

**IMPACTS FOR D7**

**Winds/US Coast – Extreme**

**Winds/SRR – Extreme**

**Waves/US Coastal – Extreme**

**Waves/SRR – Extreme**

through next 5 days

**US Storm Surge – Extreme**

**US Rainfall/Flash Flooding – Extreme**

**US Tornadoes – High**

# HURRICANE HELENE BRIEFING



9:00 AM EDT

Thursday, September 26, 2024

Prepared by:

**Keren Rosado-Vázquez**

*Tropical Analysis and Forecast Branch  
NWS National Hurricane Center*





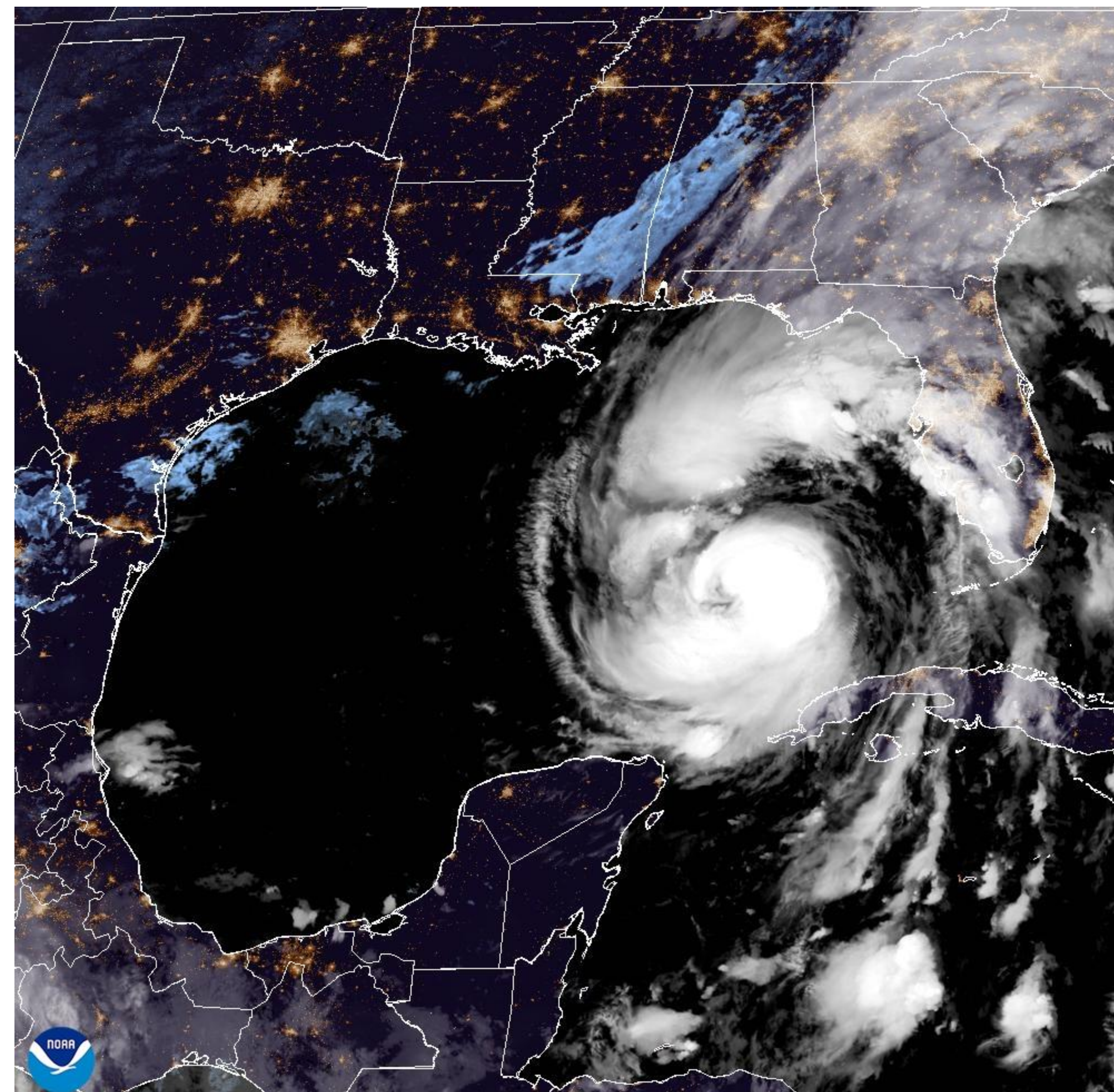
# Changes Since The Last Briefing

Hurricane Helene



Tropical Analysis and Forecast Branch  
NWS National Hurricane Center

- Helene is now a Category 2 hurricane.
- Helene will likely rapidly intensify and be Category 3 or 4 at the time of landfall.
- Storm Surge peak values were raised.
- Flooding Rain threat has increased for portions of the Florida Panhandle.



26 Sep 2024 11:21Z - NOAA/NESDIS/STAR - GOES-East - GEOCOLOR Composite - GM

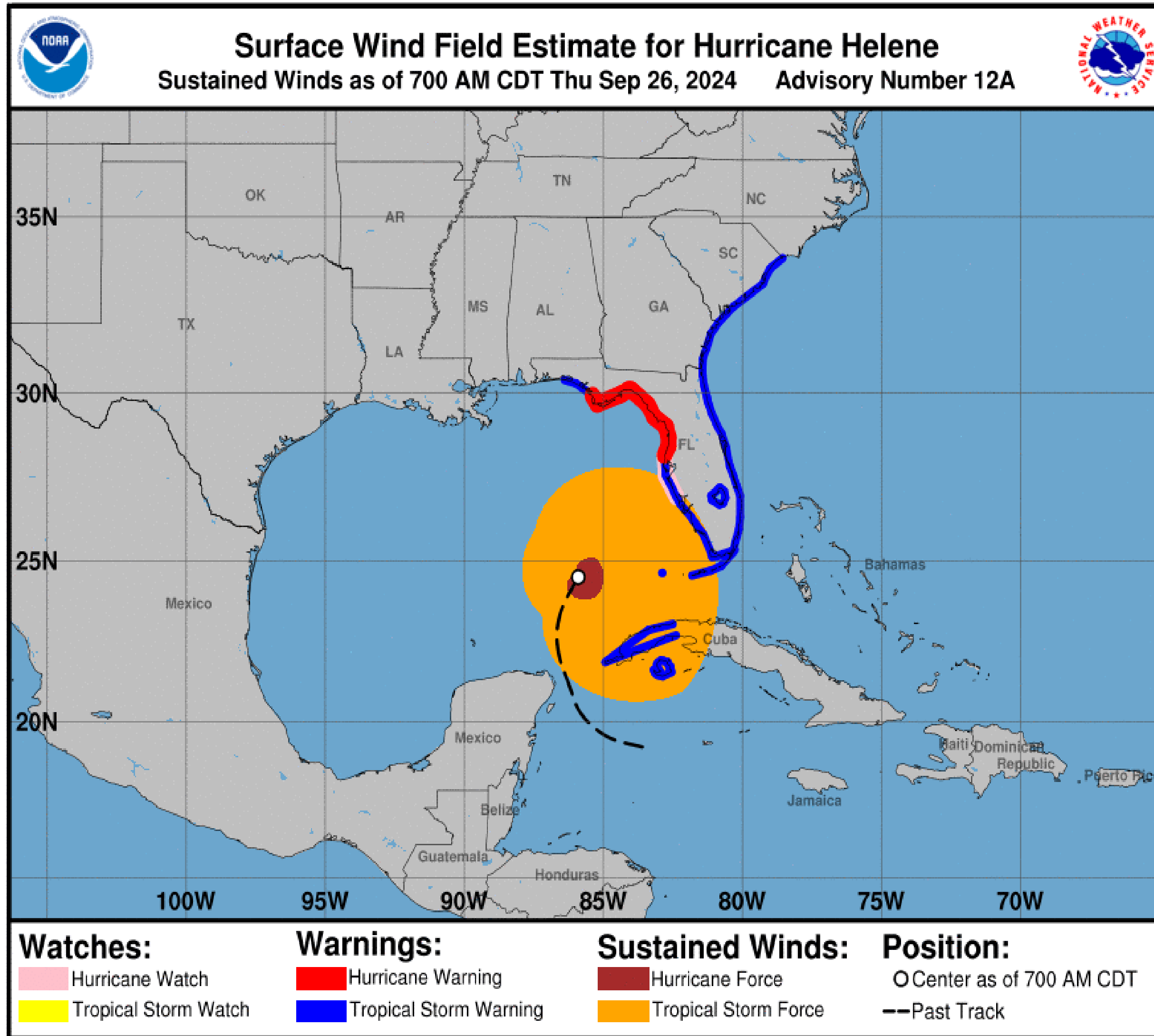


# Situation Overview

Hurricane Helene



Tropical Analysis and Forecast Branch  
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**...HELENE BECOMES A CATEGORY 2 HURRICANE WITH SIGNIFICANT ADDITIONAL STRENGTHENING EXPECTED BEFORE LANDFALL IN FLORIDA...  
...PREPARATIONS TO PROTECT LIFE AND PROPERTY SHOULD BE RUSHED TO COMPLETION...**

## SUMMARY OF 800 AM EDT.. INFORMATION

LOCATION...24.5N 85.9W  
ABOUT 280 NM...SW OF TAMPA FLORIDA  
ABOUT 320 NM...S OF APALACHICOLA FLORIDA  
MAXIMUM SUSTAINED WINDS...85 KT  
PRESENT MOVEMENT...NNE AT 10 KT

## SIZE

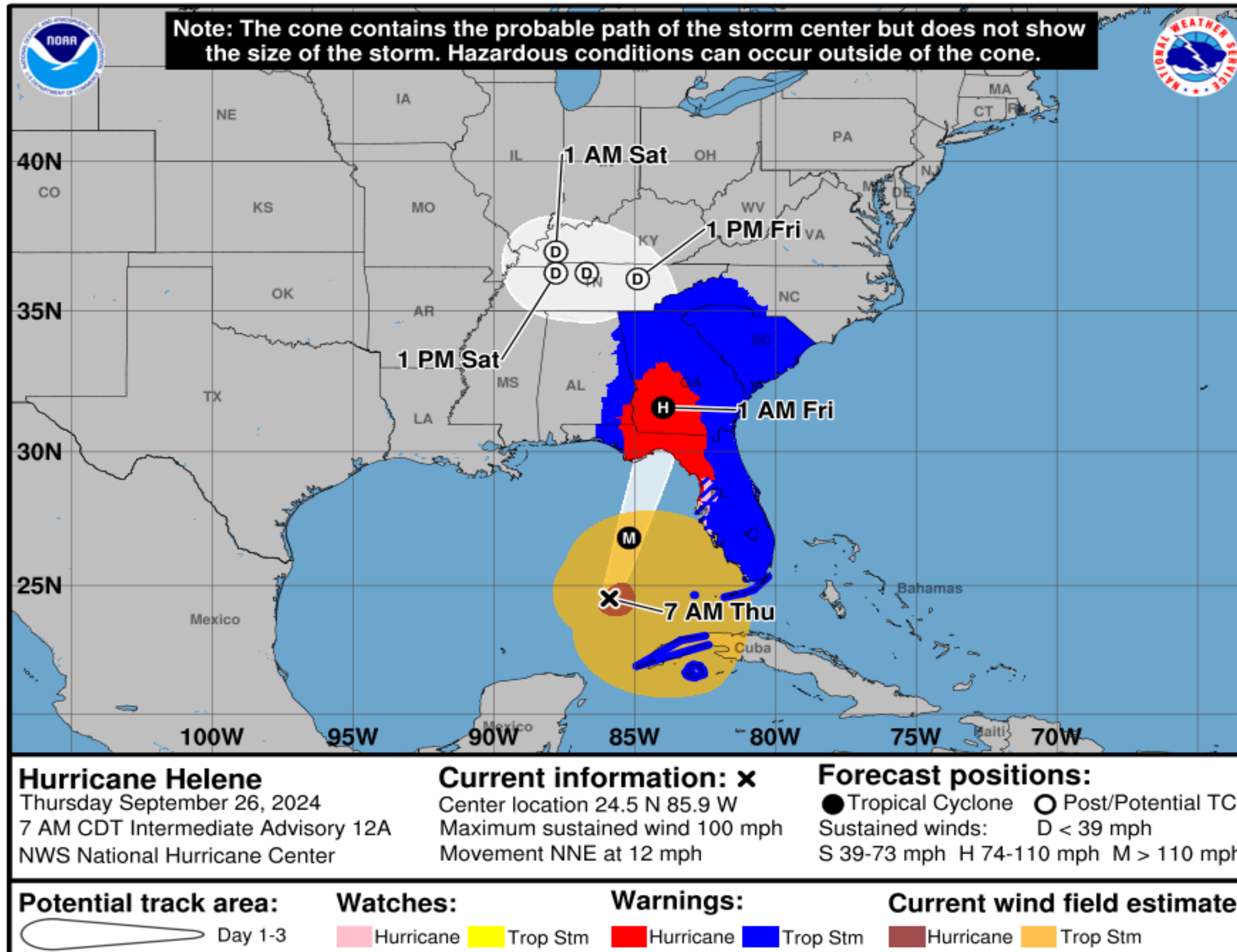
64 KT..... 50NE 50SE 30SW 0NW.  
34 KT.....250NE 300SE 100SW 120NW.  
12 FT SEAS..240NE 270SE 150SW 180NW.

# Forecast Information

## Hurricane Helene



Tropical Analysis and Forecast Branch  
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- Helene's motion toward the north-northeast is expected to continue with a significant increase in forward speed during the next 24 hours.
- On the forecast track, Helene will move across the eastern Gulf of Mexico today and cross the Florida Big Bend coast this evening.
- Additional strengthening is forecast, and Helene is expected to be Category 3 or 4 when it reaches the Florida Big Bend coast this evening.
- Weakening is expected after landfall, but Helene's fast forward speed will allow strong, damaging winds, especially in gusts, to penetrate well inland across the southeastern United States, including over the higher terrain of the southern Appalachians.
- 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.

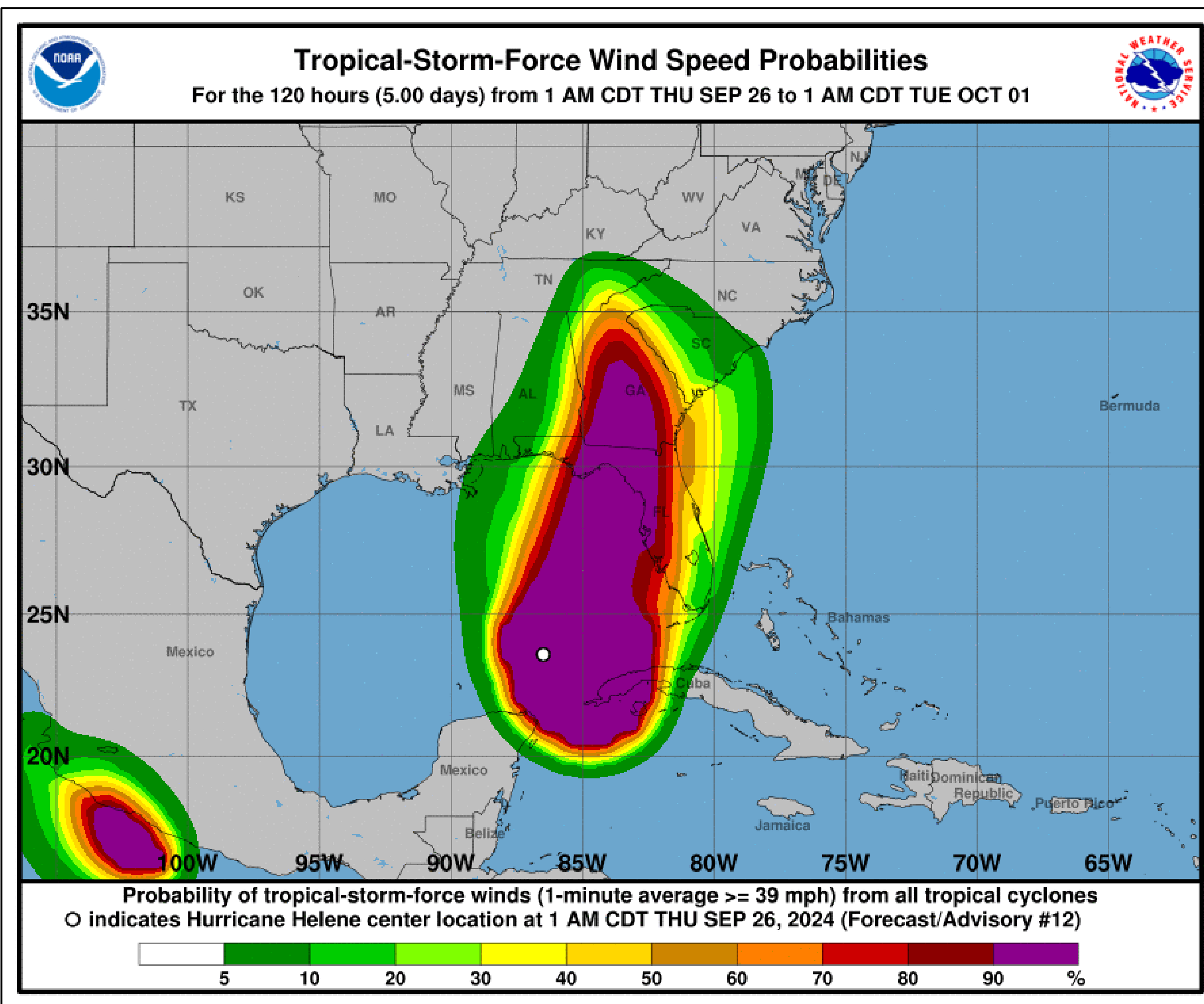


# T.S. Wind Speed Probabilities

Hurricane Helene



Tropical Analysis and Forecast Branch  
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- MARATHON 27%
- KEY WEST FL 48%
- NAPLES 66%**
- FT MYERS 79%**
- VENICE 84%**
- TAMPA FL 87%**
- CEDAR KEY 96%**
- FT LAUDERDALE 19%
- W PALM BEACH 24%
- FT PIERCE 33%
- PATRICK AFB 33%
- COCOA BEACH 42%
- DAYTONA BEACH 47%
- JACKSONVILLE 73%**
- MAYPORT 64%**
- KINGS BAY 66%**
- SAVANNAH 48%
- CHARLESTON 29%

**GREEN** - Probabilities have decreased  
**RED** - Probabilities have gone up  
**BLACK** - Probabilities unchanged  
**Locations** boldfaced & underlined - At least 50% chance of TS Winds

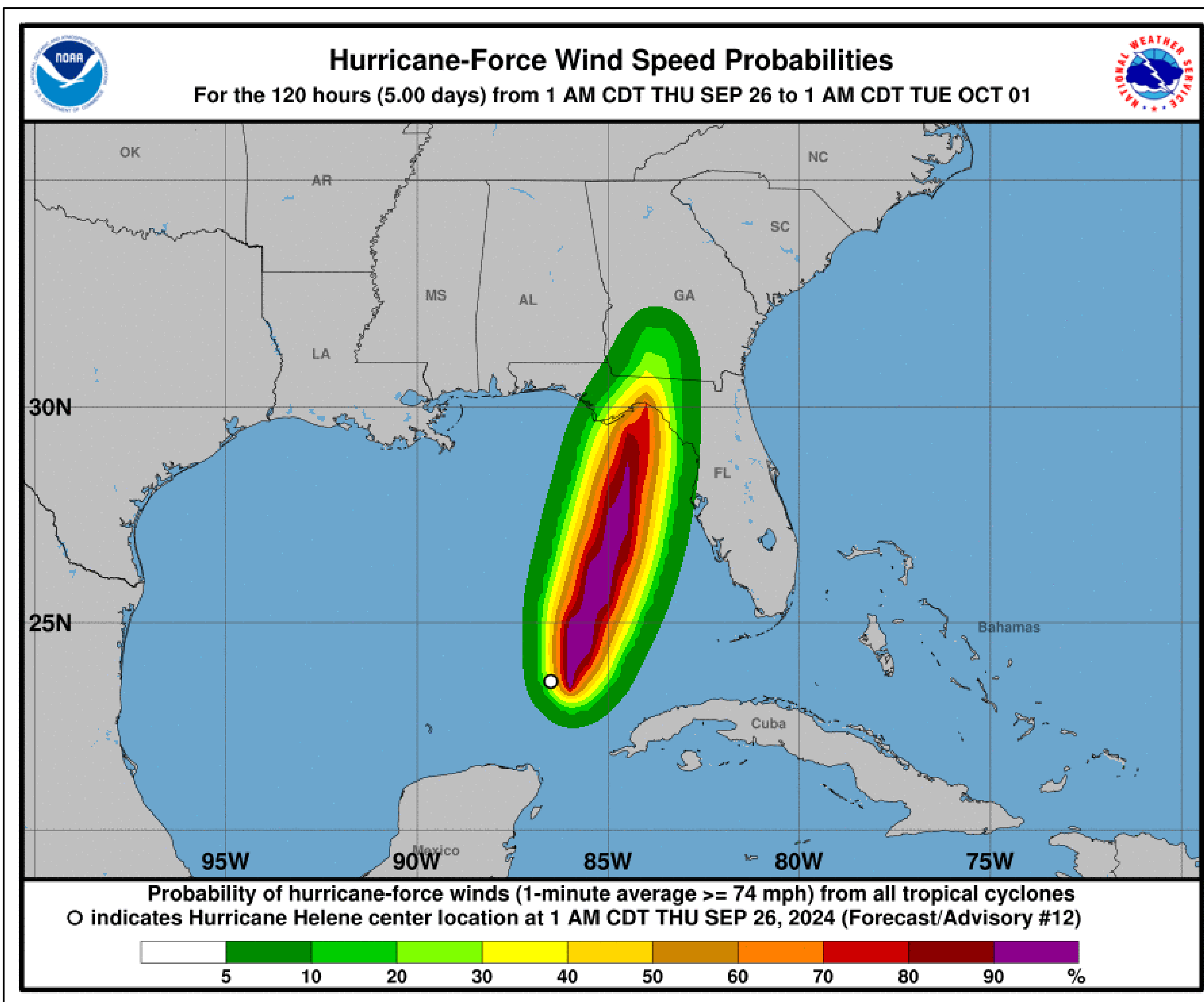
- Probabilities of sustained tropical storm force winds (34 kt to 63 kt) over the next 5 days, based off this cyclone's wind radii and track.
- Clear or dark green are the lowest chances of 0-30%. Yellow to orange is 31-70%. Red through purple are the highest probabilities of 71%-100%.

# Hurricane Wind Speed Probabilities



Tropical Analysis and Forecast Branch  
NWS National Hurricane Center

## Hurricane Helene



- **ST MARKS 39%**
- **APALACHICOLA 36%**
- **PANAMA CITY FL 5%**

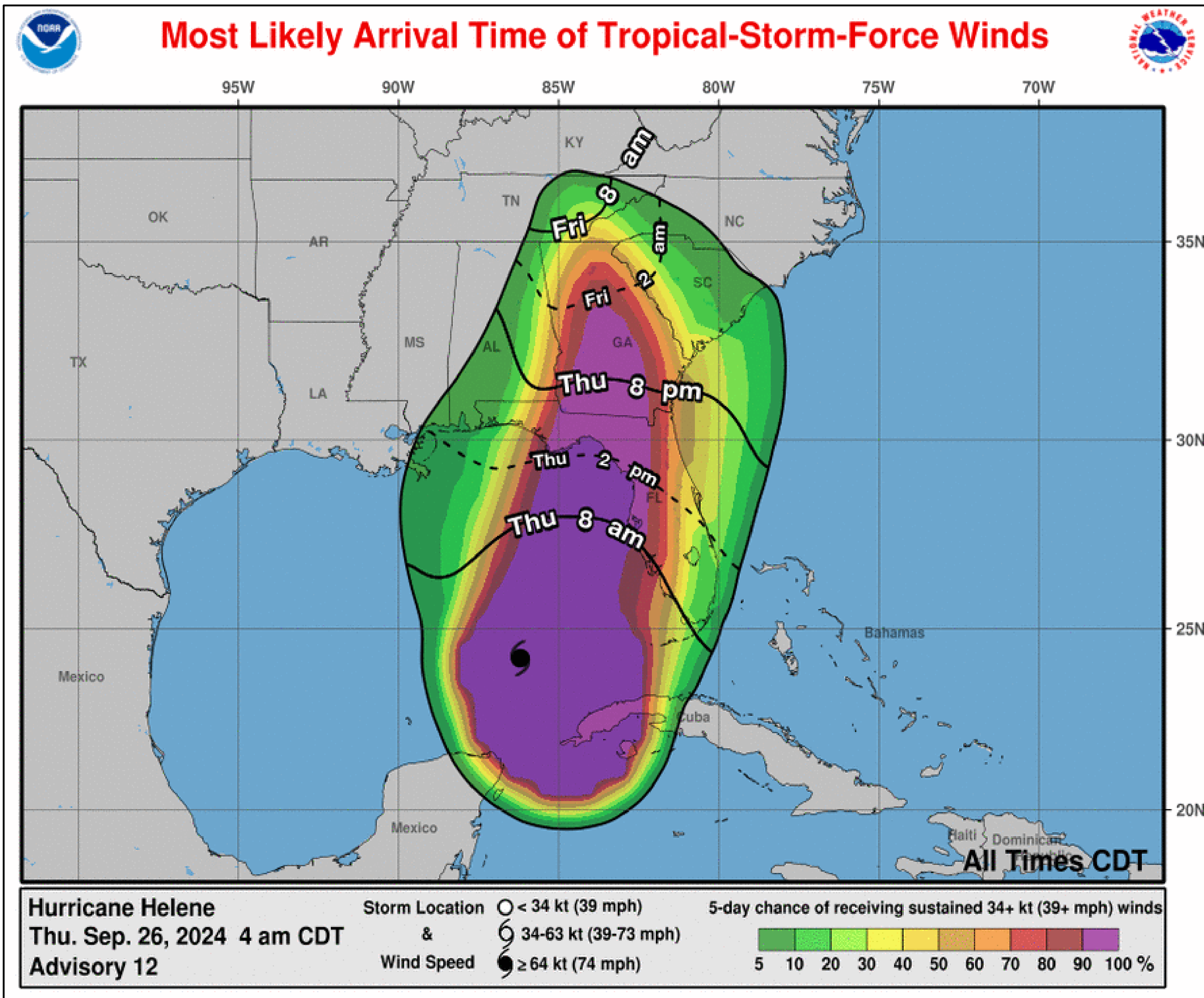
**GREEN** - Probabilities have decreased  
**RED** - Probabilities have gone up  
**BLACK** - Probabilities unchanged

**Locations boldfaced & underlined** - At least 50% chance of HWinds

- 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.



## Hurricane Helene



- **FL Keys/SW Florida – On going**
- **Tampa – Imminent**
- **Big Bend/FL Panhandle – This afternoon**
- **NE Florida/Georgia – Late this 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.

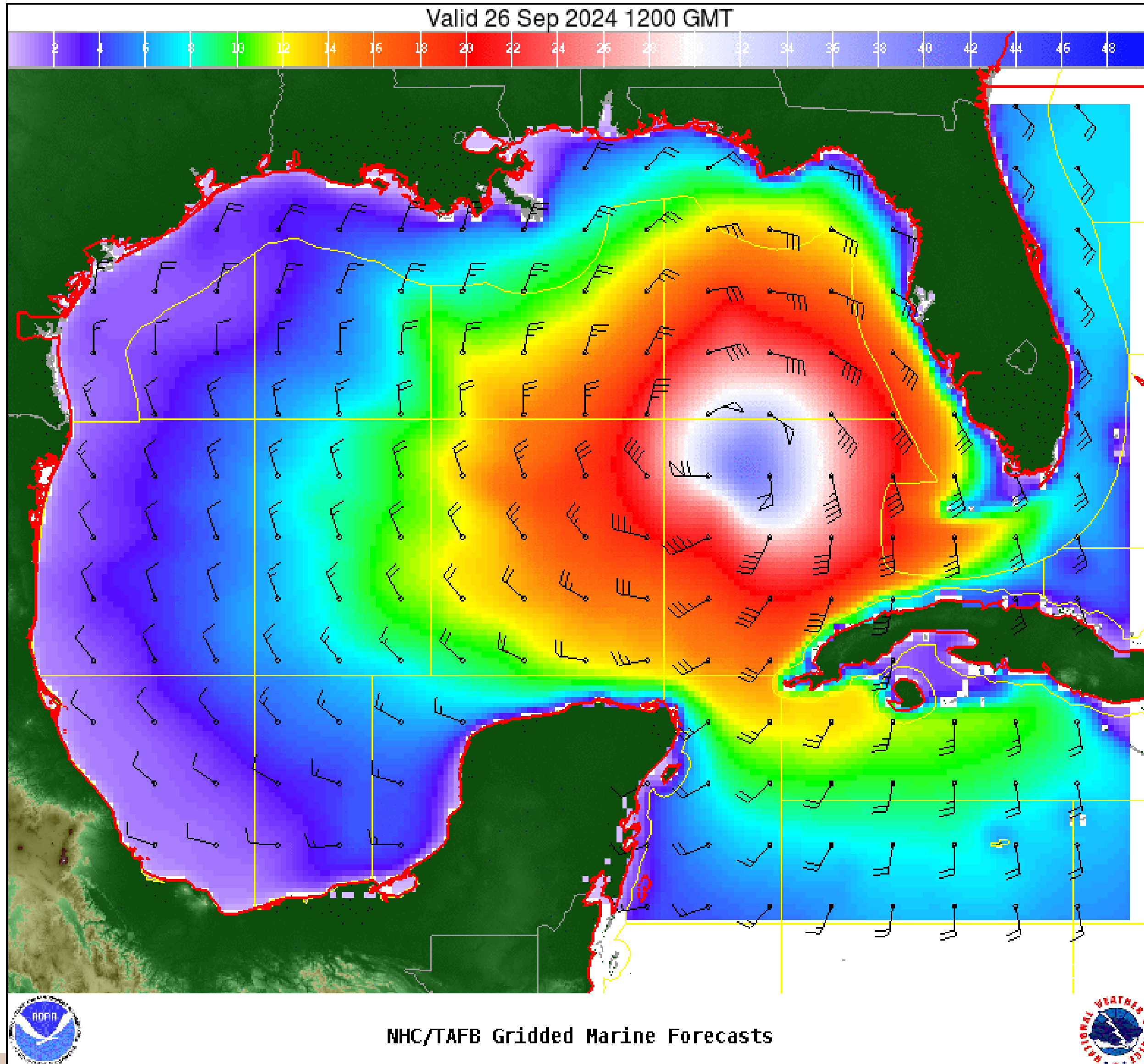


# Wind And Waves

Hurricane Helene



Tropical Analysis and Forecast Branch  
NWS National Hurricane Center



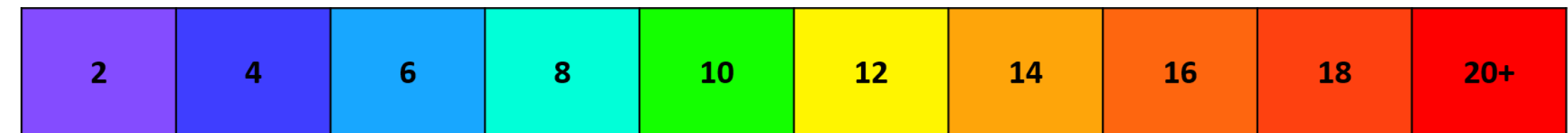
## Current Conditions

Thursday, September 26 at 8:00 AM EDT

Peak Winds: 85 kt

Peak Seas: 35 ft

■ Wave heights are in feet



Significant Wave Height (ft)



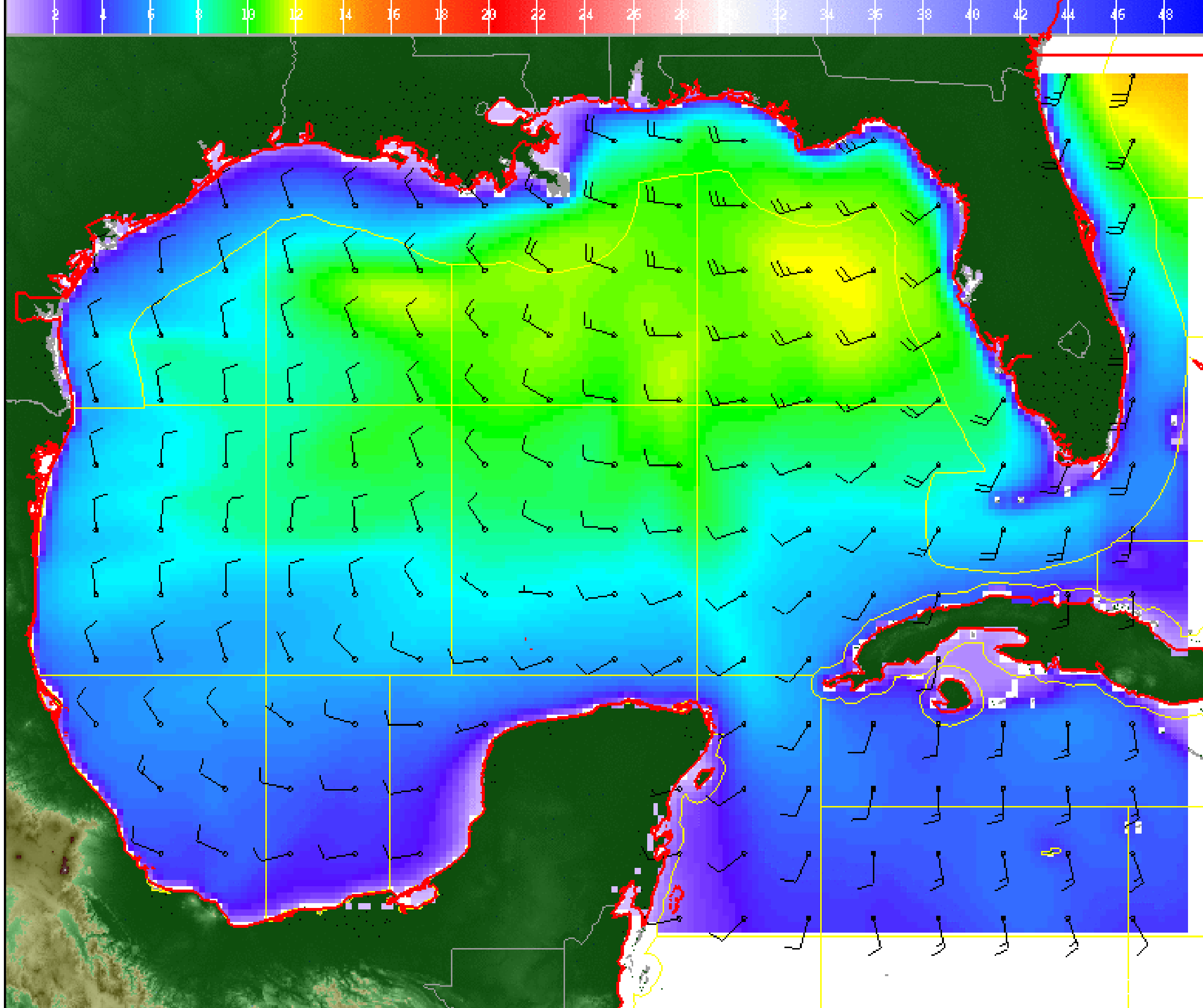
# Wind And Waves

Hurricane Helene



Tropical Analysis and Forecast Branch  
NWS National Hurricane Center

Valid 27 Sep 2024 1200 GMT



NHC/TAFB Gridded Marine Forecasts

## 24 Hour Forecast

**Friday, September 27 at 8:00 AM EDT**

Peak Winds: 25 kt

Peak Seas: 13 ft

■ Wave heights are in feet



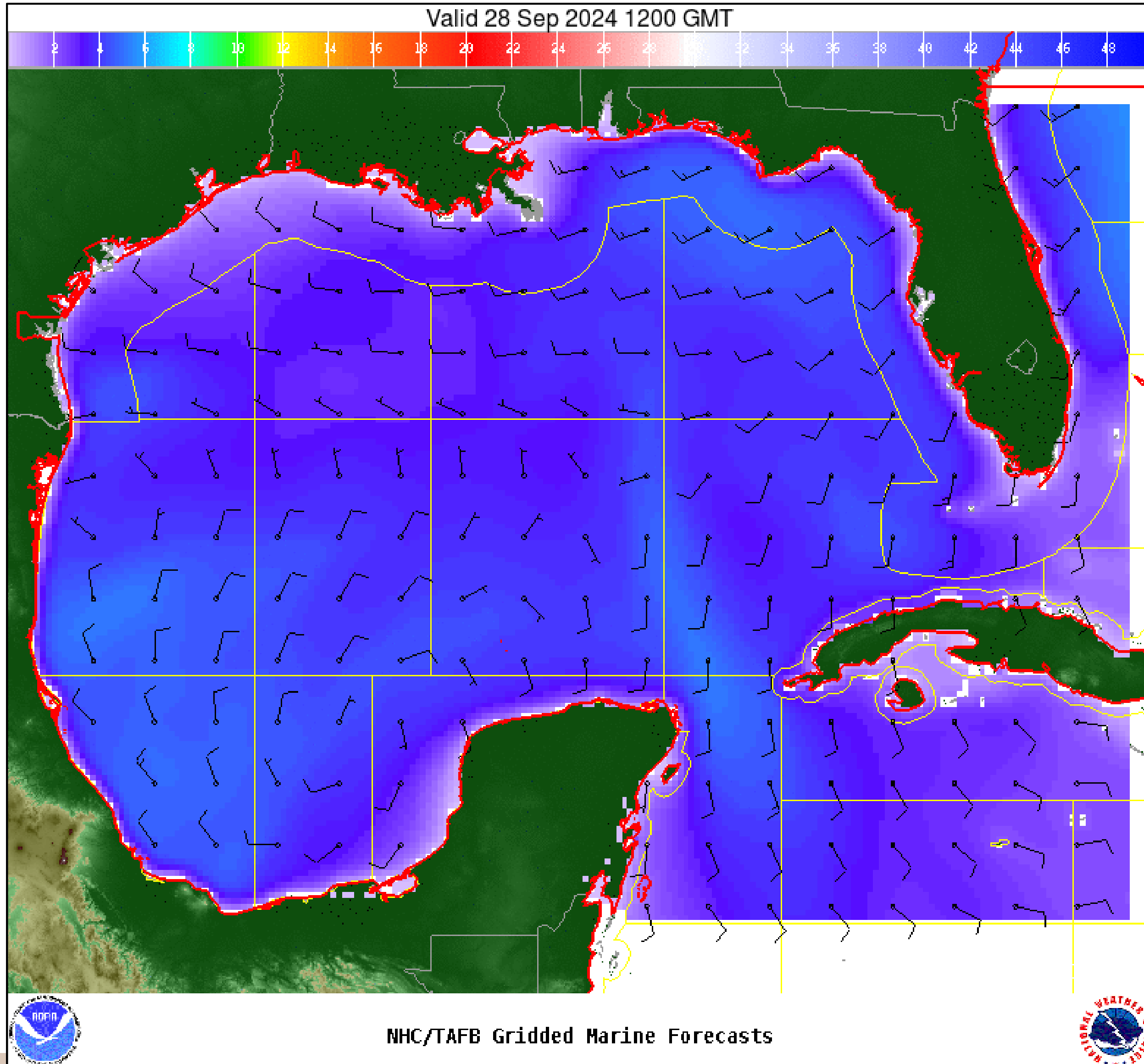
Significant Wave Height (ft)

# Wind And Waves

Hurricane Helene



Tropical Analysis and Forecast Branch  
NWS National Hurricane Center



48 Hour Forecast

Saturday, September 28 at 8:00 AM EDT

Peak Winds: 15 kt

Peak Seas: 5 ft

■ Wave heights are in feet



Significant Wave Height (ft)

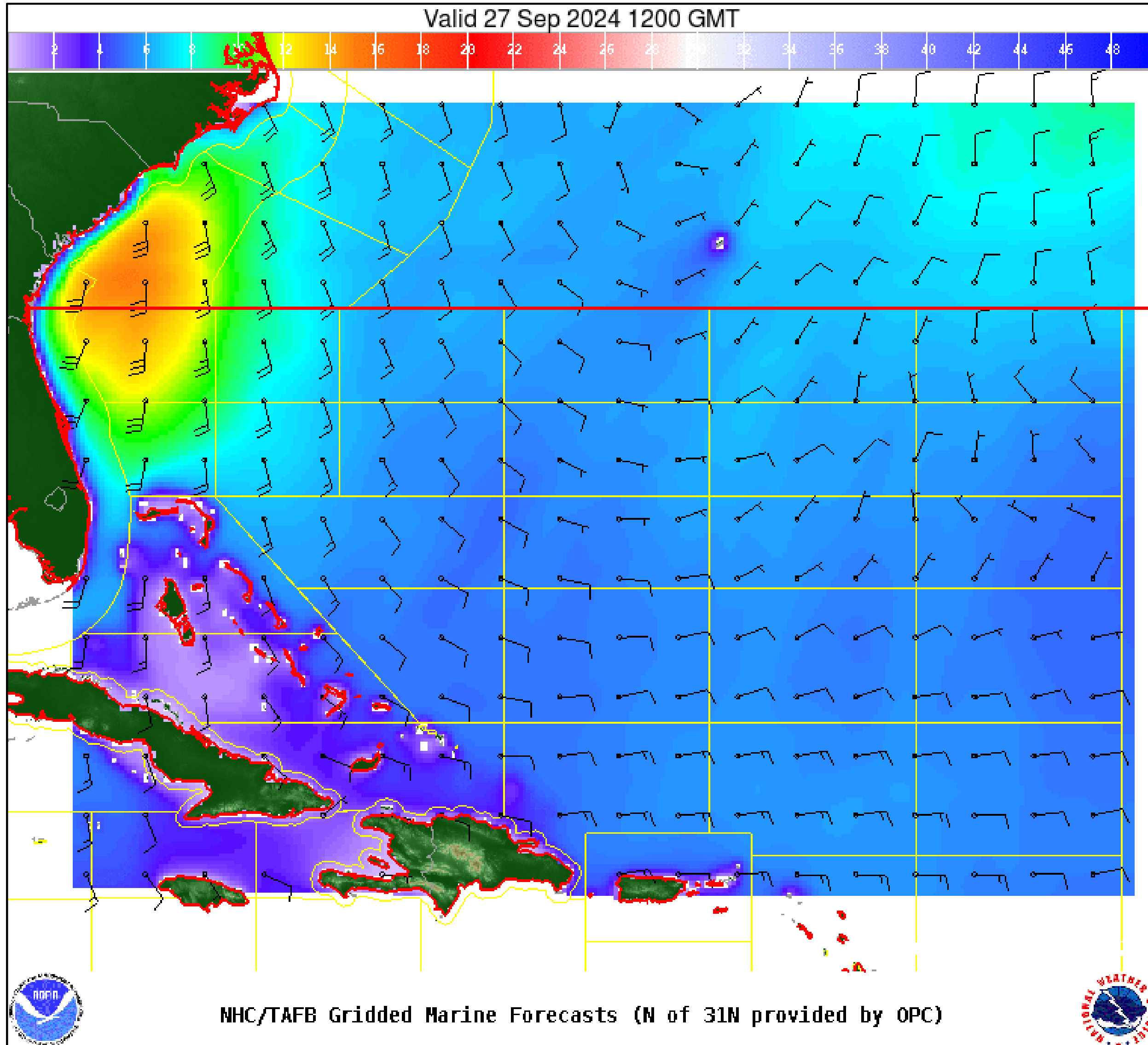


# Wind And Waves

Hurricane Helene



Tropical Analysis and Forecast Branch  
NWS National Hurricane Center



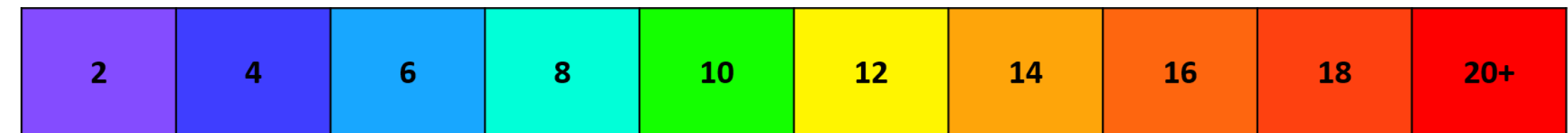
## 24 Hour Forecast

Friday, September 27 at 8:00 AM EDT

Peak Winds: 30 kt

Peak Seas: 15 ft

■ Wave heights are in feet



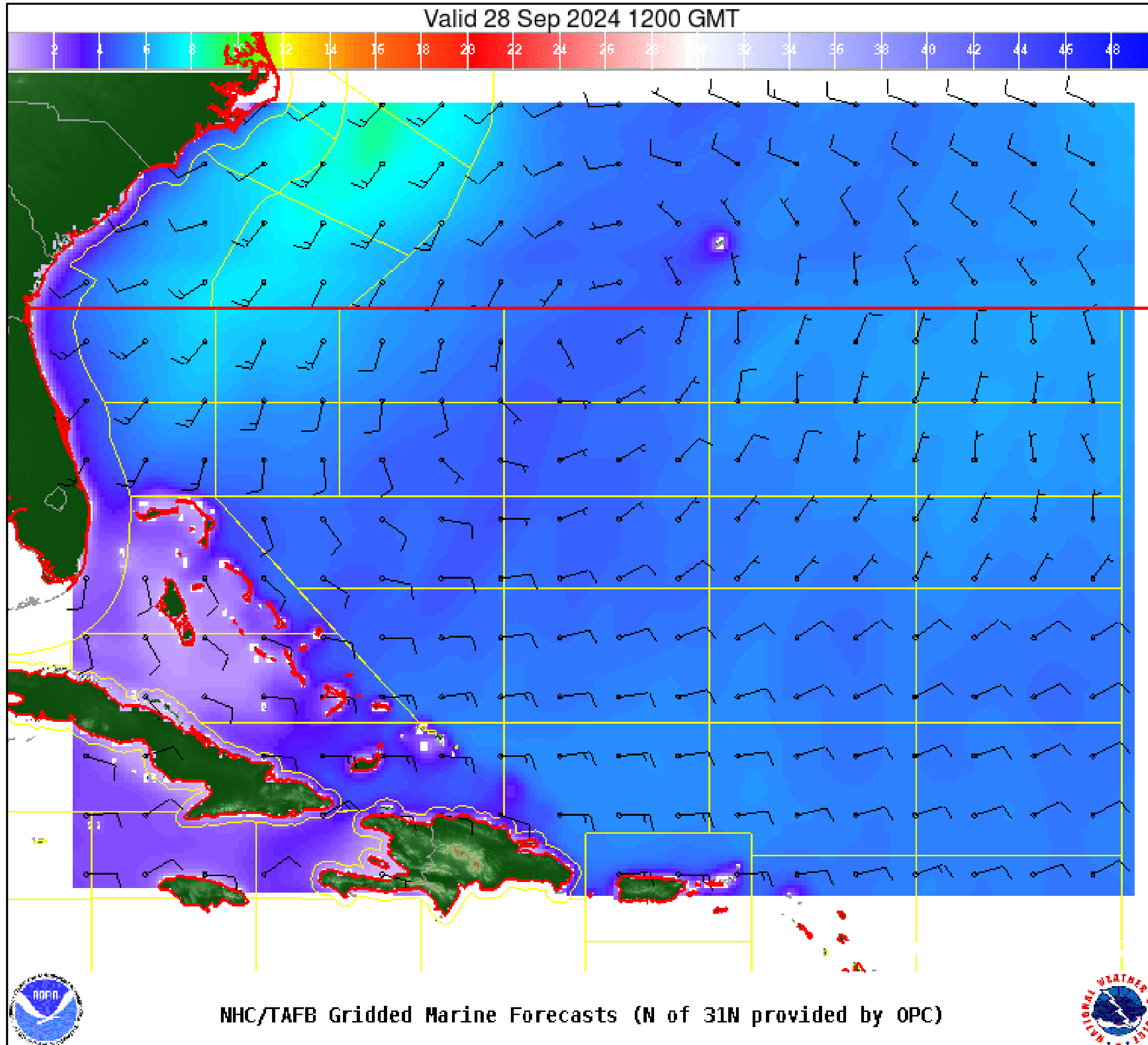
Significant Wave Height (ft)

# Wind And Waves

Hurricane Helene



Tropical Analysis and Forecast Branch  
NWS National Hurricane Center



NHC/TAFB Gridded Marine Forecasts (N of 31N provided by OPC)

48 Hour Forecast

Saturday, September 28 at 8:00 AM EDT

Peak Winds: 15 kt

Peak Seas: 9 ft

■ Wave heights are in feet



Significant Wave Height (ft)

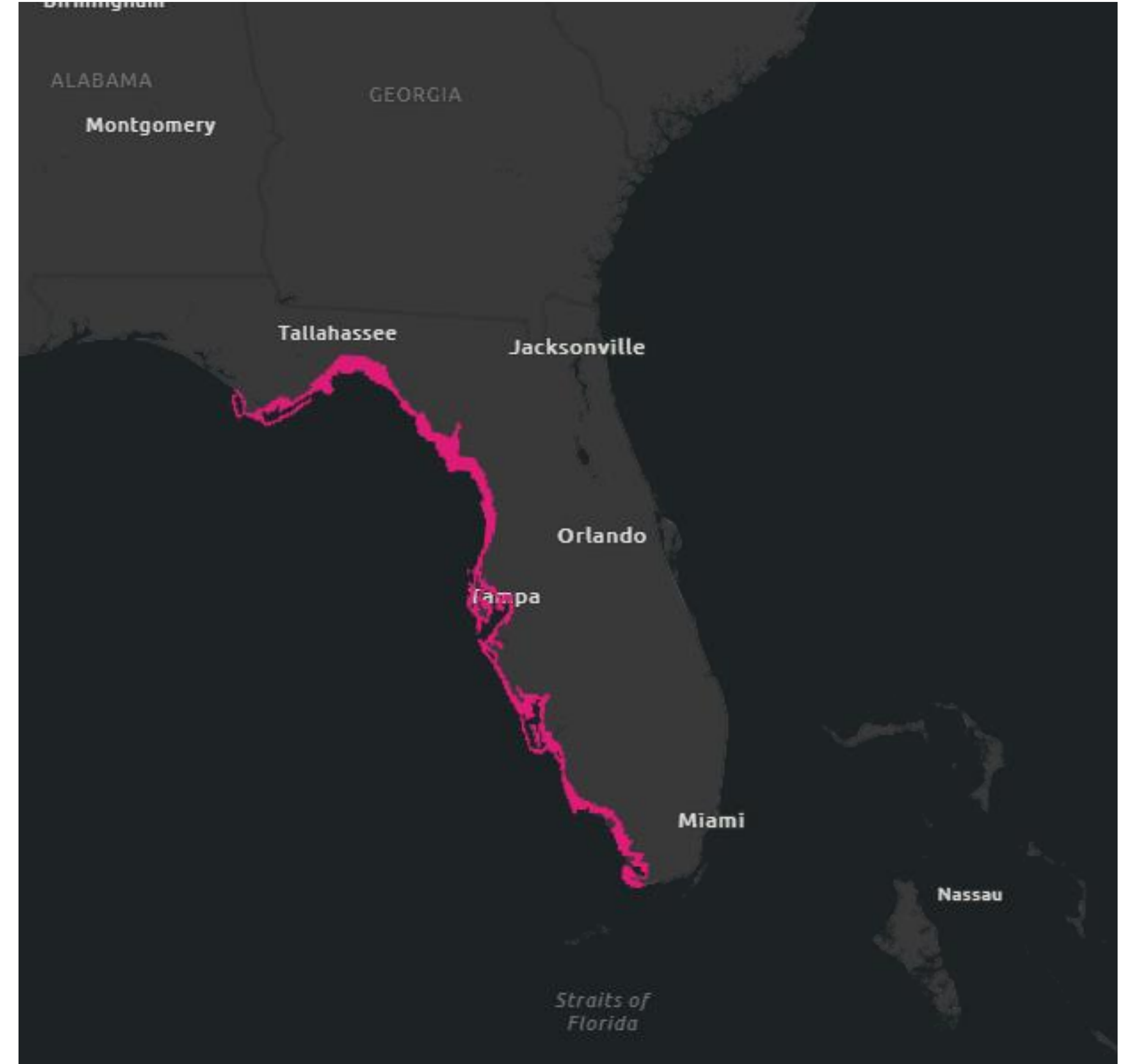
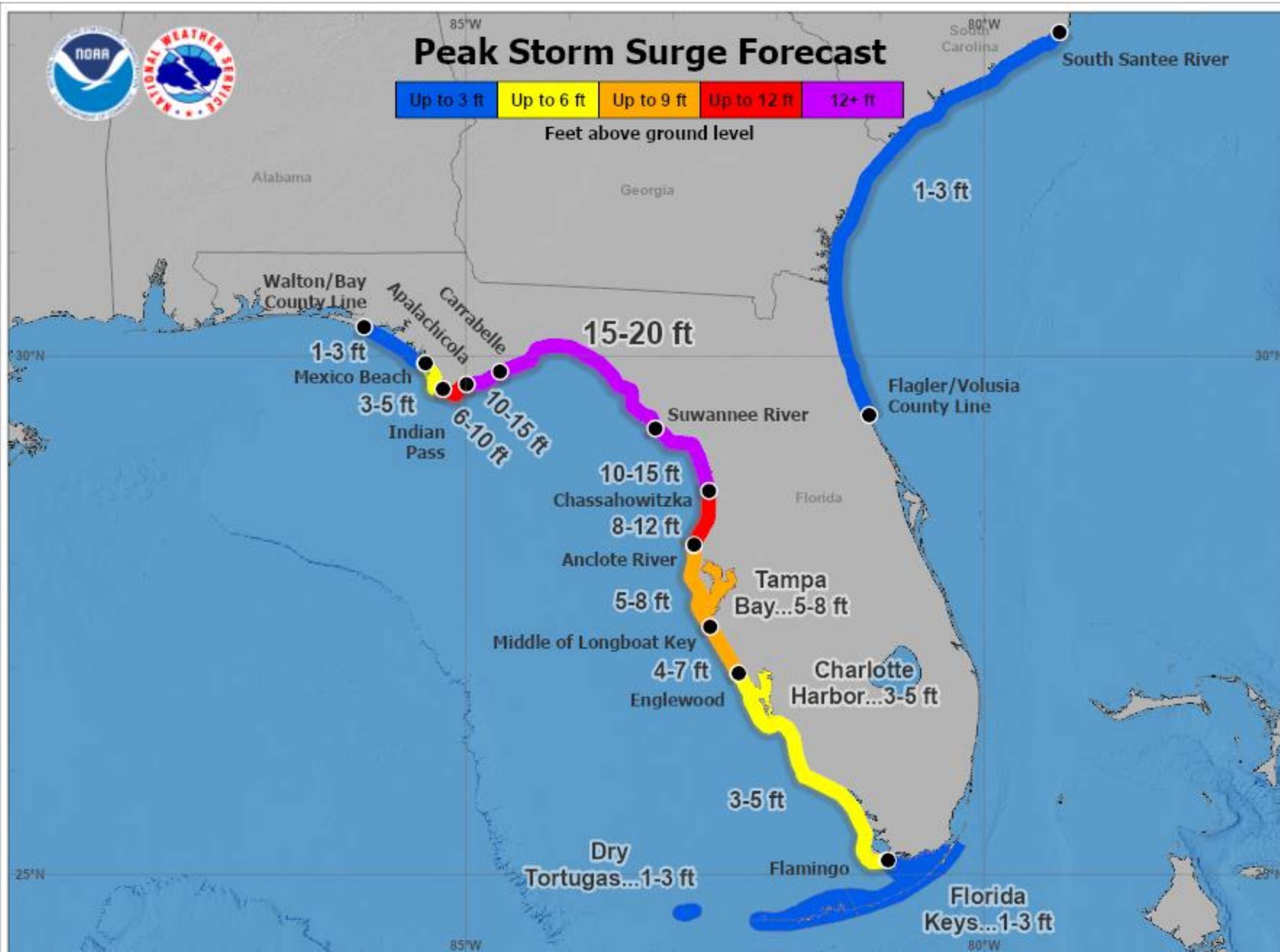


# Potential Peak Storm Surge / Watches and Warnings



Tropical Analysis and Forecast Branch  
NWS National Hurricane Center

## Hurricane Helene



Hurricane Helene  
Thursday September 26, 2024  
04 AM CDT Advisory 12  
NWS National Hurricane Center

**User Notes:** Water levels along the immediate coast could reach the following heights above ground level within the indicated areas. Elevated water levels will likely be accompanied by large and destructive waves. Colors are determined by the highest values in the associated forecast peak surge range. Values shown on this graphic are inclusive of tide.



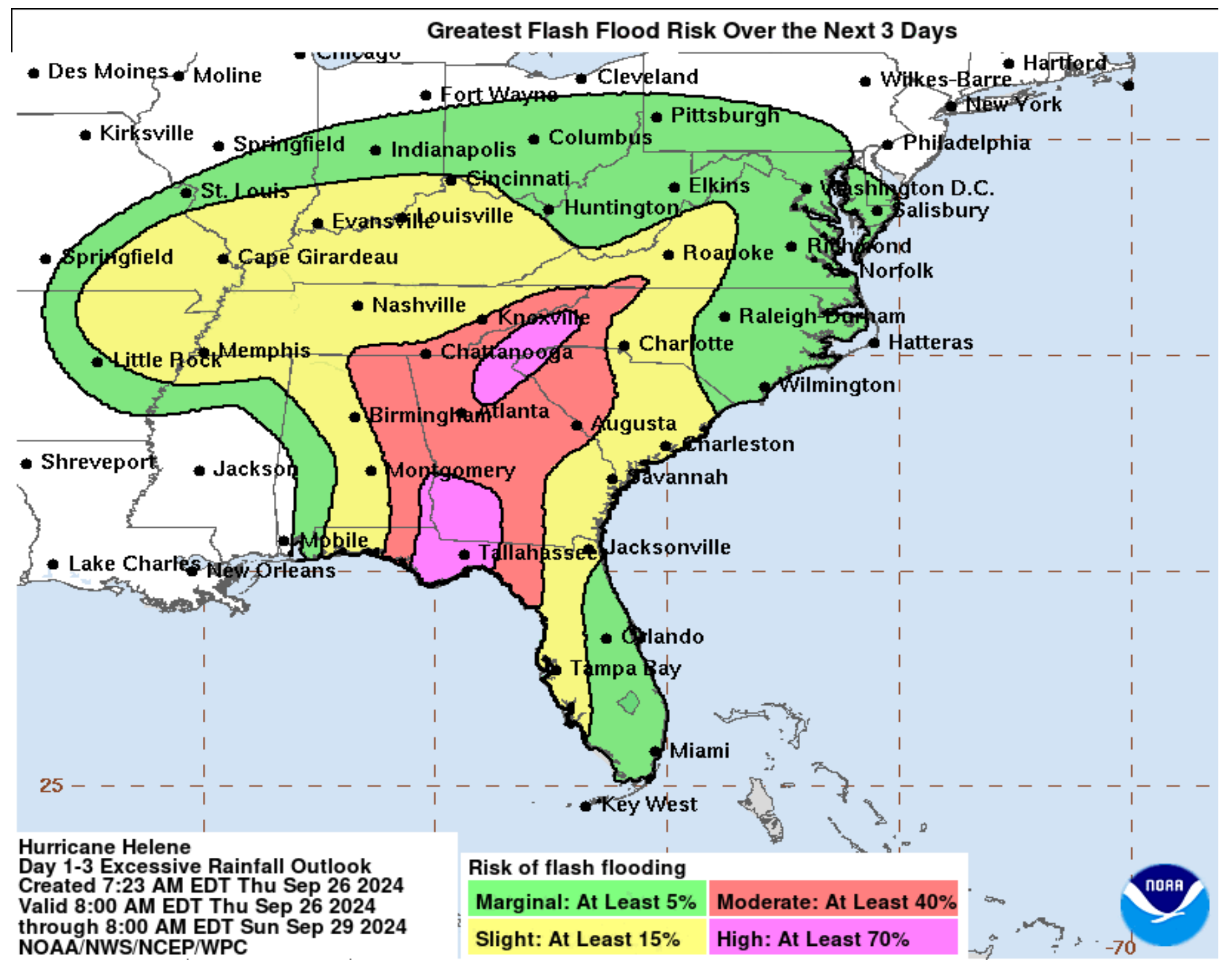
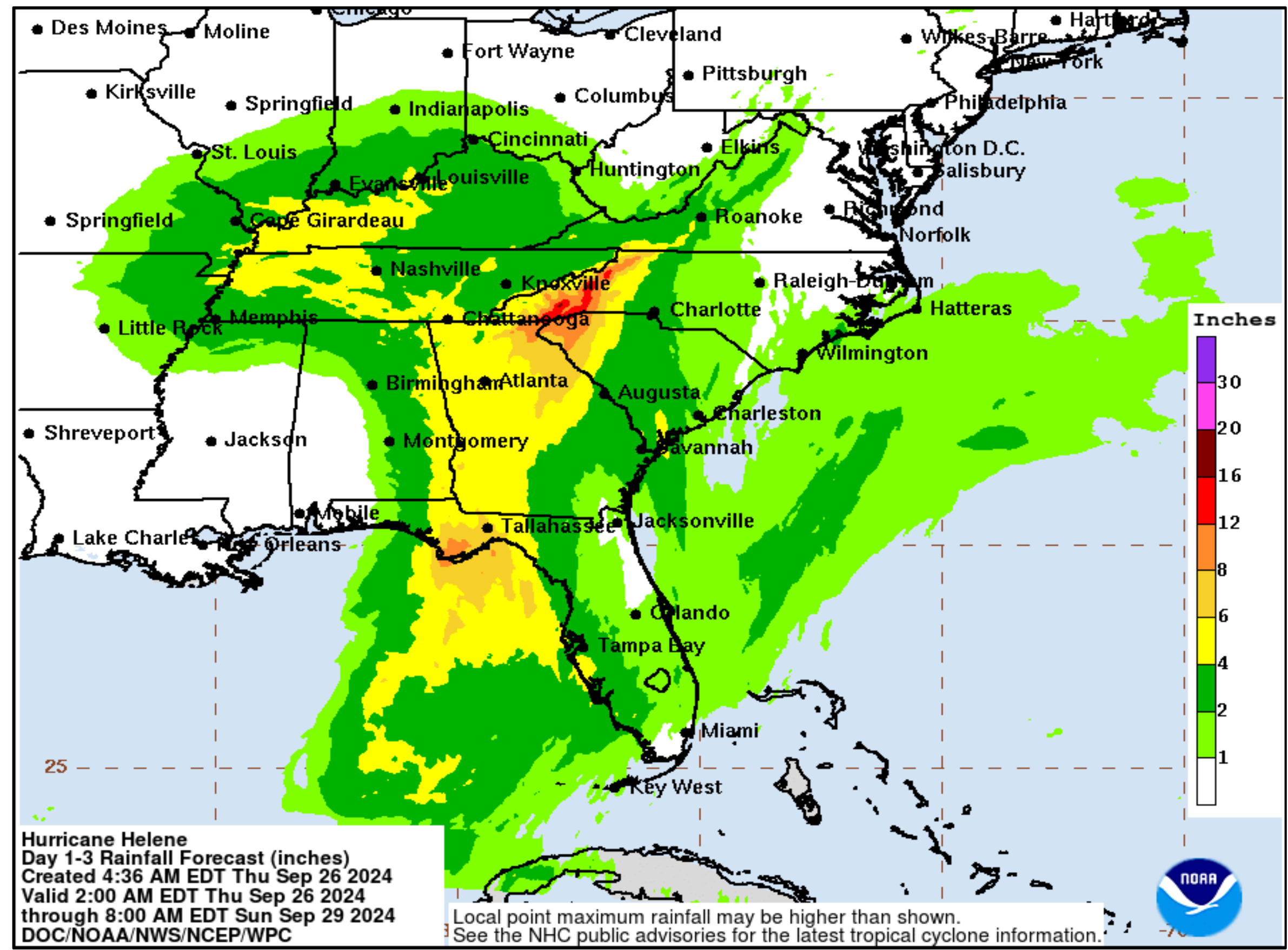
# Expected Storm Total Rainfall and Chance of Rainfall Flooding



Tropical Analysis and Forecast Branch  
NWS National Hurricane Center

Hurricane Helene

Images from NWS Weather Prediction Center



Risk of rainfall exceeding flash flood guidance within 25 miles of a point

**HIGH: > 50%**      **SLGT: 10%-20%**  
**MDT: 20%-50%**    **MRGL: 5%-10%**

Refer to map legend for Valid Time

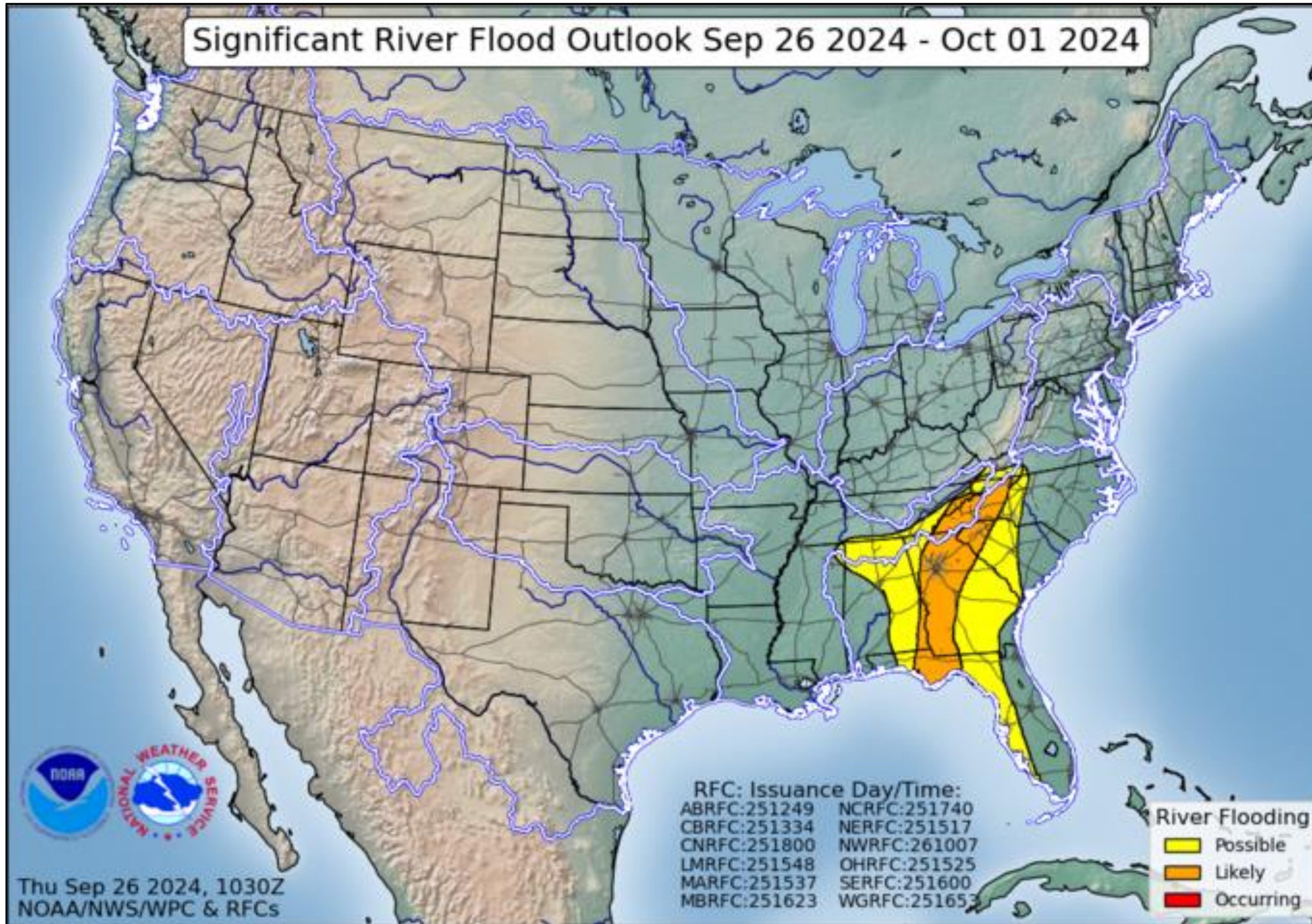


# Flood Outlook

Hurricane Helene



Tropical Analysis and Forecast Branch  
NWS National Hurricane Center



**Possible river flooding in FL, GA, AL, and SC after Helene passes through.**

**Likely river flooding for parts of the Panhandle of FL, GA, AL, and SC.**



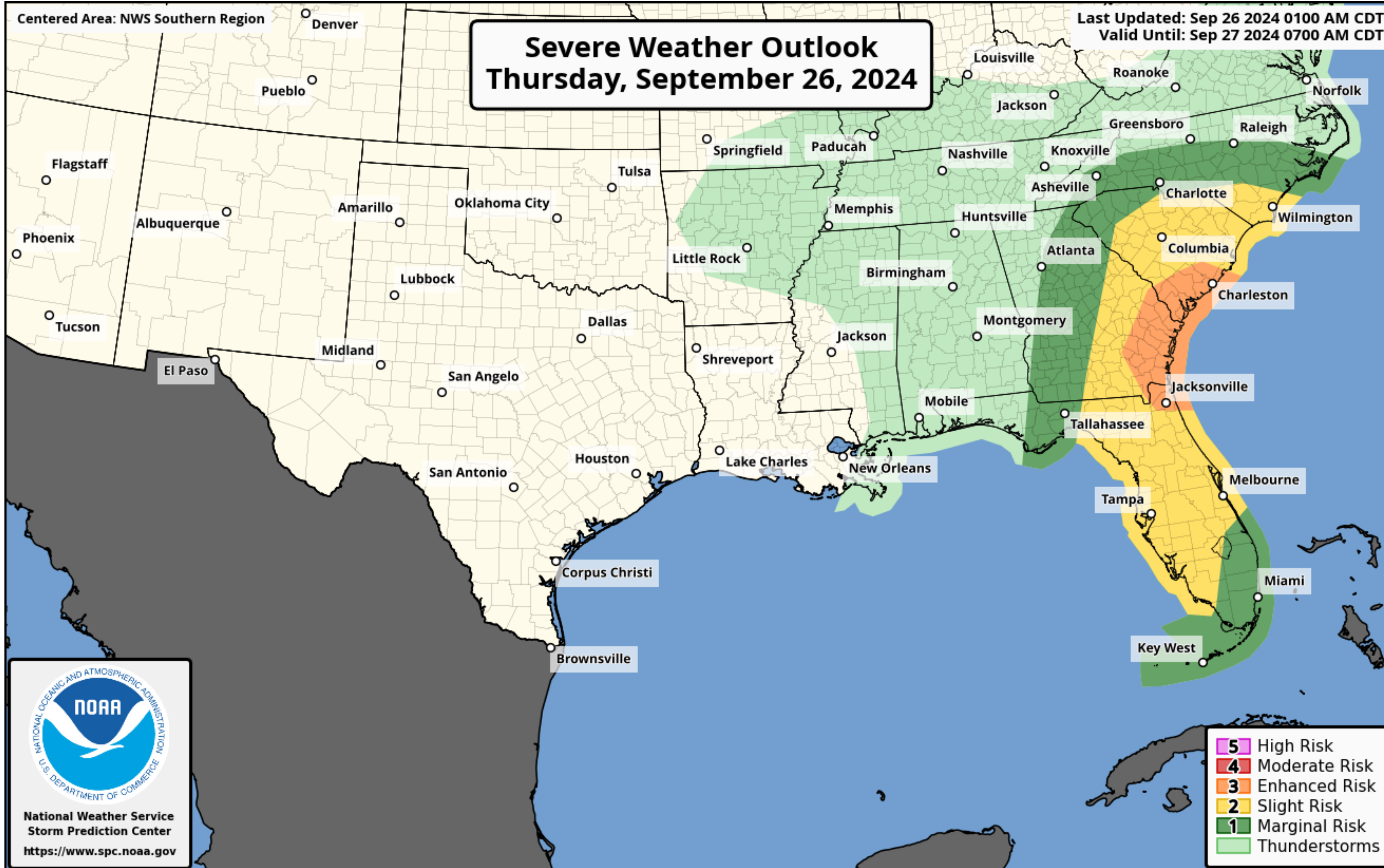
# Tornado Outlook – Day 1

Hurricane Helene

Image from NWS Storm Prediction Center



Tropical Analysis and Forecast Branch  
NWS National Hurricane Center



**Today:**

**Marginal Risk of Tornadoes  
in parts of FL, GA, SC, &  
NC**

**Slight Risk of Tornadoes  
for parts FL, GA, & SC.**

**Enhanced Risk of  
Tornadoes for parts of GA  
& SC.**



# Key Messages

## Hurricane Helene



Tropical Analysis and Forecast Branch  
NWS National Hurricane Center



### Key Messages for Hurricane Helene Advisory 12: 4:00 AM CDT Thu Sep 26, 2024

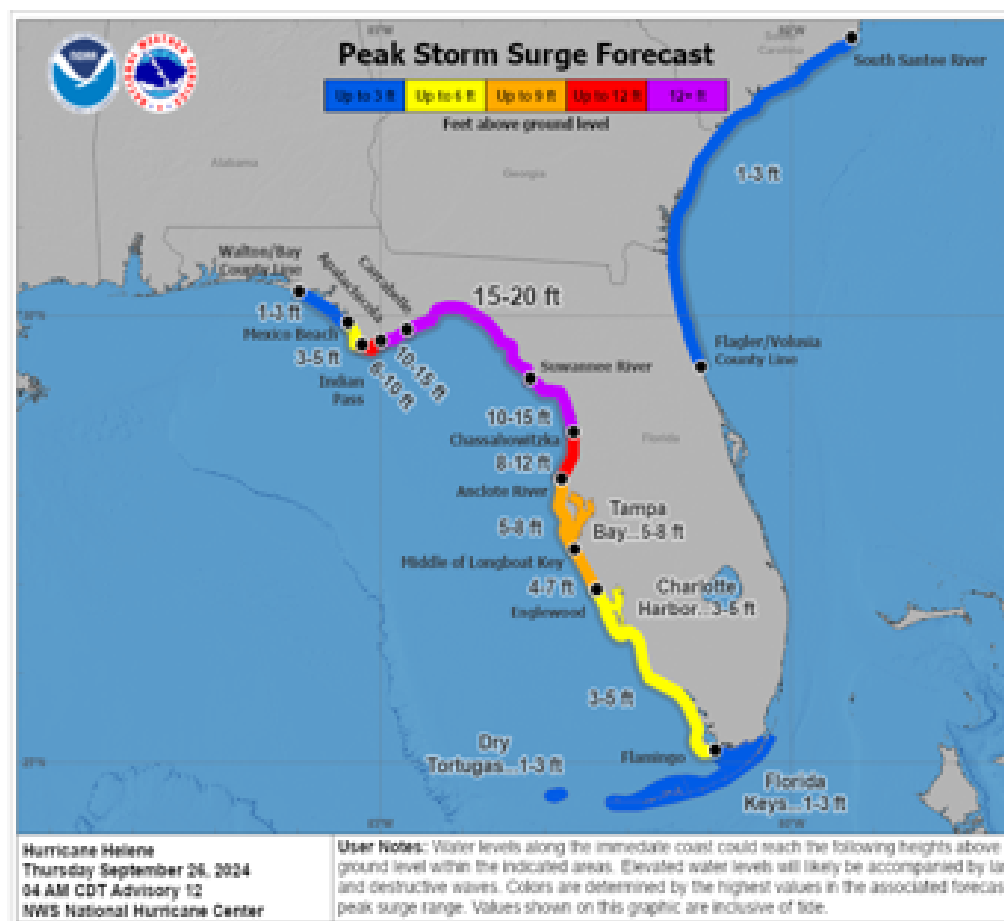
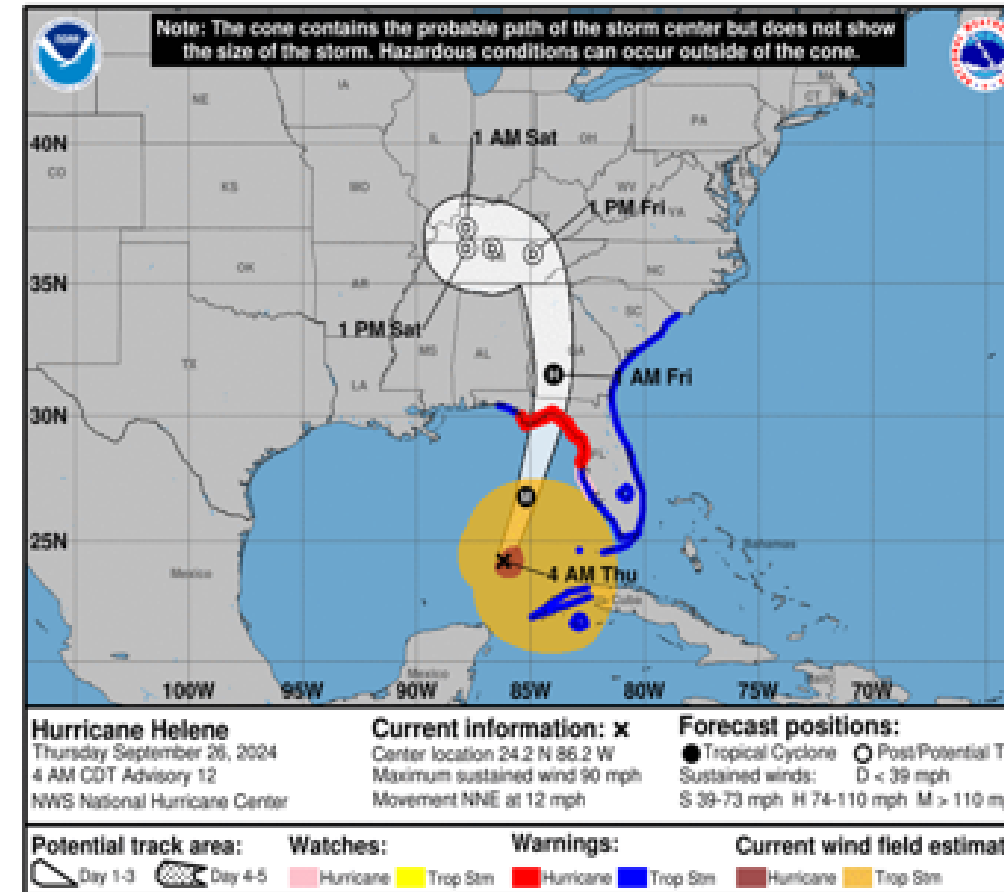


1. A catastrophic and deadly storm surge is likely along portions of the Florida Big Bend coast, where inundation could reach as high as 20 feet above ground level, along with destructive waves. There is also a danger of life-threatening storm surge along the remainder of the west coast of the Florida Peninsula. Residents in those areas should follow advice given by local officials and evacuate if told to do so.

2. Potentially catastrophic hurricane-force winds are expected within the eyewall of Helene when it makes landfall in the Florida Big Bend region later today. Preparations to protect life and property should be completed this morning before tropical storm conditions arrive. Damaging and life-threatening hurricane-force winds, especially in gusts, will penetrate well inland over portions of northern Florida and southern Georgia later today and tonight where Hurricane Warnings are in effect. Strong wind gusts are also likely farther north across portions of northern Georgia and the Carolinas, particularly over the higher terrain of the southern Appalachians.

3. Catastrophic and life-threatening flash and urban flooding, including numerous significant landslides, is expected across portions of the southern Appalachians through Friday. Considerable to locally catastrophic flash and urban flooding is likely for northwestern and northern Florida and the Southeast through Friday. Widespread significant river flooding and isolated major river flooding are likely.

4. Tropical storm conditions are expected over portions of western Cuba within the Tropical Storm Warning area. Hurricane Helene will bring heavy rain to portions of the western Caribbean with potentially significant flooding across western Cuba and the northeastern Yucatan Peninsula through this morning.



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

### IMPACTS FOR **D7** through next 5 days

Winds/US Coast – **Extreme**

Winds/SRR – **Extreme**

Waves/US Coastal – **Extreme**

Waves/SRR – **Extreme**

US Storm Surge – **Extreme**

US Rainfall/Flash Flooding – **Extreme**

US Tornadoes – **High**

### Key Messages:

- Conditions will continue to rapidly deteriorate in the E Gulf.
- Thursday late afternoon NE Gulf:
  - Peak winds of 110-115 kt are likely.
  - Peak seas near 38 ft are likely.
- While Gulf will quickly return to normal on Fri, the Atlantic waters off of NE Florida/Georgia will build on Fri before diminishing Sat.

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



# HURRICANE HELENE BRIEFING

**TIME of NEXT NHC Advisory:**

**15 UTC: 11 AM EDT**

*The Next Briefing Will Be:*

*Thursday 4:00 PM EDT*

*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)