

**IMPACTS FOR D8**

**Winds/US Coast – Low**

**Winds/SRR – High**

**Waves/US Coastal – Low**

**Waves/SRR – High**

through next 5 days

**US Storm Surge – Unknown**

**US Rainfall/Flash Flooding – Low**

**US Tornadoes – Unknown**

# HURRICANE RAFAEL BRIEFING



11:00 AM CST  
Wednesday, November 6, 2024

Prepared by:

**Nelsie Ramos**

*Tropical Analysis and Forecast Branch  
NWS National Hurricane Center*



# Changes Since Yesterday and Impacts

Hurricane Rafael



Tropical Analysis and Forecast Branch  
NWS National Hurricane Center

- Rafael intensified to a hurricane last night
- Hurricane force winds expected in the SE Gulf tonight through Friday night
- Peak waves - 36 ft in the SE Gulf within that period
- High uncertainty in the track forecast remains for the northern Gulf Sunday and Monday
- Current forecast has Rafael in the NW Gulf offshore waters as a Tropical Storm by Monday morning

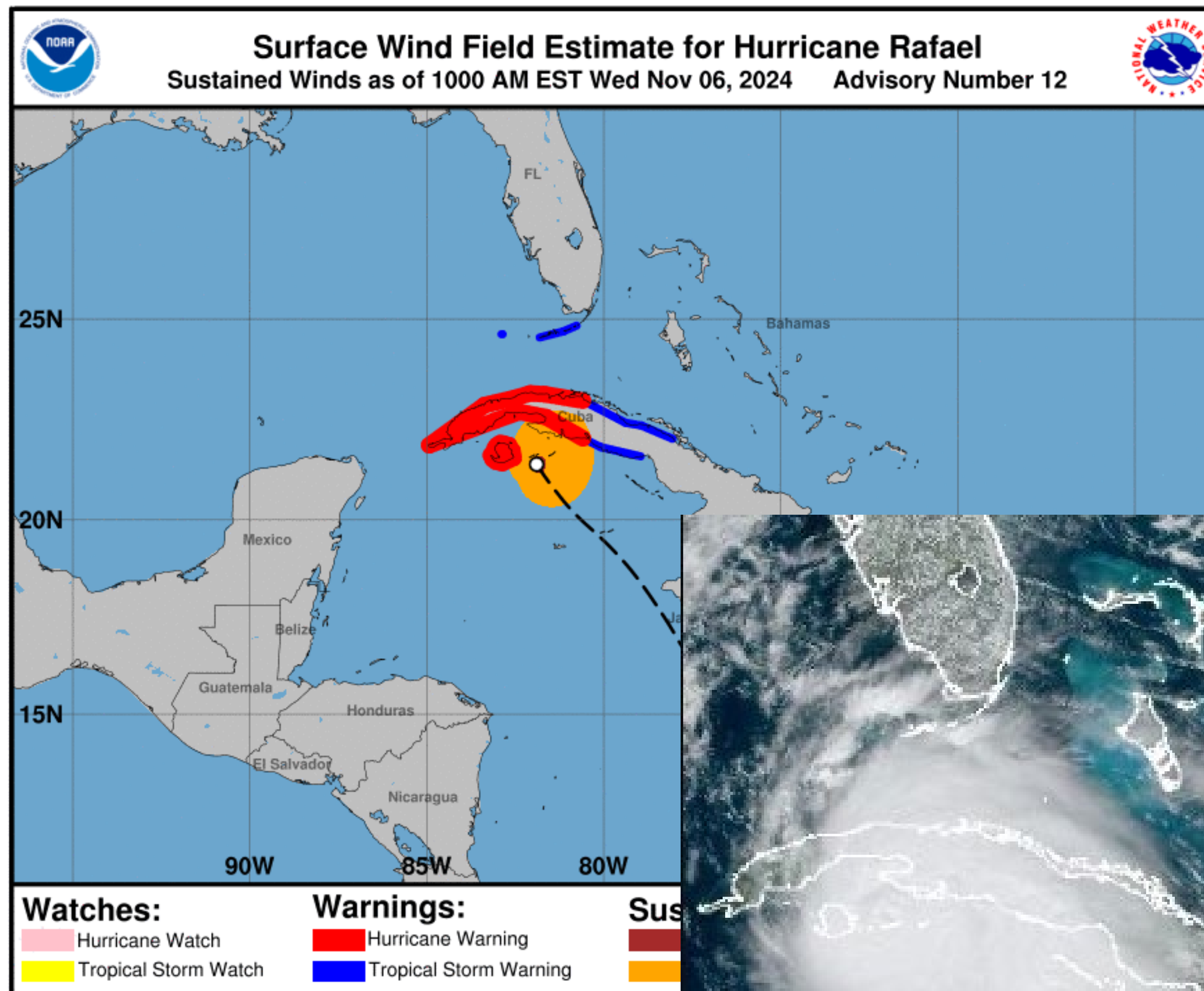


# Situation Overview

## Hurricane Rafael



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...**RAFAEL EXPECTED TO BECOME A MAJOR HURRICANE BEFORE LANDFALL IN WESTERN CUBA...**

SUMMARY OF 1000 AM EST...1500 UTC...INFORMATION

LOCATION 21.4N 81.9W  
ABOUT 115 NMI SSE OF HAVANA CUBA  
MAXIMUM SUSTAINED WINDS 95 KT  
PRESENT MOVEMENT...NW AT 12 KT

SIZE

64 KT.....15NE 15SE 10SW 10NW.  
34 KT.....100NE 80SE 40SW 50NW.  
12 FT SEAS.. 90NE 90SE 60SW 60NW

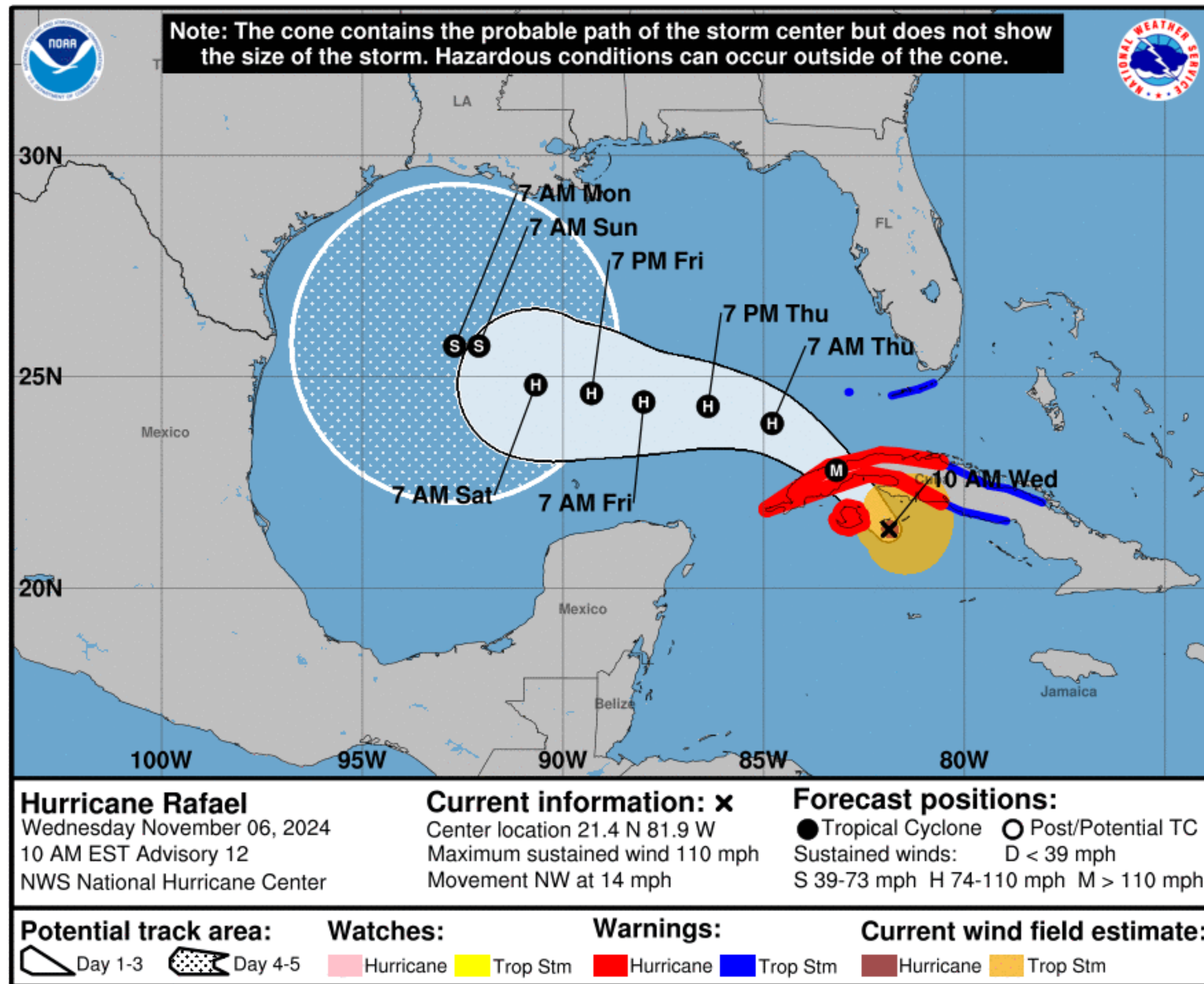


# Forecast Information

## Hurricane Rafael



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

- **General NW motion anticipated over the next day or two, followed by a gradual WNW turn in the Gulf of Mexico**
- **Crossing Cuba as a Major Hurricane today**
- **Moving into the SE Gulf as a Hurricane tonight**
- **Will remain as a Hurricane as it moves across the SE Gulf through Friday night**
- **Rafael forecast to weaken to a Tropical Storm over the NW Gulf offshores by Sunday morning**
- **High uncertainty in track remains for Sunday and Monday**

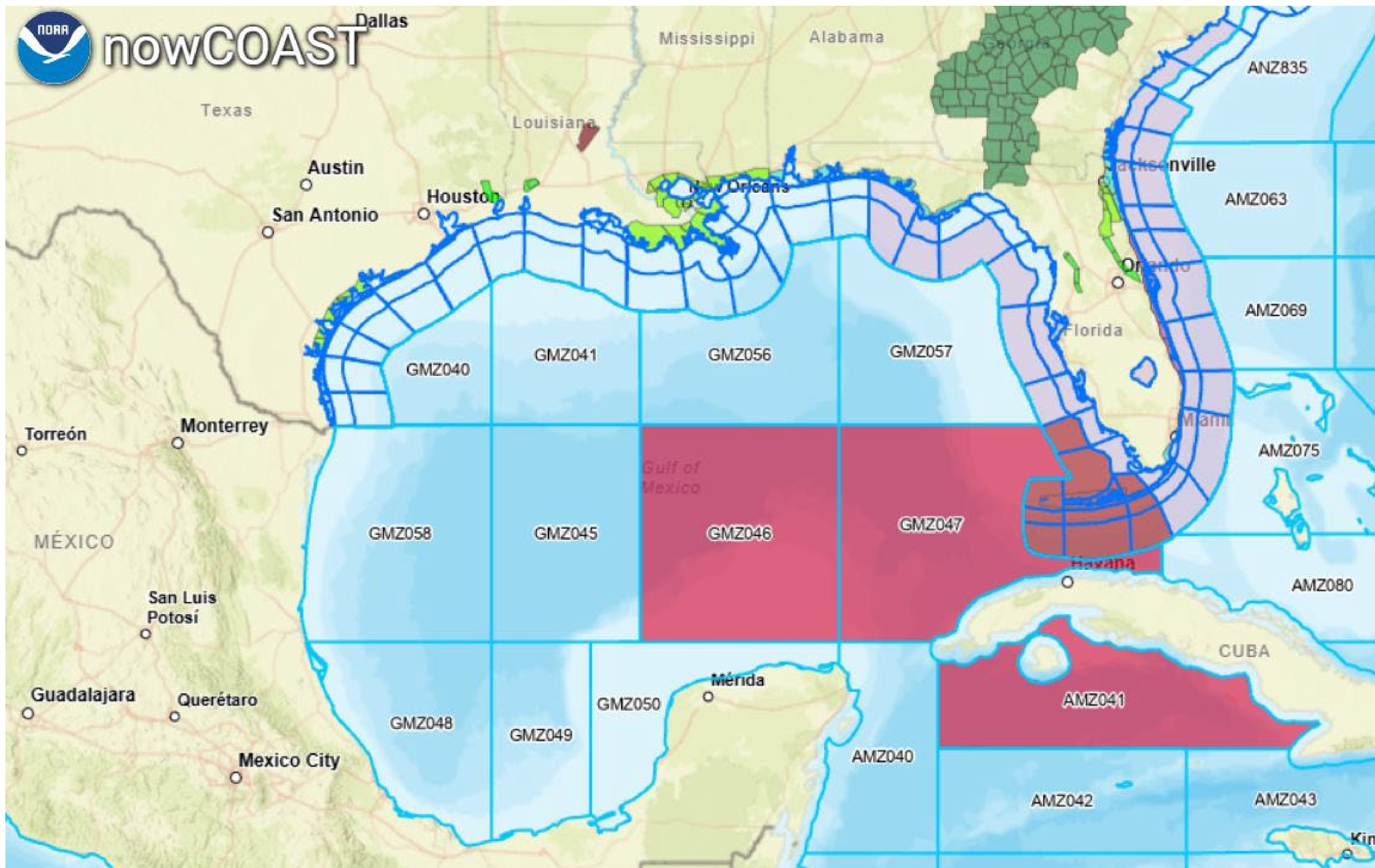


# Hazards Map

Hurricane Rafael



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NWS National Hurricane Center

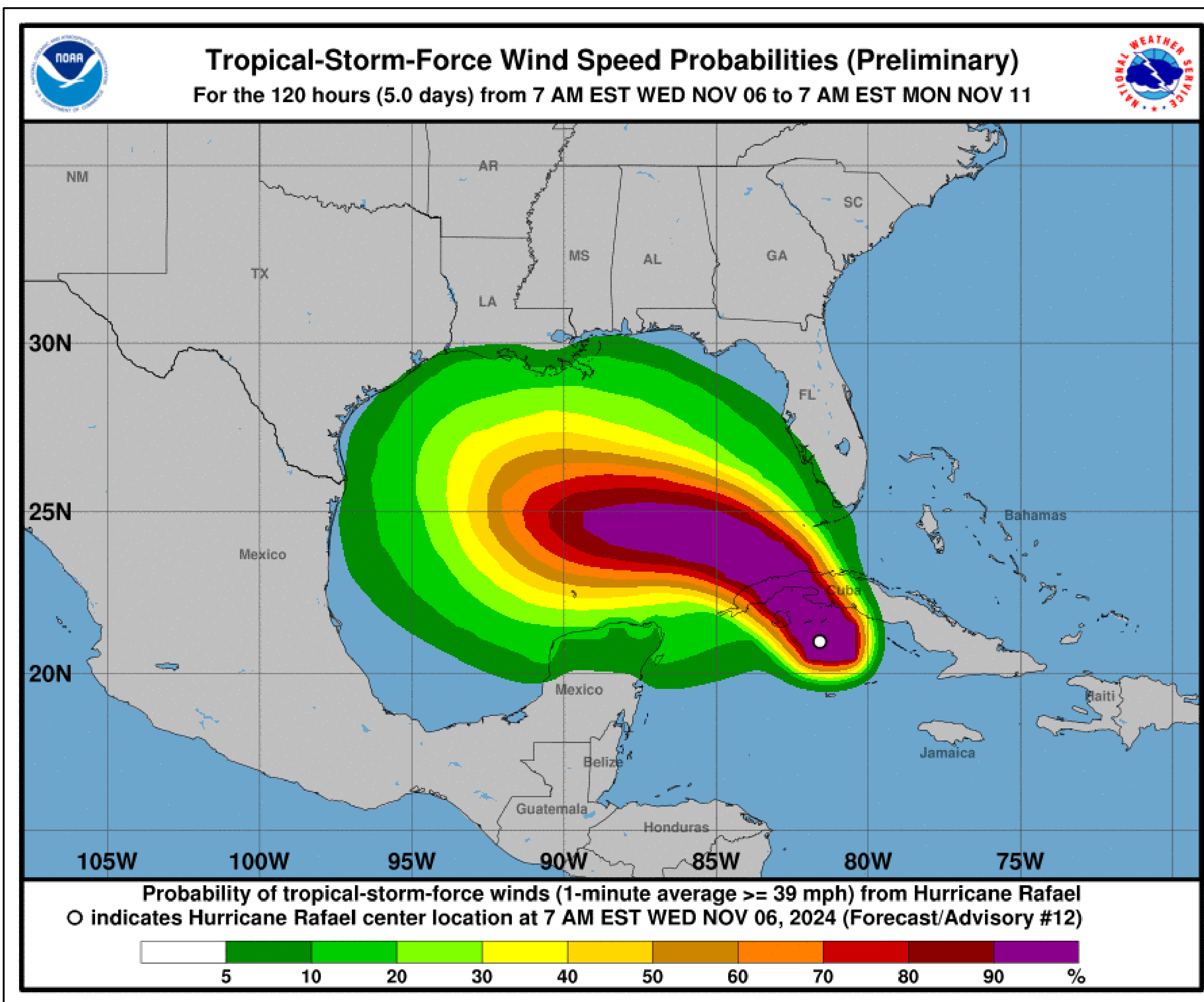


# T.S. Wind Speed Probabilities

Hurricane Rafael



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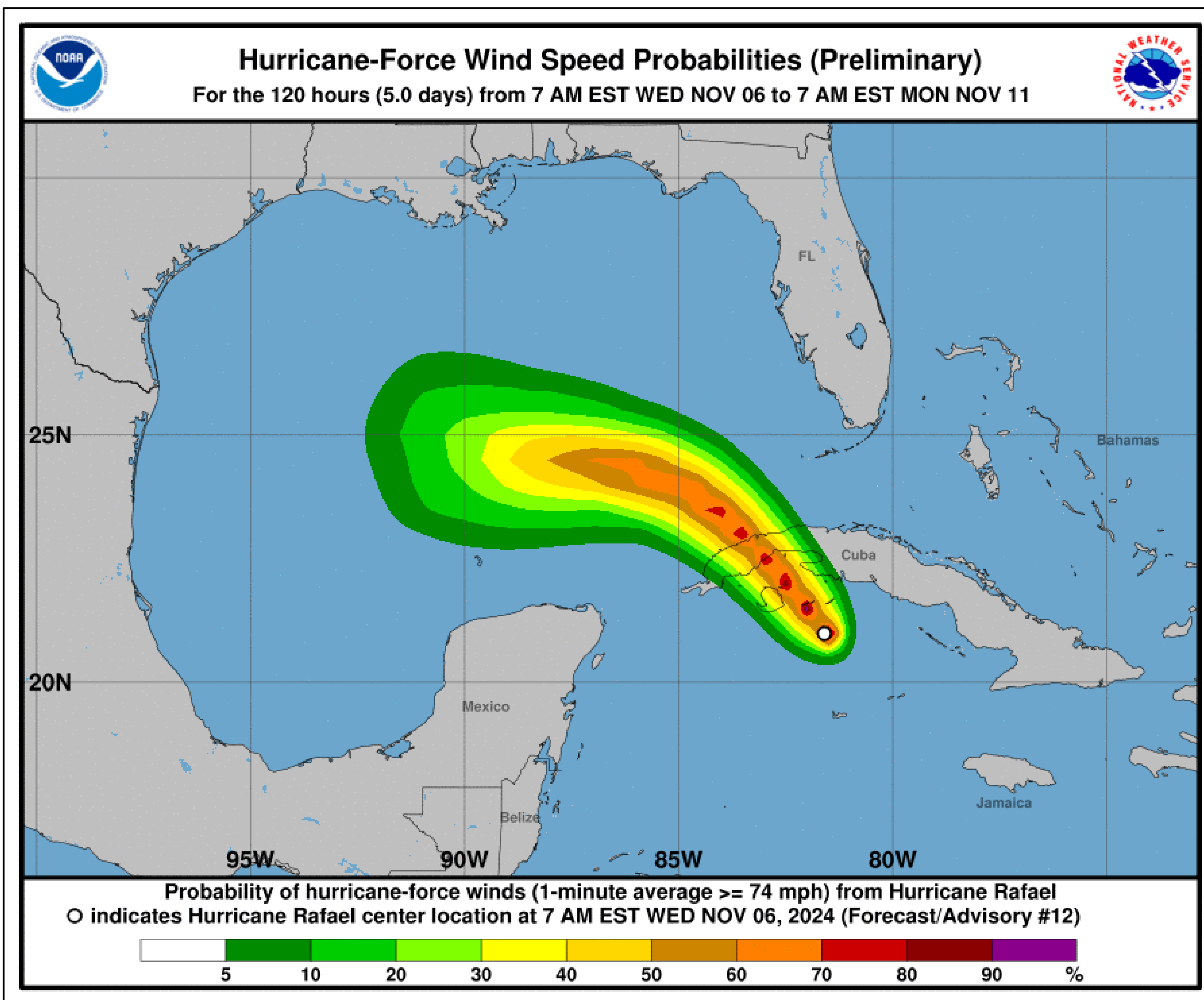
- Buras, LA – 5%
- Cameron, LA – 10%
- Galveston, TX – 10%
- Matagorda, TX – 10%
- Port O Connor – 10%
- Probabilities of sustained tropical storm force winds (34 kt to 63 kt) over the next 5 days, based off this cyclone's wind radii and track.
- Clear or dark green are the lowest chances of 0-30%.
- Yellow to orange is 31-70%
- Red through purple are the highest probabilities of 71%-100%

# Hurricane Wind Speed Probabilities

Hurricane Rafael



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NWS National Hurricane Center

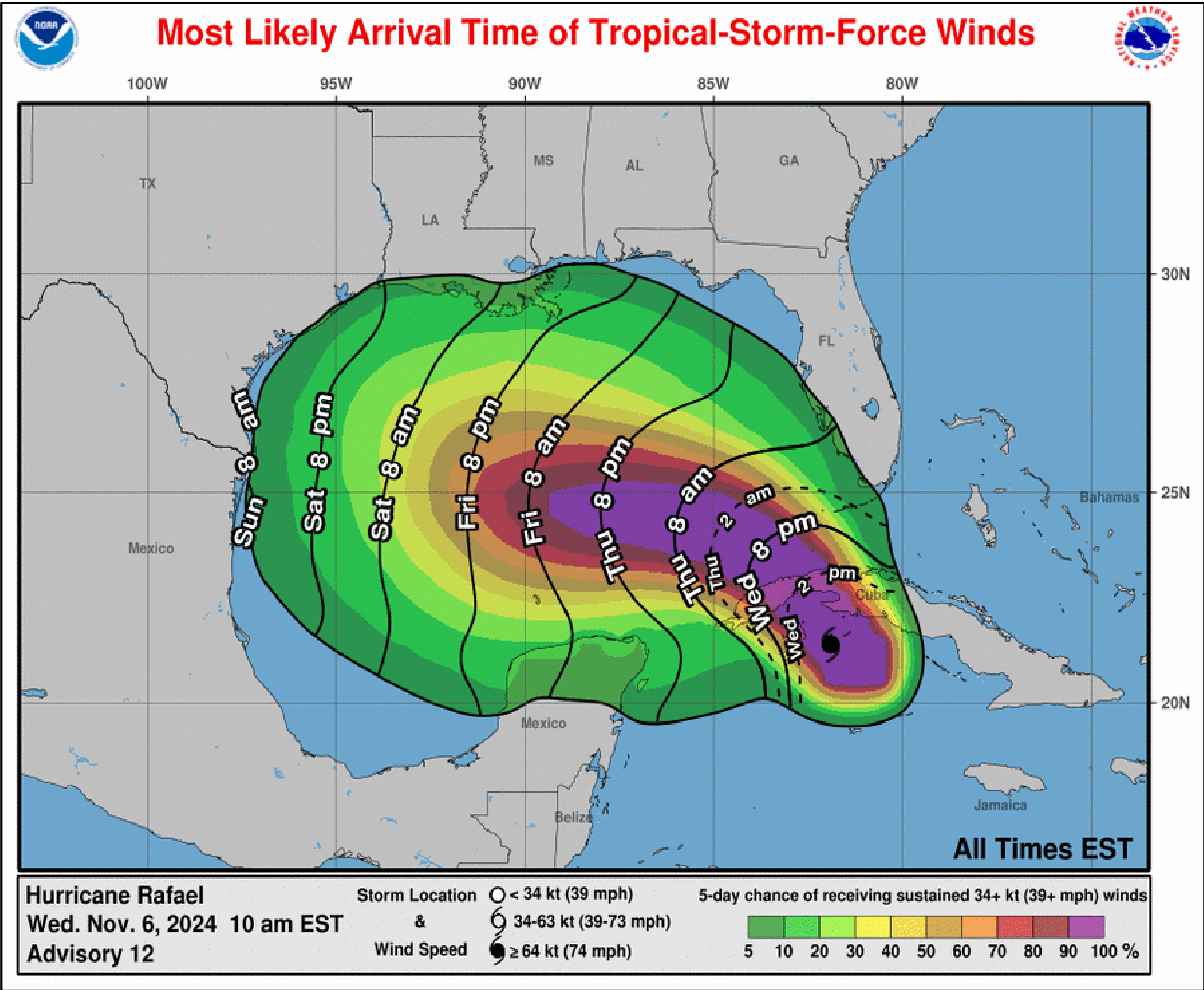


- Risk of Hurricane Force Winds over land remains less than 5%
- Probabilities of sustained hurricane force winds (64 kt +) over the next 5 days, based off this cyclone's wind radii and track.
- Clear or dark green are the lowest chances of 0-30%.
- Yellow to orange is 31-70%
- Red through purple are the highest probabilities of 71%-100%





Hurricane Rafael



- **AL/MS/LA – Friday night**
- **Texas – Saturday 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%

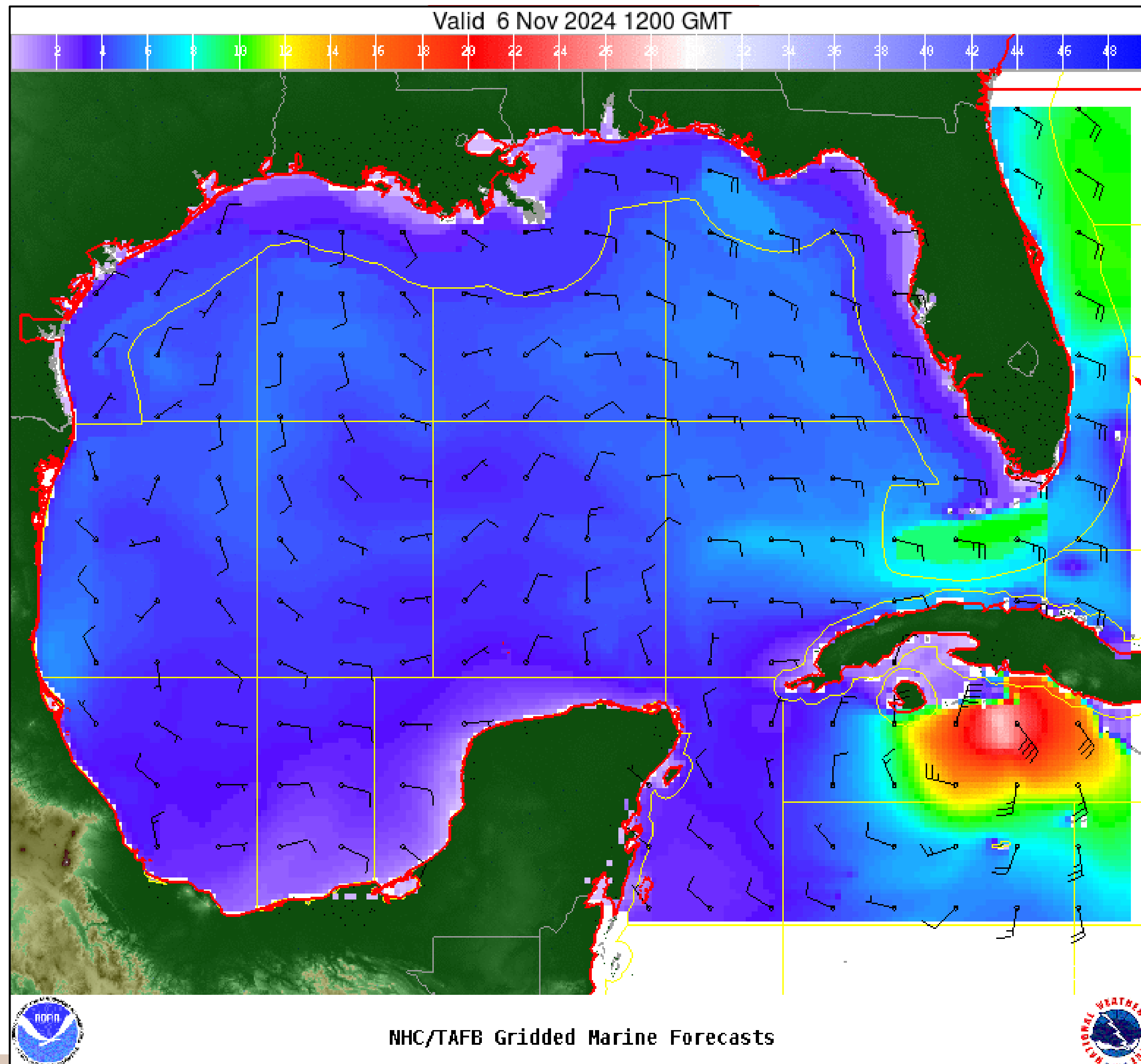


# Wind And Waves

## Hurricane Rafael



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NWS National Hurricane Center



## Current Conditions

6am CST Wednesday November 6<sup>th</sup>

Peak Winds: 25 kt (in Straits of Florida)

Peak Seas: 10 ft (in Straits of Florida)

- Wave heights are in feet



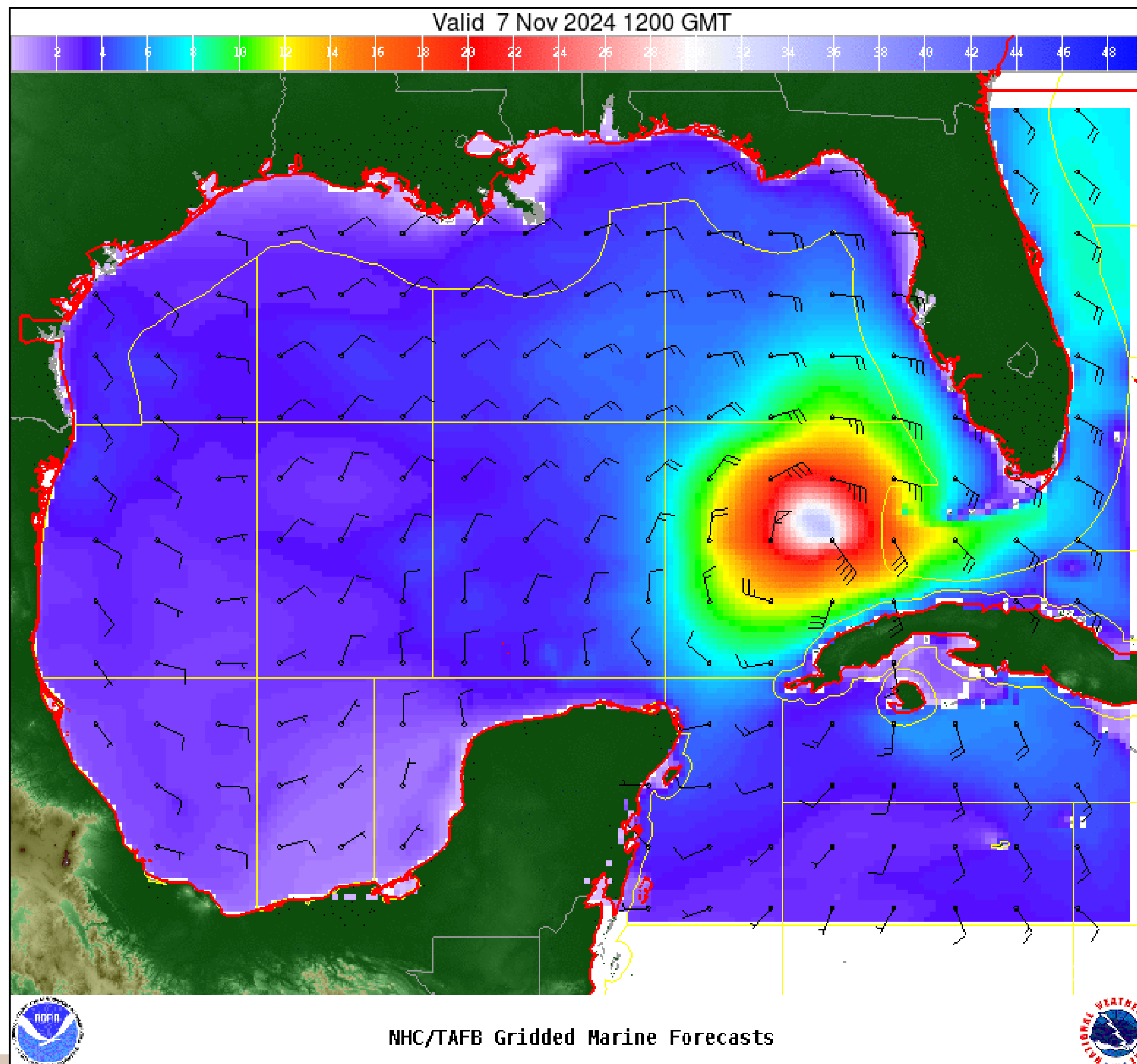
Significant Wave Height (ft)

# Wind And Waves

Hurricane Rafael



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24 Hour Forecast

6am CST Thursday November 7th

Peak Winds: 90 kt

Peak Seas: 34 ft

■ Wave heights are in feet



Significant Wave Height (ft)

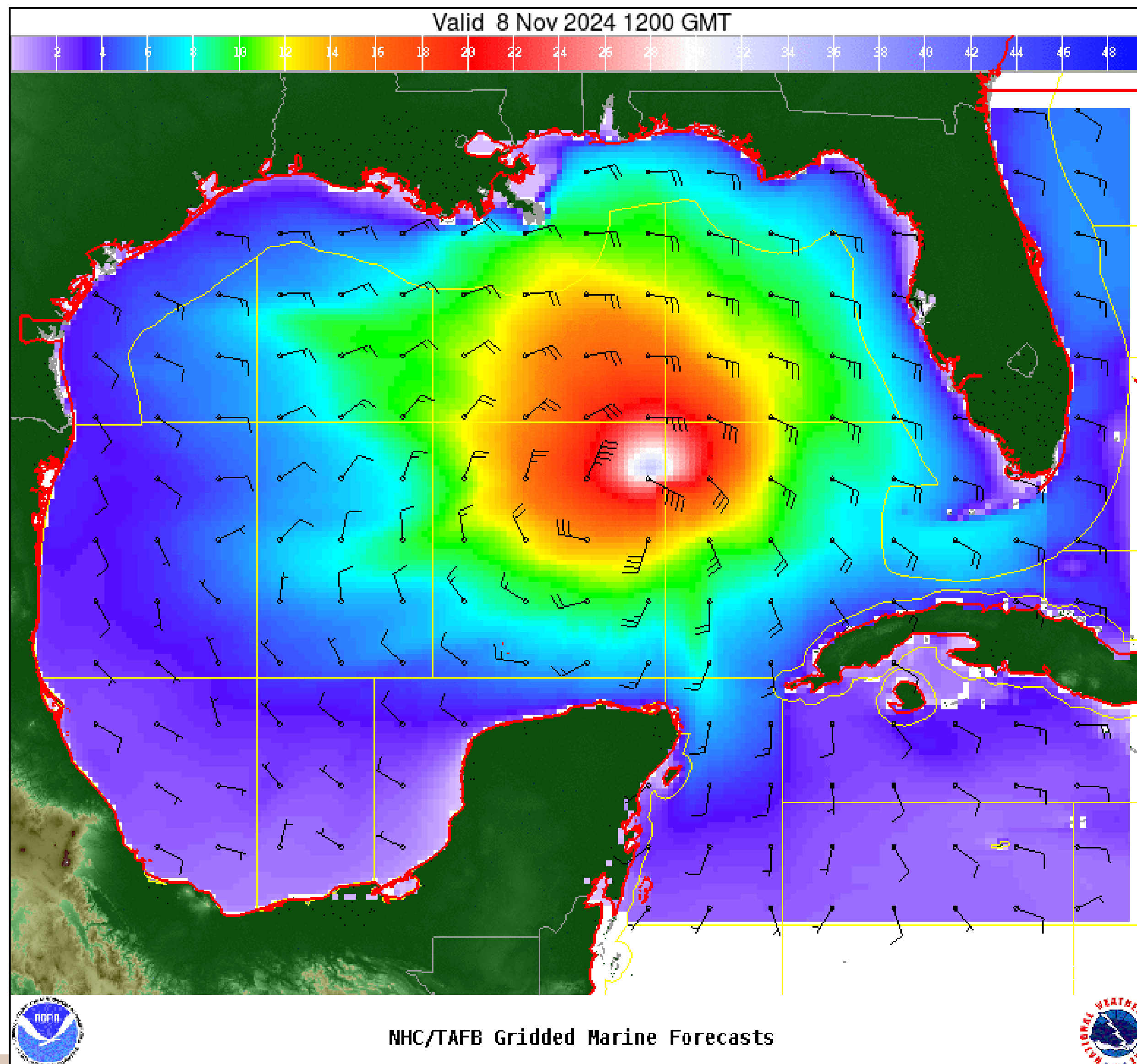


# Wind And Waves

Hurricane Rafael



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48 Hour Forecast

6am CST Friday November 8th

Peak Winds: 85 kt

Peak Seas: 34 ft

■ Wave heights are in feet



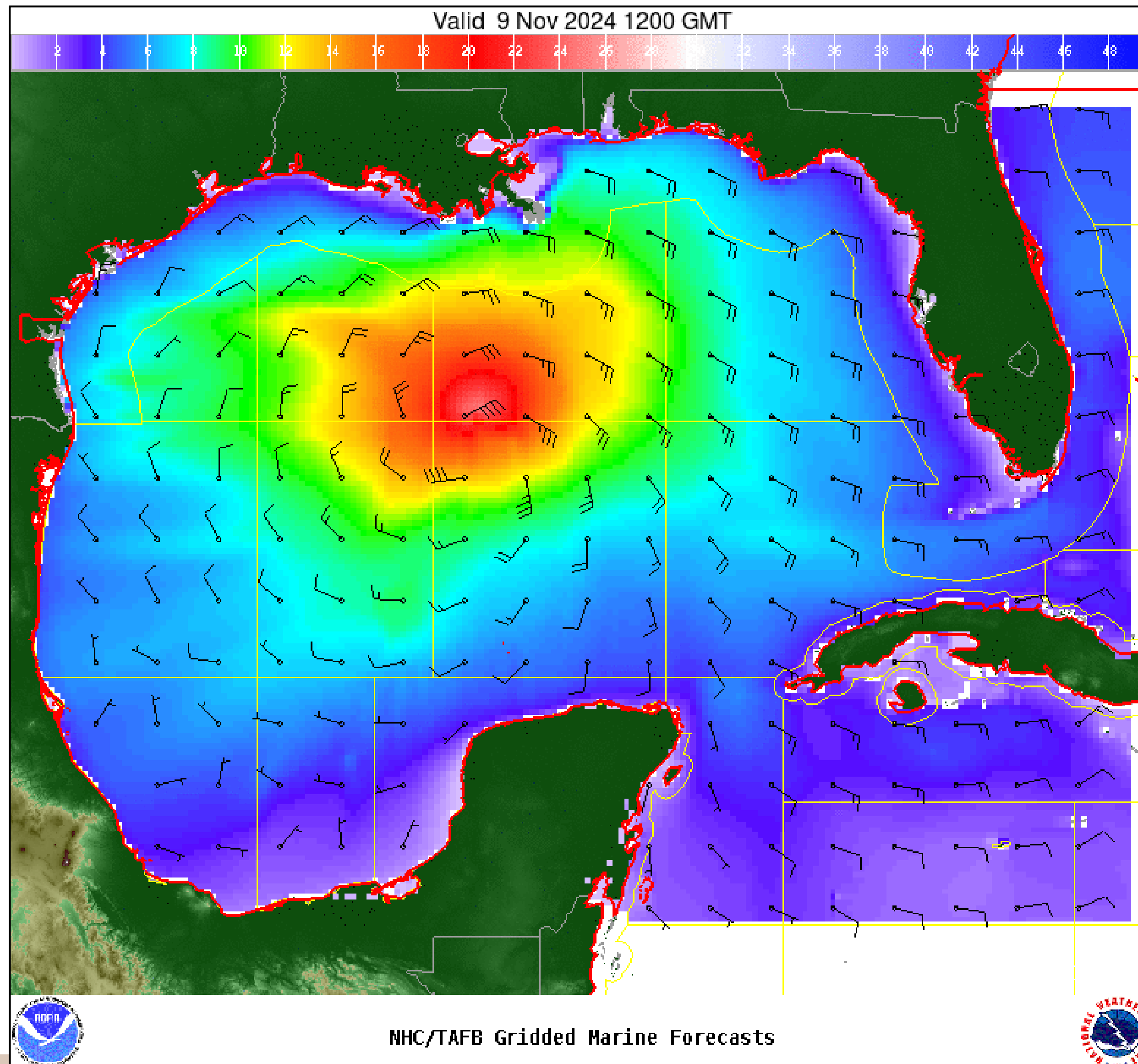
Significant Wave Height (ft)

# Wind And Waves

Hurricane Rafael



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72 Hour Forecast

6am CST Saturday November 9th

Peak Winds: 70 kt

Peak Seas: 24 ft

■ Wave heights are in feet



Significant Wave Height (ft)

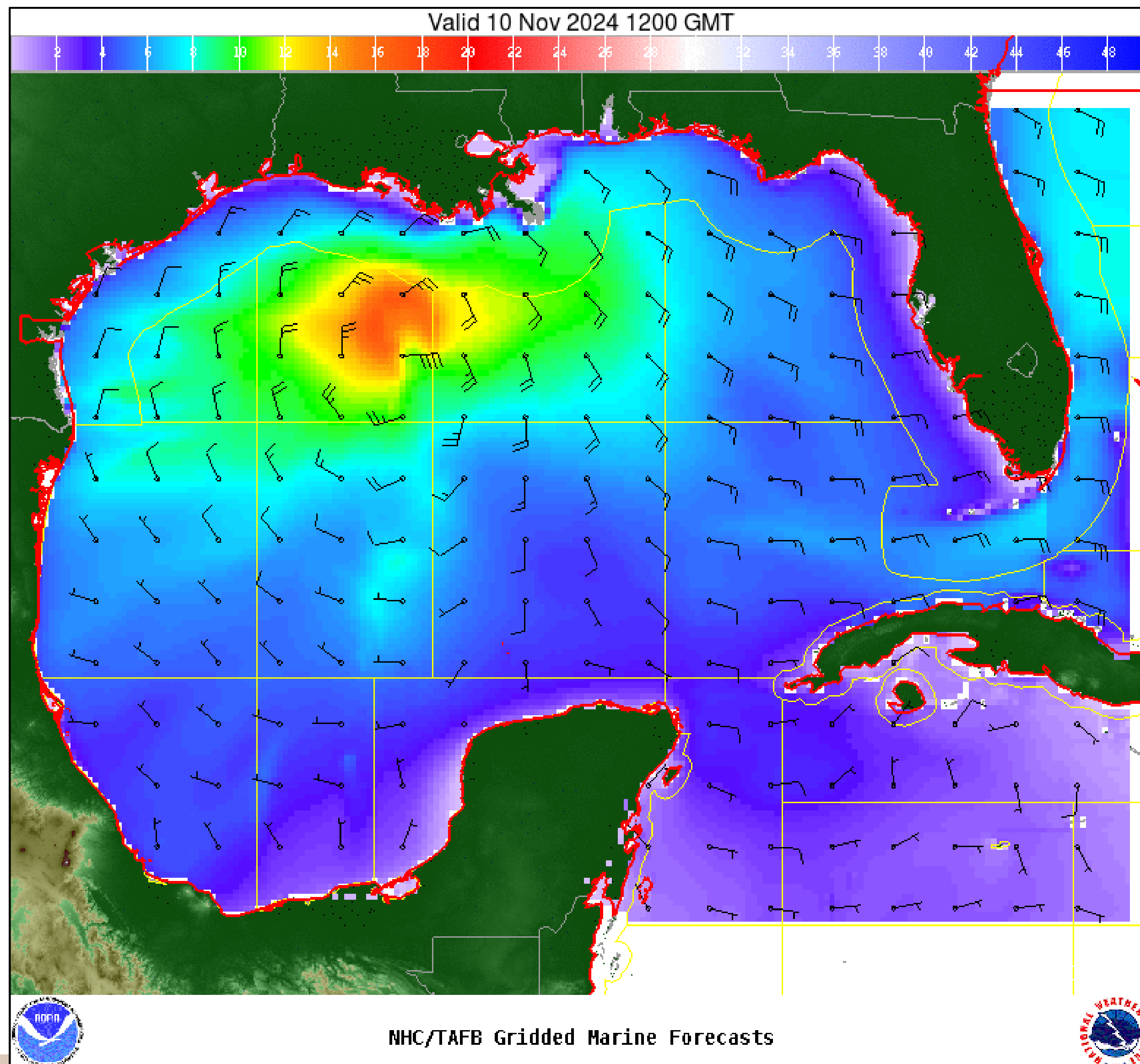


# Wind And Waves

Hurricane Rafael



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96 Hour Forecast

6am CST Sunday November 10th

Peak Winds: 50 kt

Peak Seas: 17 ft

■ Wave heights are in feet



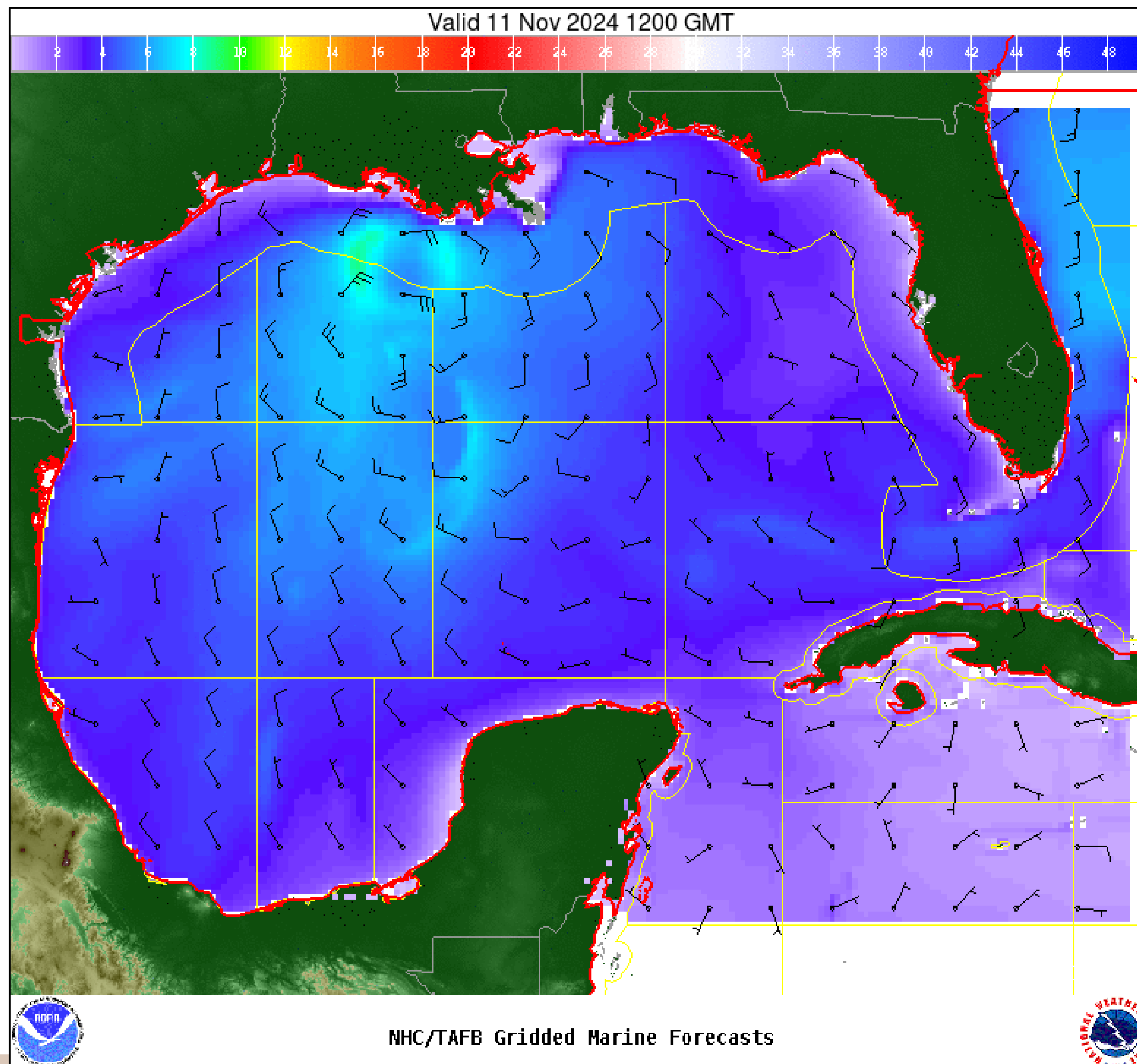
Significant Wave Height (ft)

# Wind And Waves

Hurricane Rafael



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120 Hour Forecast

6am CST Monday November 11th

Peak Winds: 35 kt

Peak Seas: 9 ft

■ Wave heights are in feet



Significant Wave Height (ft)



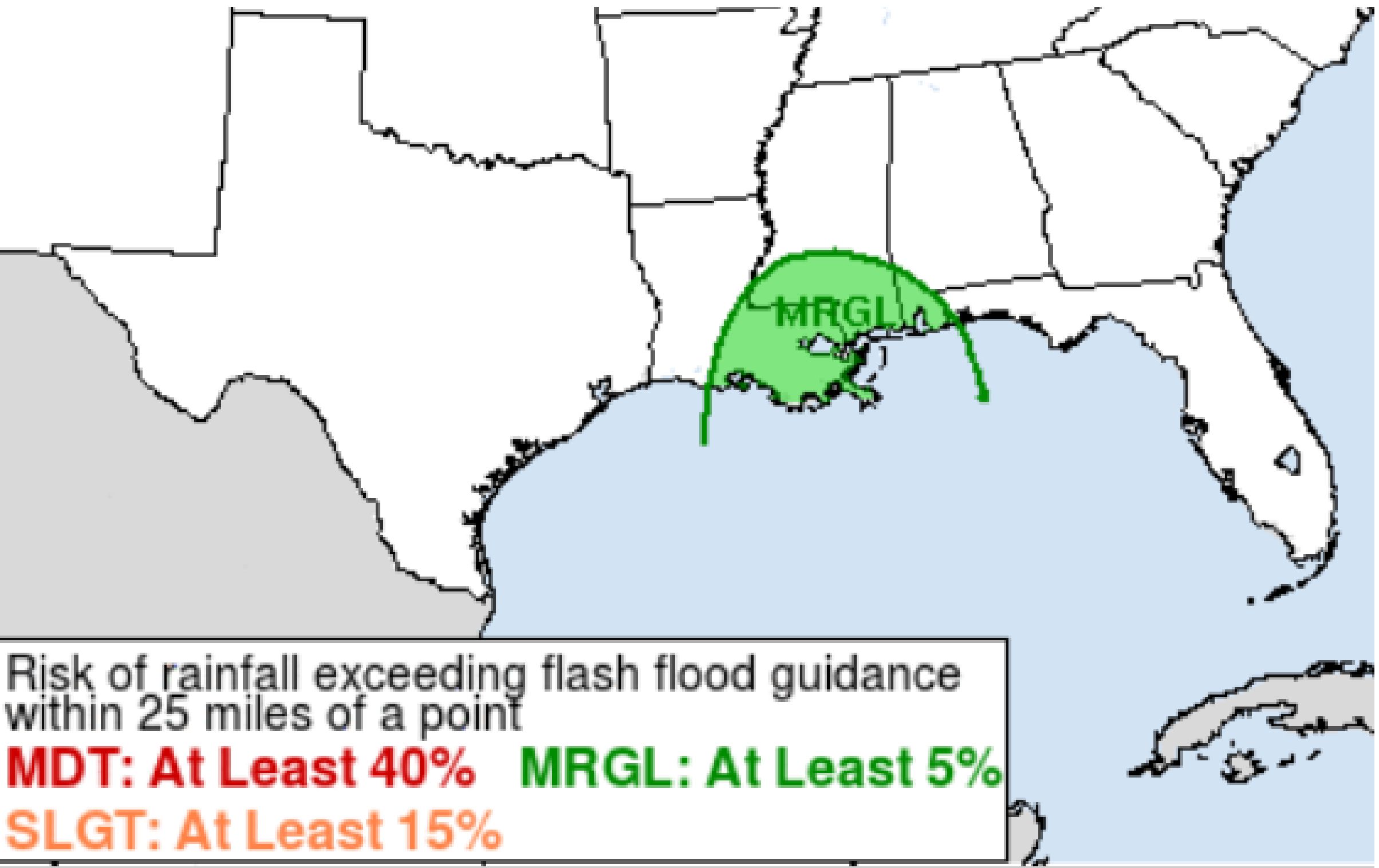
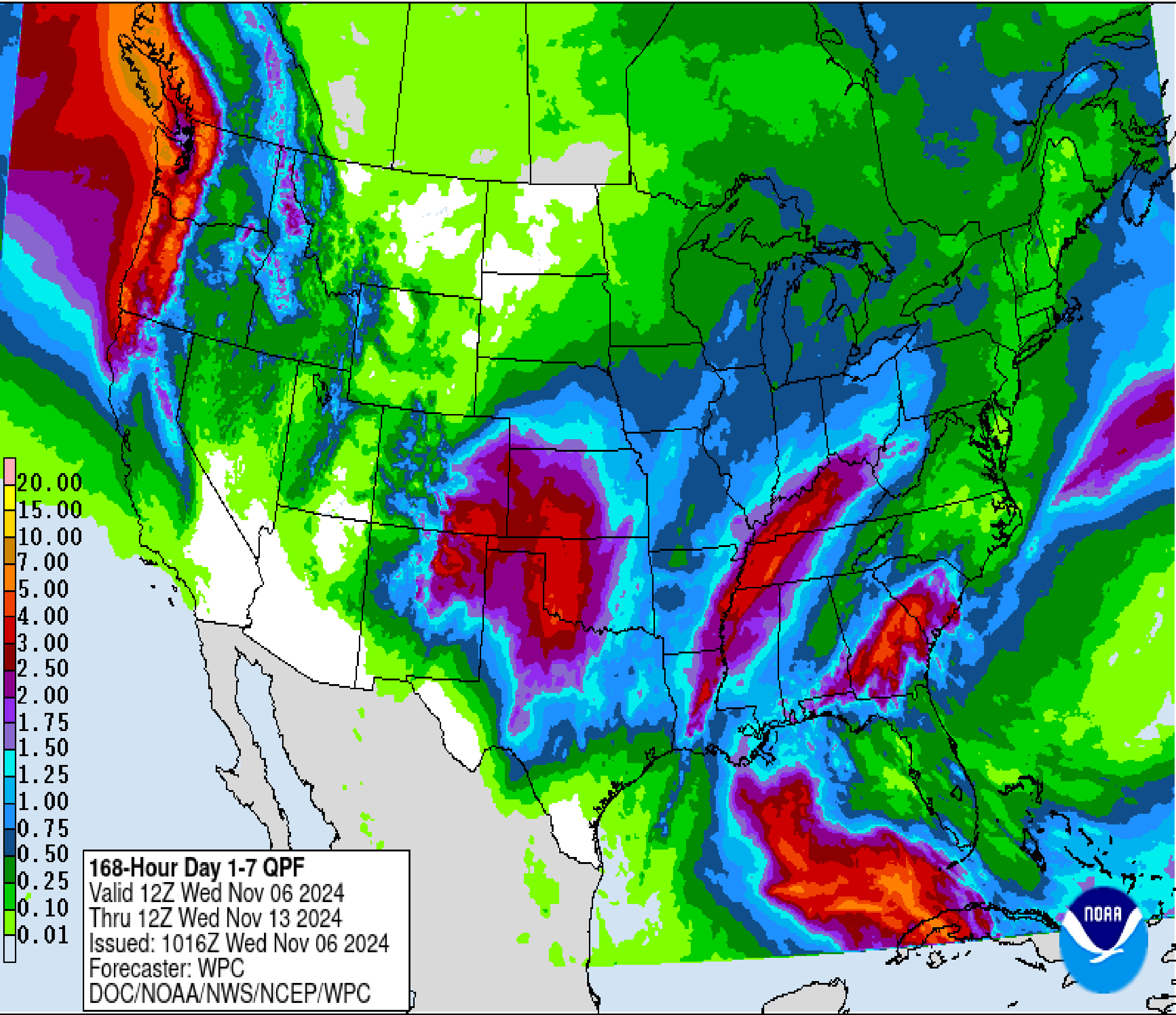
# Expected Storm Total Rainfall and Chance of Rainfall Flooding

Hurricane Rafael

Images from NWS Weather Prediction Center



Tropical Analysis and Forecast Branch  
NWS National Hurricane Center



**Day 5 Excessive Rainfall Outlook**  
Valid 12Z Sun Nov 10 2024  
Thru 12Z Mon Nov 11 2024  
Issued: 0821Z Wed Nov 06 2024  
Forecaster: RAUSCH  
DOC/NOAA/NWS/NCEP/WPC

# Key Messages

## Hurricane Rafael



Tropical Analysis and Forecast Branch  
NWS National Hurricane Center

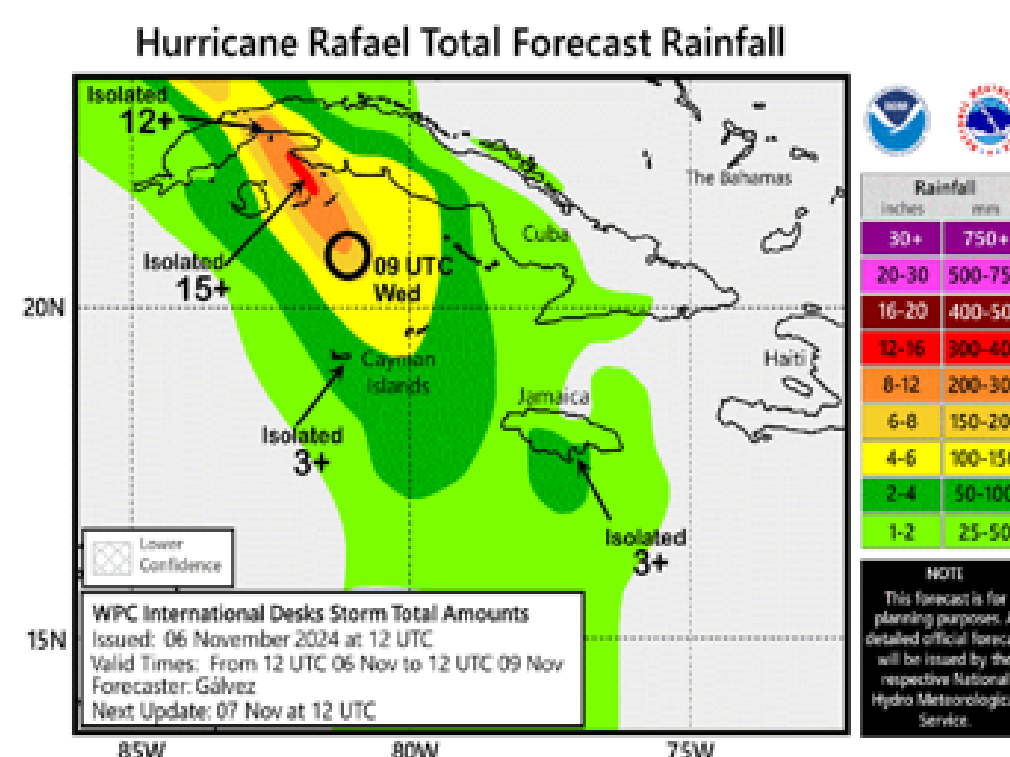
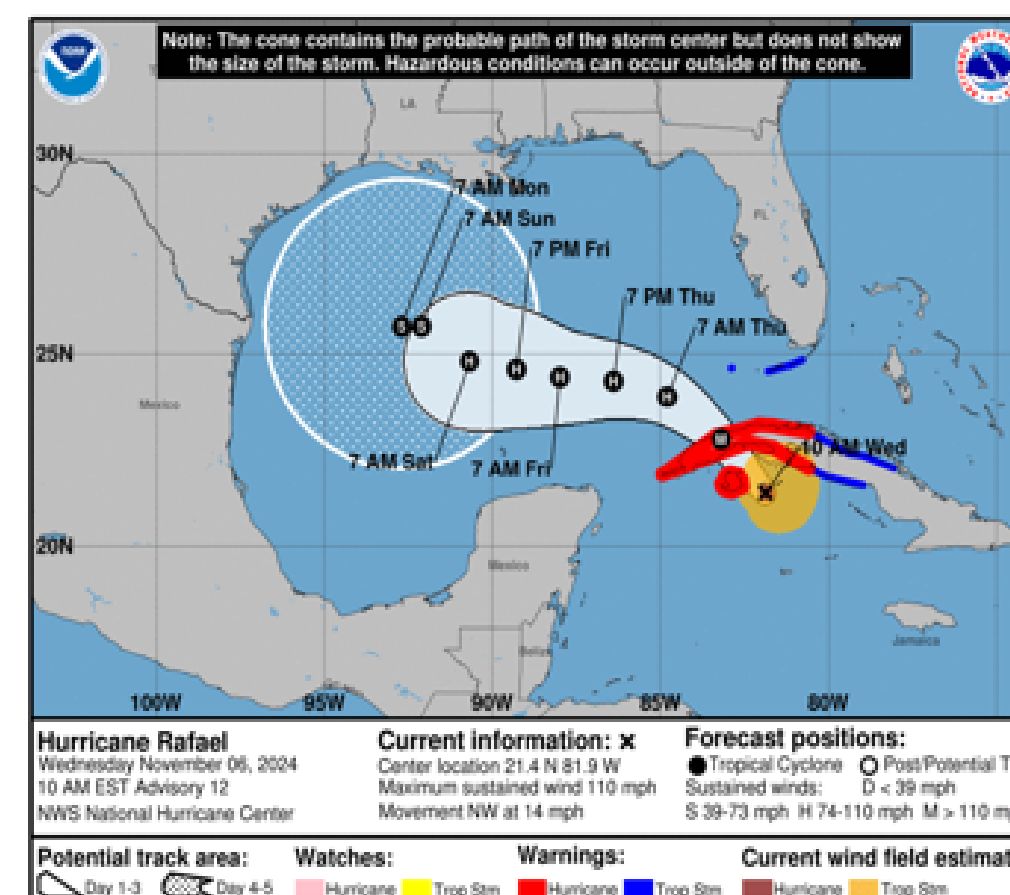


### Key Messages for Hurricane Rafael

Advisory 12: 10:00 AM EST Wed Nov 06, 2024

1. Rafael is forecast to become a major hurricane before it reaches western Cuba and the Isle of Youth. A hurricane warning is in effect for this region, where a life-threatening storm surge, damaging hurricane-force winds, and destructive waves are expected.
2. Tropical-storm-force winds, especially in gusts, are expected in the Lower and Middle Florida Keys beginning later today and tonight.
3. Rafael will bring areas of heavy rain to the Cayman Islands and western Cuba through Thursday. Flash flooding and mudslides are expected in areas of higher terrain in western Cuba.
4. It is too soon to determine what, if any, impacts Rafael could bring to portions of the western Gulf Coast. Residents in this area should regularly monitor updates to the forecast.

For more information go to [hurricanes.gov](https://hurricanes.gov)



### IMPACTS FOR D8

Winds/US Coast – Low

Winds/SRR – High

Waves/US Coastal – Low

Waves/SRR – High

US Storm Surge – Unknown

US Rainfall/Flash Flooding – Low

US Tornadoes – Unknown

### Marine Key Messages:

- Winds and Seas will ramp up quickly in the SE Gulf of Mexico today
- Hurricane force winds expected in the SE Gulf tonight through Friday night with Peak waves to 36 ft
- Seas over D8 waters will diminish by Sunday



**TIME of NEXT NHC Advisory:**

**21 UTC/ 3 PM CST**



This briefing was prepared by:

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# HURRICANE 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](http://www.hurricanes.gov)*



NHC\_TAFB

[www.nhc.noaa.gov](http://www.nhc.noaa.gov)