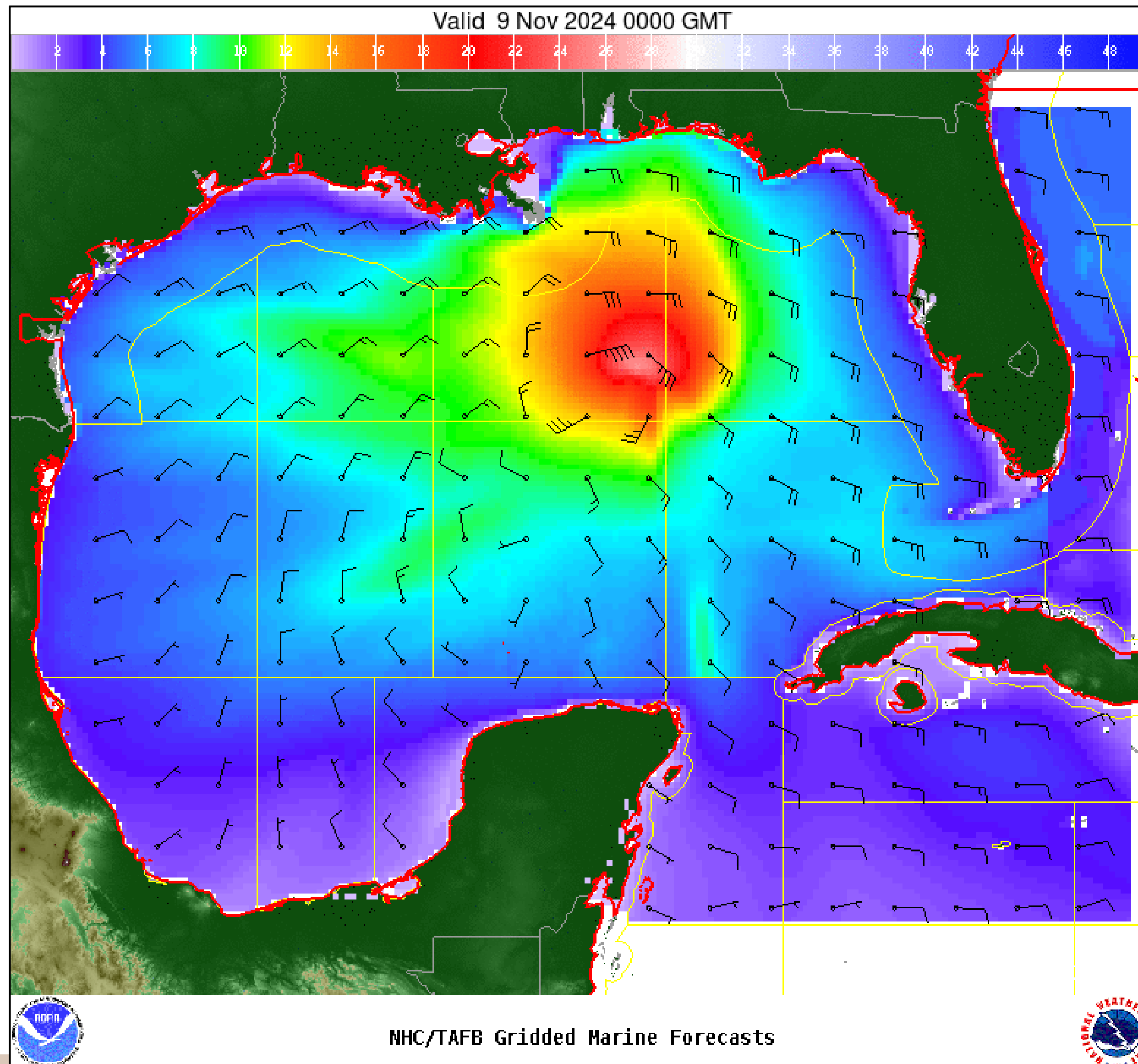
Significant Wave Height (ft)

Wind And Waves

Tropical Storm Rafael



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7PM EST FRIDAY

Peak Winds: 70 kt

Peak Seas: 25 ft

■ Wave heights are in feet



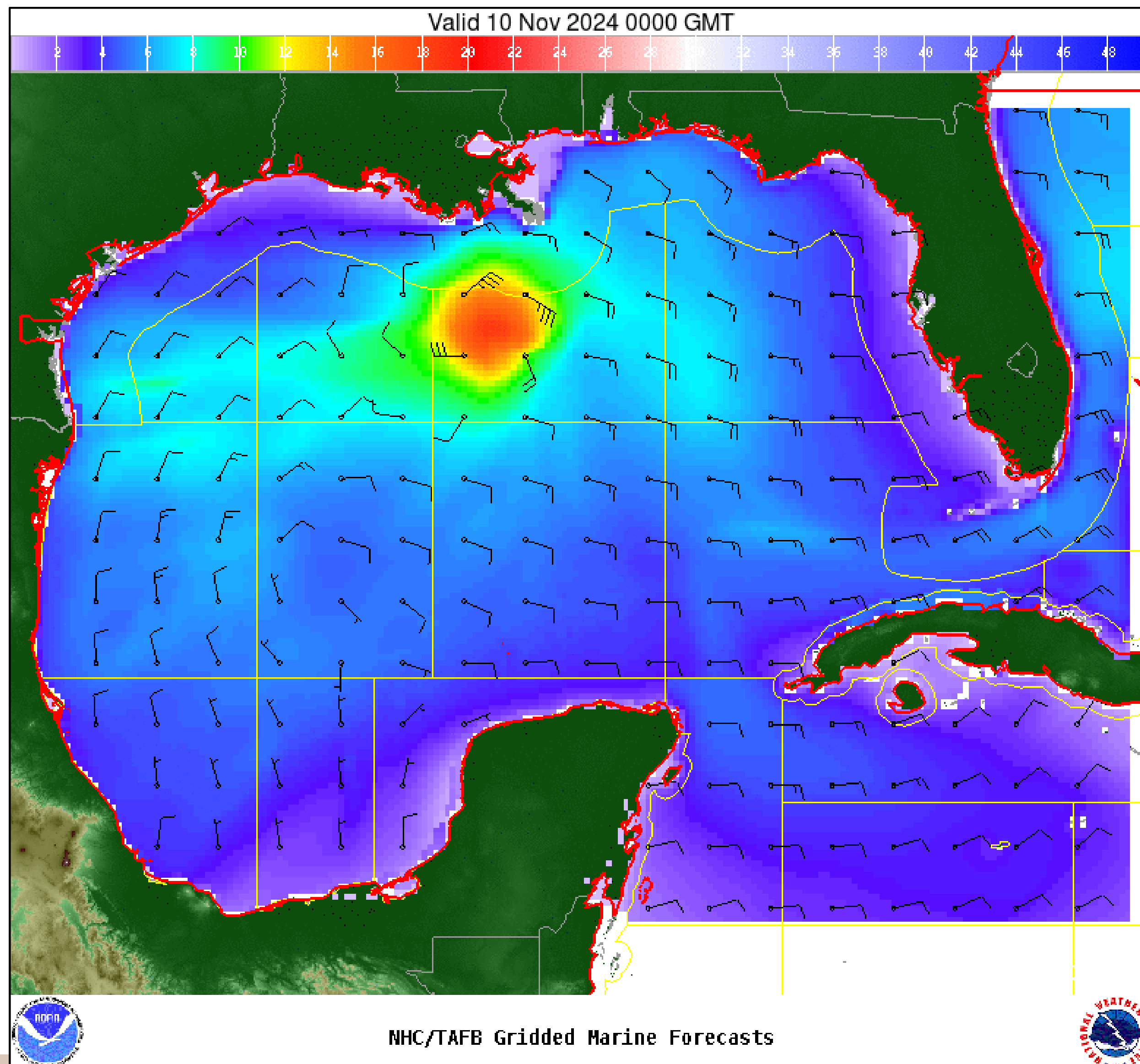
Significant Wave Height (ft)

Wind And Waves

Tropical Storm Rafael



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7PM EST SATURDAY

Peak Winds: 55 kt

Peak Seas: 20 ft

■ Wave heights are in feet



Significant Wave Height (ft)

Key Messages

Tropical Storm Rafael



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Key Messages for Tropical Storm Rafael

Advisory 7: 4:00 AM EST Tue Nov 05, 2024

1. Rafael is forecast to be near hurricane intensity when it passes near or over the Cayman Islands by tonight where damaging hurricane-force winds, a dangerous storm surge, and destructive waves are expected. Rafael should reach western Cuba and the Isle of Youth on Wednesday. A hurricane warning is in effect for this region, where a dangerous storm surge and destructive waves are also expected.

2. Tropical storm conditions are expected in Jamaica through early this afternoon. Tropical storm conditions are possible in the Lower and Middle Florida Keys beginning late Wednesday or Wednesday night.

3. It is too soon to determine what, if any, impacts Rafael could bring to portions of the northern Gulf Coast. Residents in this area should regularly monitor updates to the forecast.

4. Rafael will bring areas of heavy rain across portions of the Western Caribbean through early Thursday, including the islands of Jamaica and the Caymans, along with southern and western portions of Cuba. Flash flooding and mudslides are possible along the higher terrain in Jamaica and Cuba. Heavy rainfall will spread north into Florida and adjacent areas of the Southeast United States mid to late week.



For more information go to hurricanes.gov

• Marine Key Messages:

- Hurricane force winds and seas to 30 ft in the SE Gulf of Mexico Wed afternoon through at least Thu after Rafael emerges from Cuba
- Too early to tell storm surge threat, but some coastal flooding along FL east coast due to strong E winds
- Dangerous surf and rip currents along all Florida coastlines

IMPACTS FOR **District 7**

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Winds/SRR – High

Waves/US Coastal – Medium

Waves/SRR – High

TIME of NEXT NHC Advisory:

15 UTC/ 10 AM EST



This briefing was prepared by:

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TROPICAL STORM RAPHAEL BRIEFING

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

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



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Placeholder I

Tropical Storm Raphael



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