

IMPACTS FOR D8

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 – High

US Tornadoes – Low

HURRICANE HELENE BRIEFING



11:00 AM CDT
Wednesday, September 25, 2024
Prepared by:
Keren Rosado-Vázquez
Tropical Analysis and Forecast Branch
NWS National Hurricane Center



NHC_TAFB

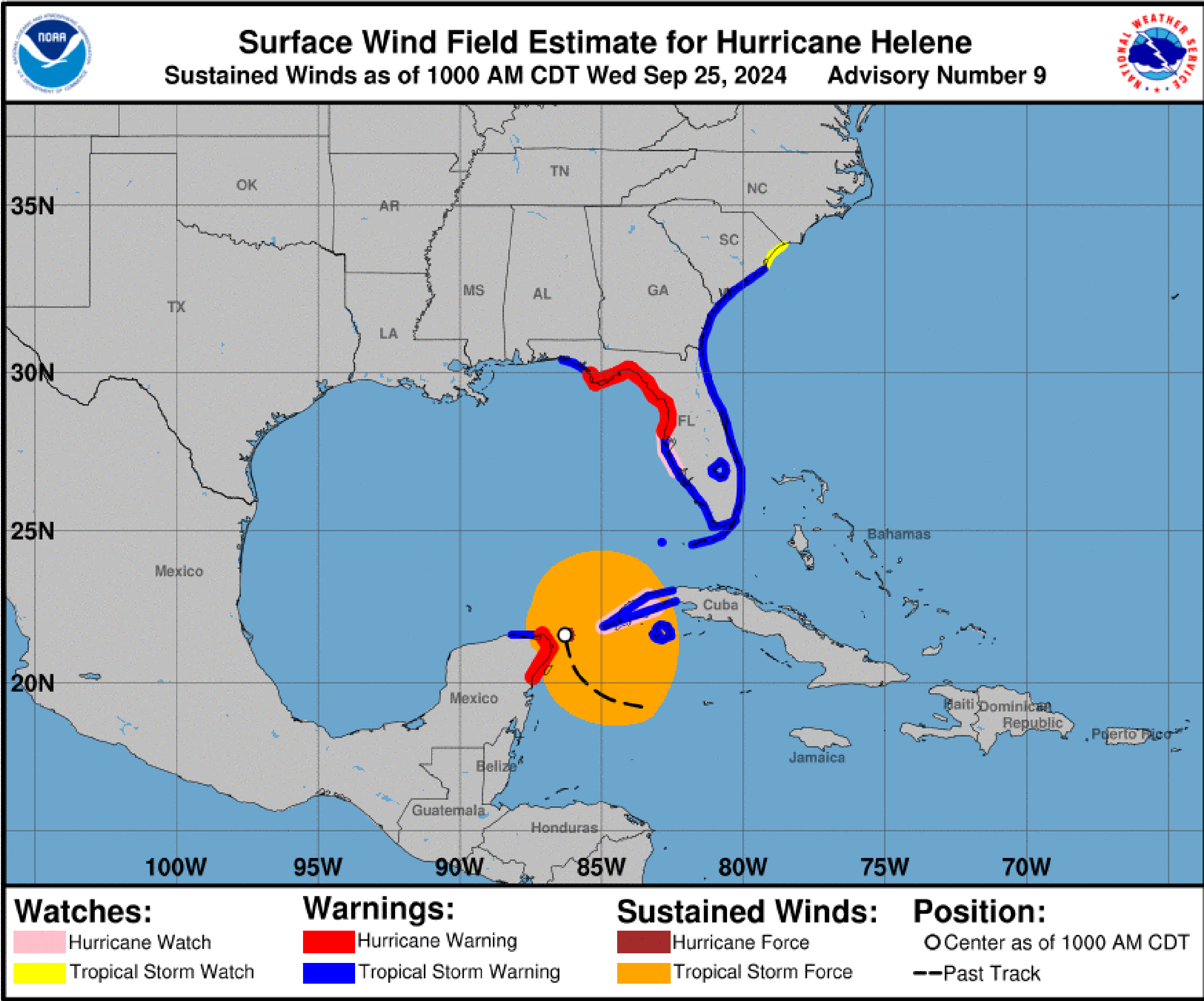
www.nhc.noaa.gov

Situation Overview

Hurricane Helene



Tropical Analysis and Forecast Branch
NWS National Hurricane Center



**...HELENE BECOMES A HURRICANE...
...EXPECTED TO BRING LIFE-THREATENING
STORM SURGE, DAMAGING WINDS,
AND FLOODING RAINS TO A LARGE PORTION
OF FLORIDA AND THE
SOUTHEASTERN UNITED STATES...**

SUMMARY OF 1000 AM CDT...INFORMATION

LOCATION...21.6N 86.3W
ABOUT 75 NM... NNE OF COZUMEL MEXICO
ABOUT 435 MI... SSW OF TAMPA FLORIDA
MAXIMUM SUSTAINED WINDS...70 KT
PRESENT MOVEMENT...NNW OR 330 DEGREES AT 9 KT
MINIMUM CENTRAL PRESSURE...979 MB

Hurricane-force winds extend outward up to 22 nm from the center and tropical-storm-force winds extend outward up to 240 nm.

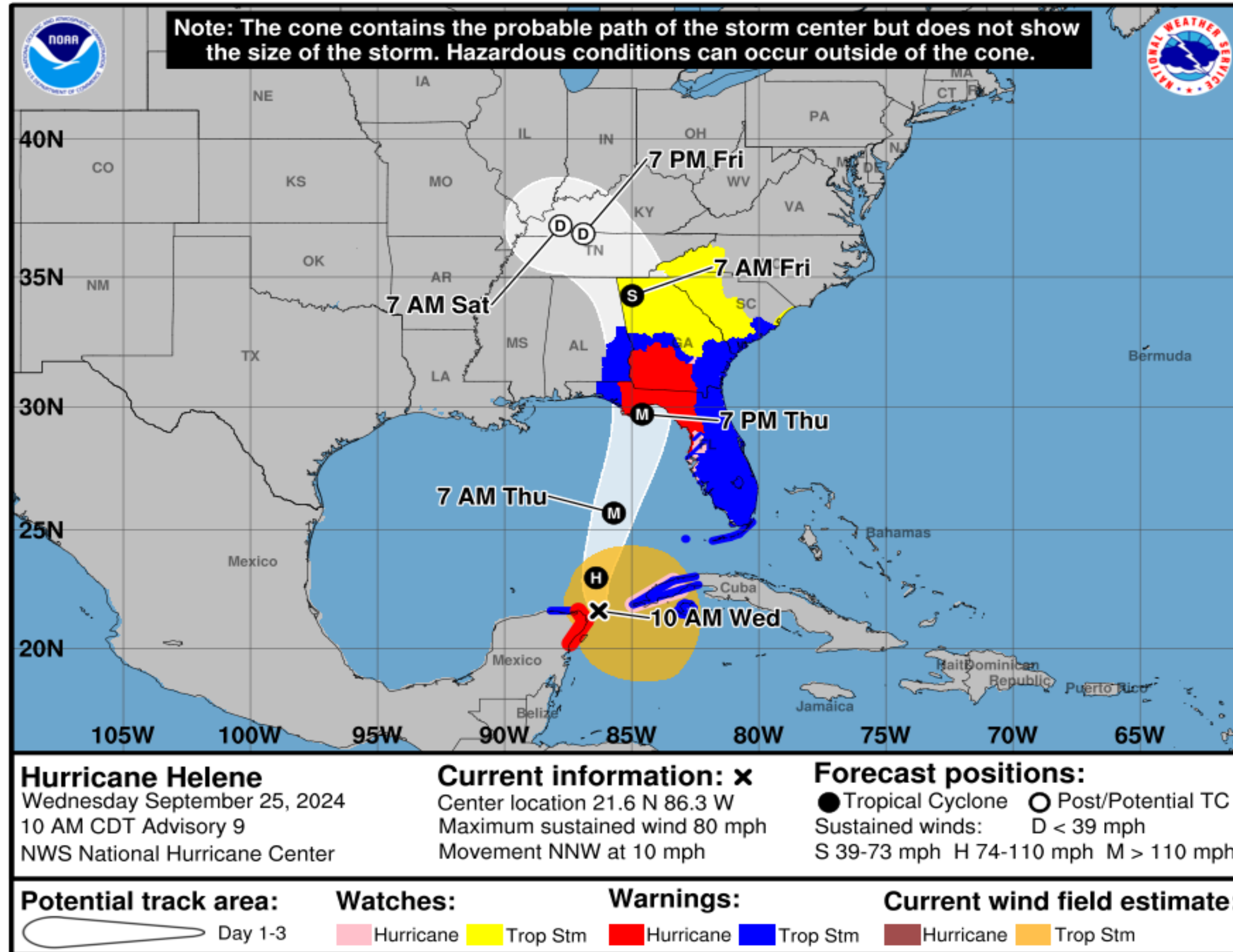
12 FT SEAS..180NE 180SE 90SW 90NW.

Forecast Information

Hurricane Helene



Tropical Analysis and Forecast Branch
NWS National Hurricane Center



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

- **A turn toward the north and north-northeast with an increase in forward speed is expected later today through Thursday, bringing the center of Helene across the eastern Gulf of Mexico and to the Florida Big Bend coast by Thursday evening.**
- **Additional strengthening is forecast, and Helene is expected to be a major hurricane – Category 3 or 4 - when it reaches the Florida Big Bend or Nature Coast Thursday 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.**
- 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

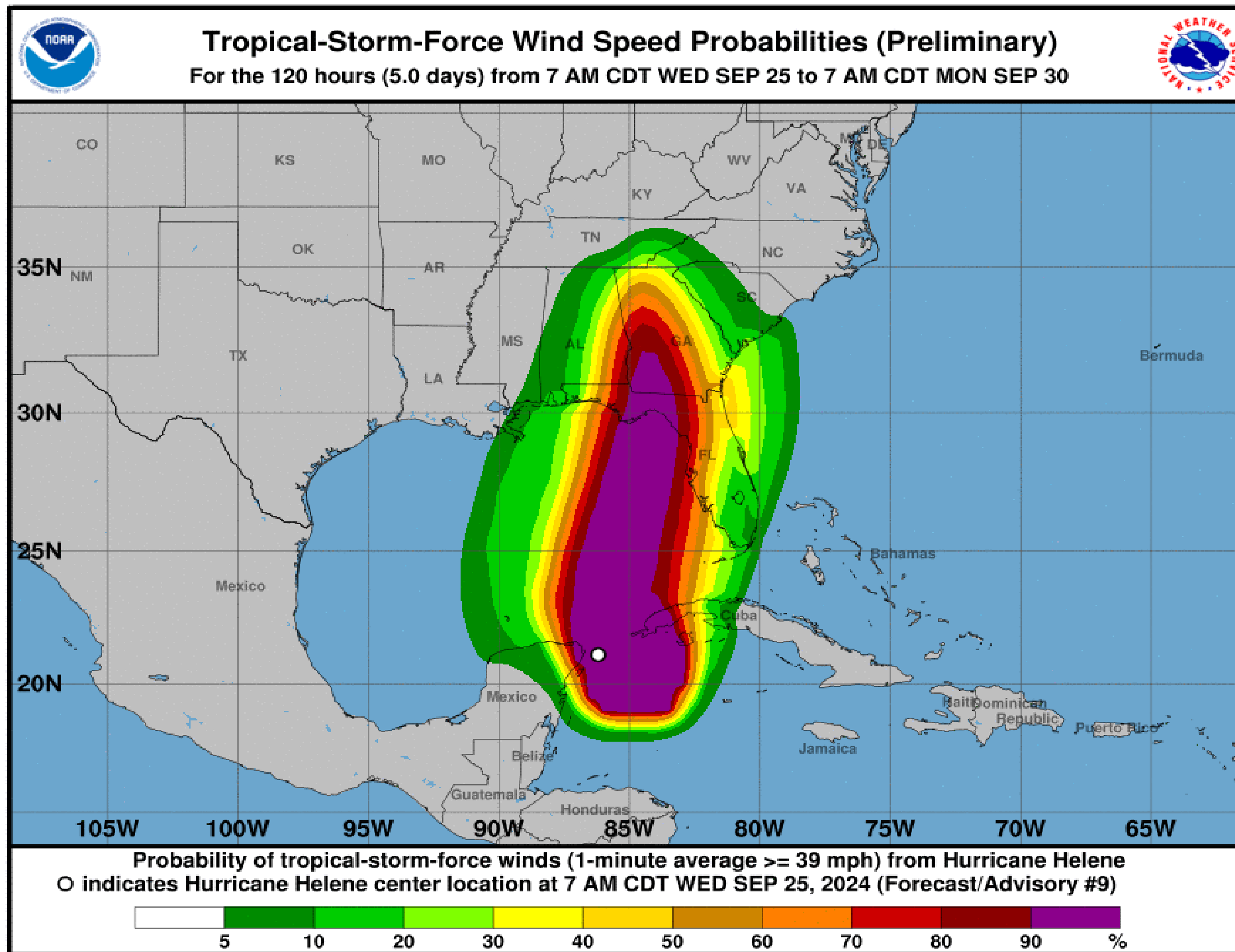
** Swaths are calculated using average track errors and actual track may be well inside, or possibly outside the potential track areas indicated.

T.S. Wind Speed Probabilities

Hurricane Helene



Tropical Analysis and Forecast Branch
NWS National Hurricane Center



- **CEDAR KEY FL 86%**
- **MOBILE AL 7%**
- **PENSACOLA FL 17%**
- **WHITING FLD FL 21%**
- **PANAMA CITY FL 83%**
- **APALACHICOLA 95%**
- **ST MARKS FL 96%**
- **TALLAHASSEE FL 95%**

GREEN - Probabilities have decreased

RED - Probabilities have gone up

BLACK - Probabilities unchanged

Locations boldfaced & underlined - At least 50% chance of TS Winds

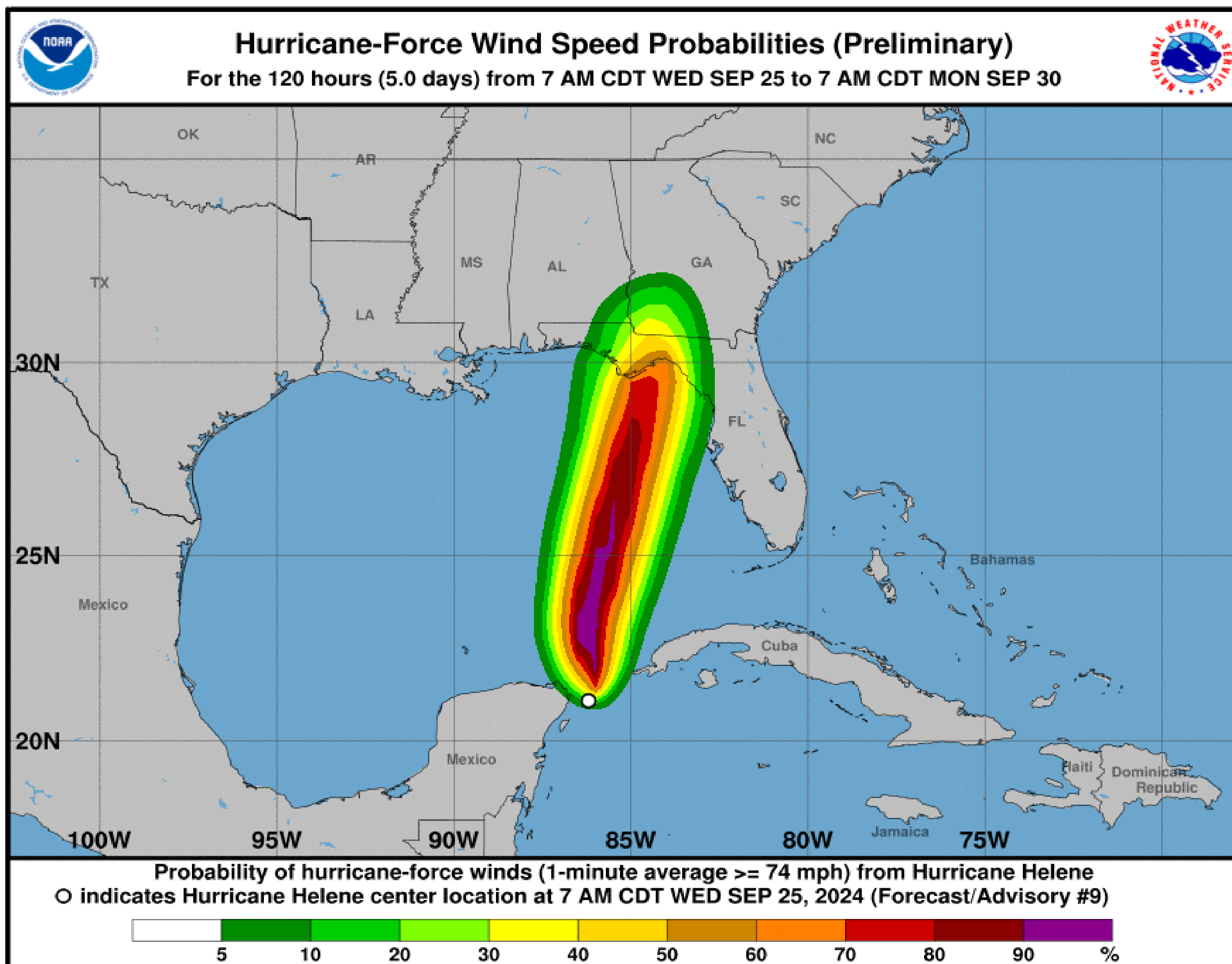
- Probabilities of sustained tropical storm force winds (34 kt to 63 kt) over the next 5 days, based off this cyclone's wind radii and track.
- Clear or dark green are the lowest chances of 0-30%.
- Yellow to orange is 31-70%
- Red through purple are the highest probabilities of 71%-100%
- See the color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

Hurricane Wind Speed Probabilities

Hurricane Helene



Tropical Analysis and Forecast Branch
NWS National Hurricane Center



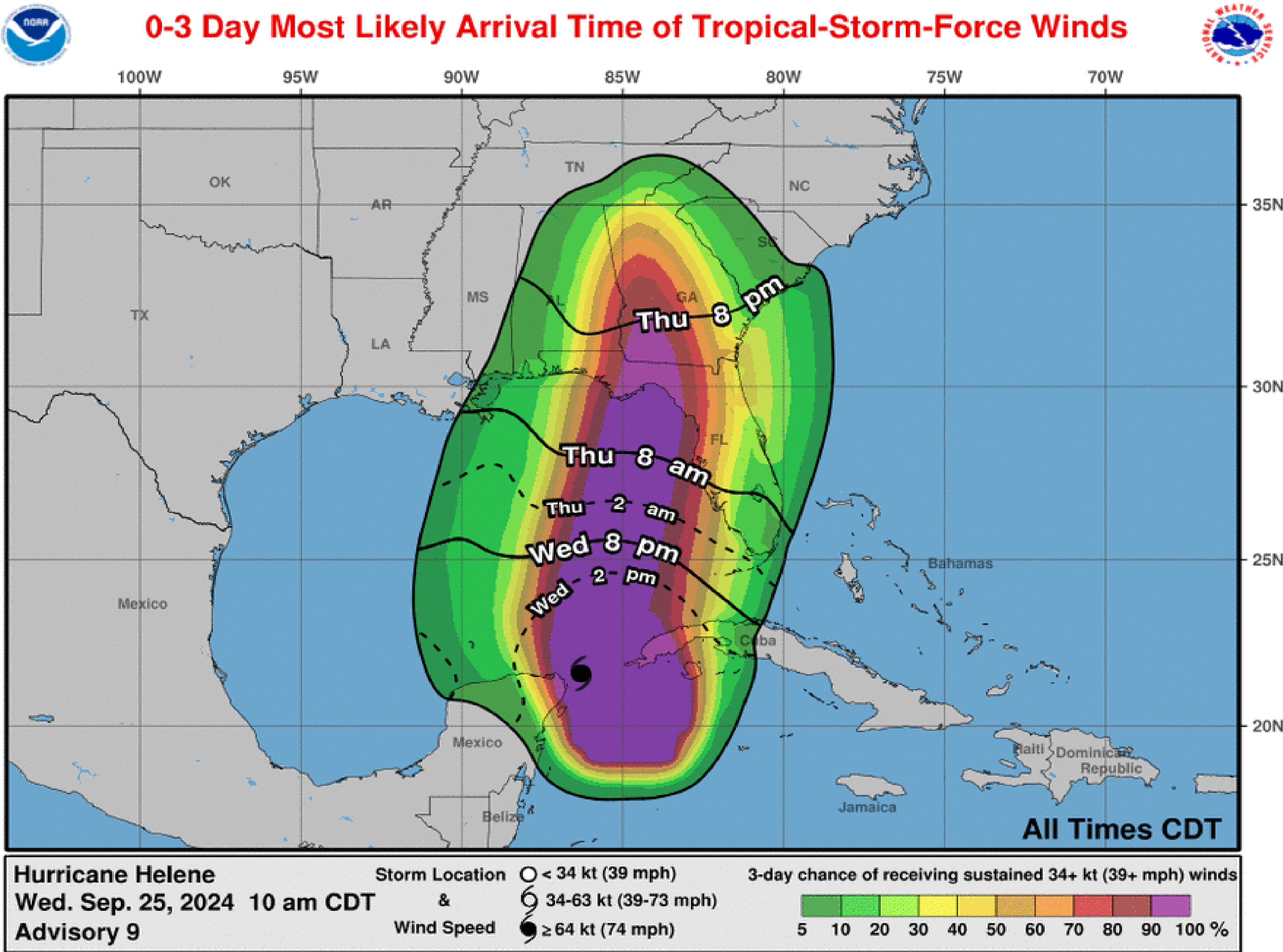
- CEDAR KEY FL 13%
- PANAMA CITY FL 33%
- **APALACHICOLA 64%**
- TALLAHASSEE FL 37%

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 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



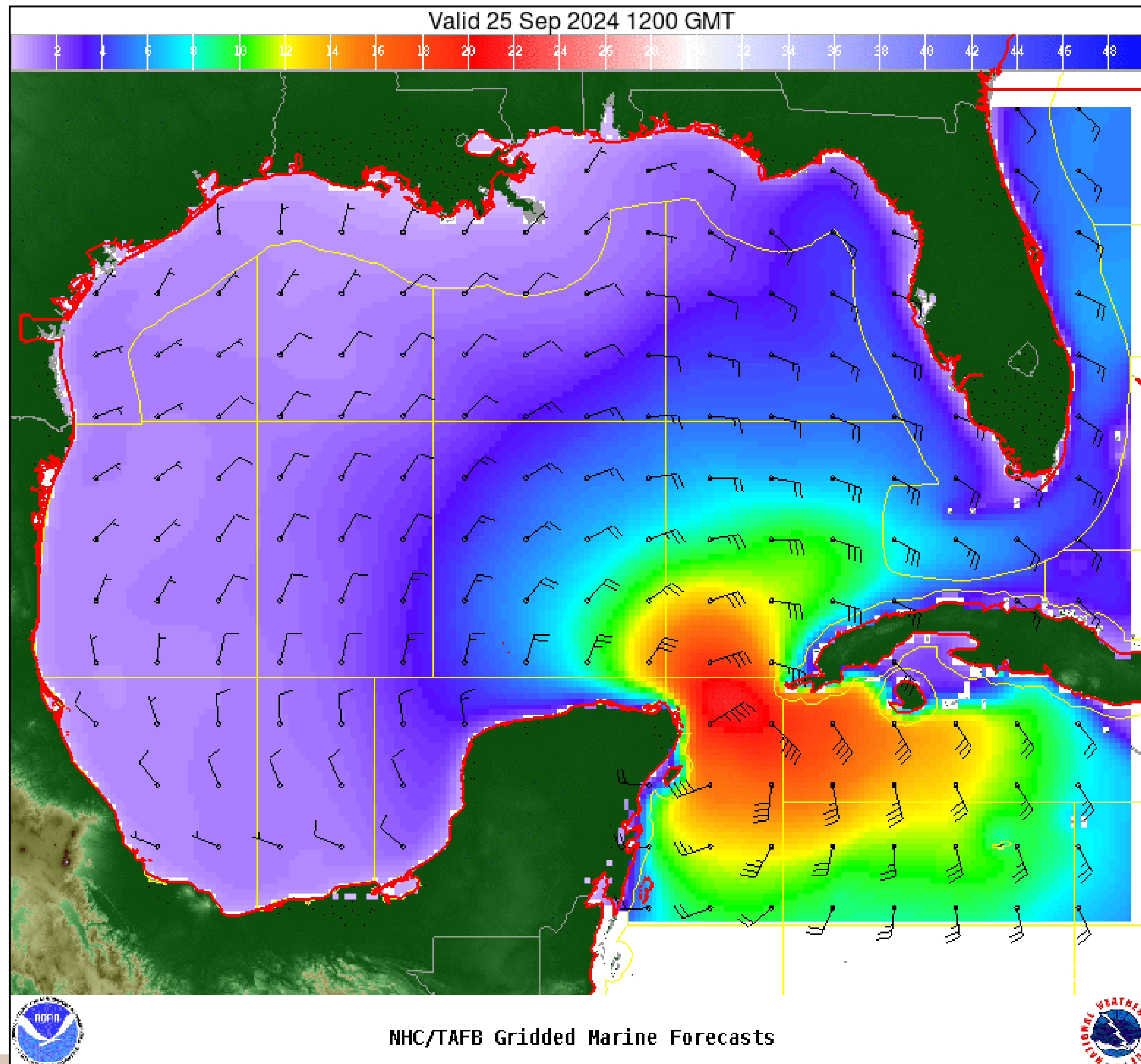
- **FL Keys/SW Florida –late night tonight/early Thu morning.**
- **Tampa –Thu morning.**
- **Big Bend/FL Panhandle –Thu afternoon.**
- **Inland Georgia –Thu late afternoon.**
- The most likely time of arrival of Tropical Storm Force Winds (34kt to 63 kt) for this cyclone based off the current track 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

Wednesday, September 25 at 7:00 AM CDT

Peak Winds: 70 kt

Peak Seas: 28 ft

- Wave heights are in feet



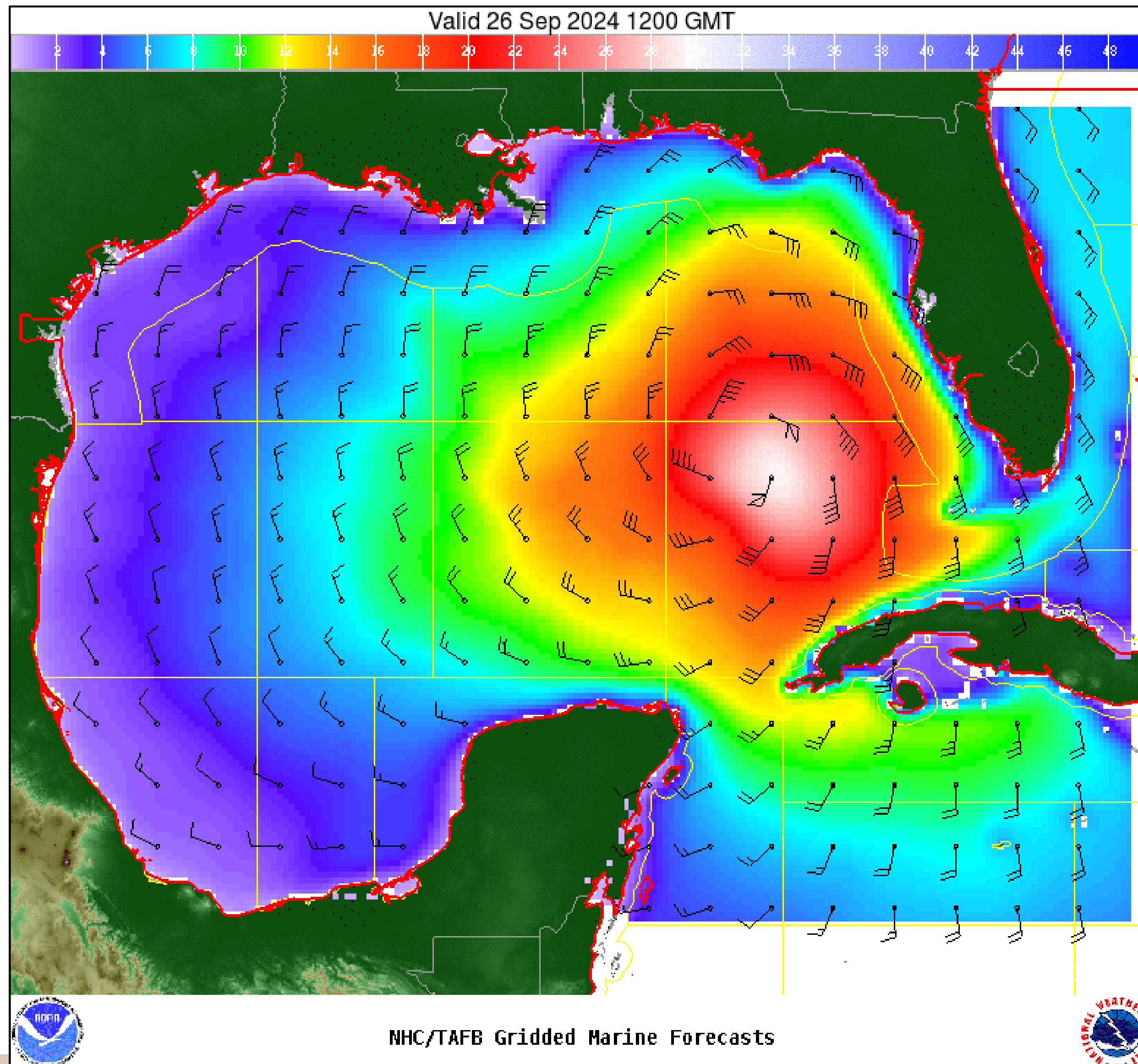
Significant Wave Height (ft)

Wind And Waves

Hurricane Helene



Tropical Analysis and Forecast Branch
NWS National Hurricane Center



24 Hour Forecast

Thursday, September 26 at 7:00 AM CDT

Peak Winds: 105 kt

Peak Seas: 41 ft

- Wave heights are in feet



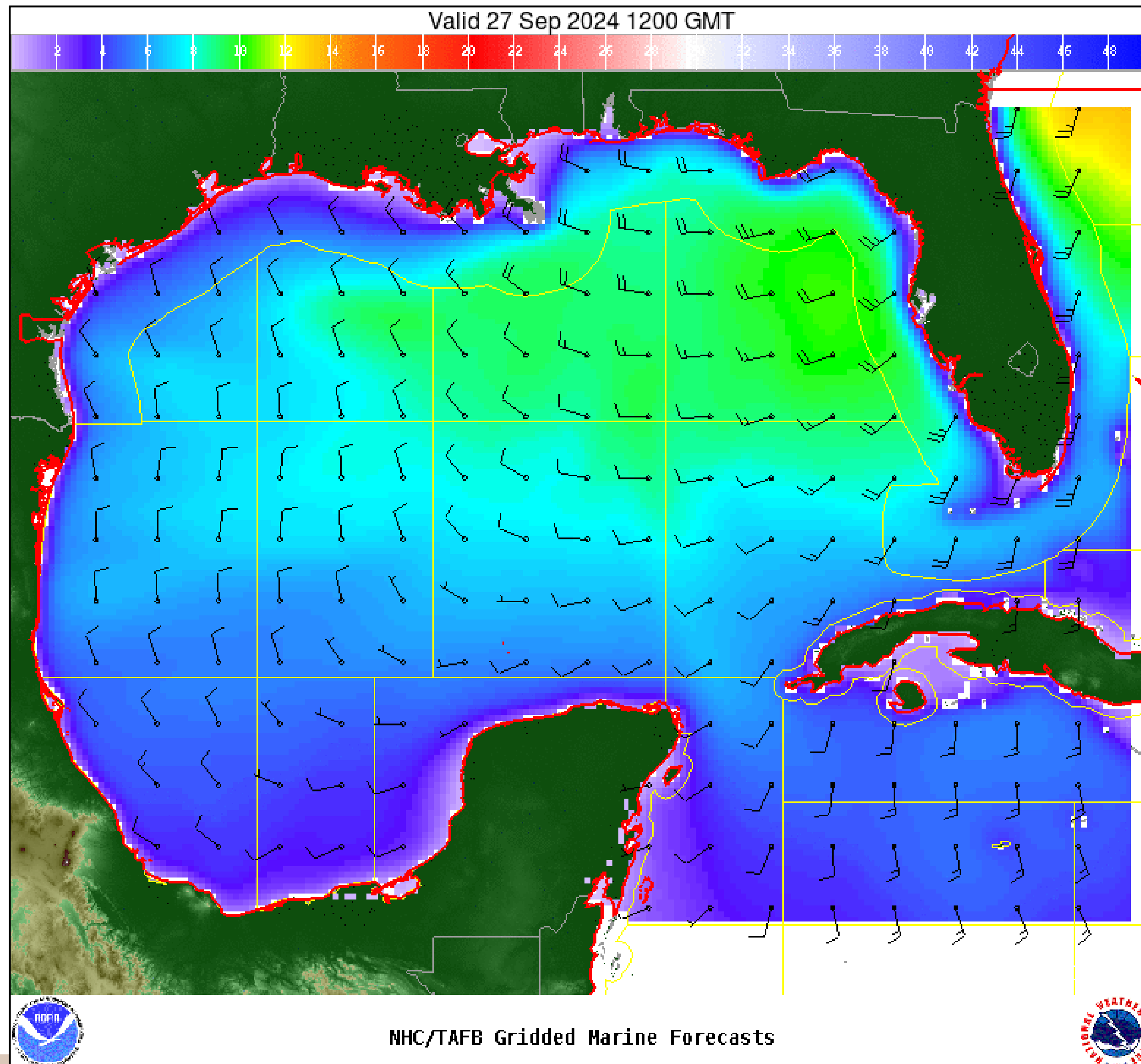
Significant Wave Height (ft)

Wind And Waves

Hurricane Helene



Tropical Analysis and Forecast Branch
NWS National Hurricane Center



48 Hour Forecast

Friday, September 27 at 7:00 AM CDT

Peak Winds: 35 kt

Peak Seas: 12 ft

■ Wave heights are in feet



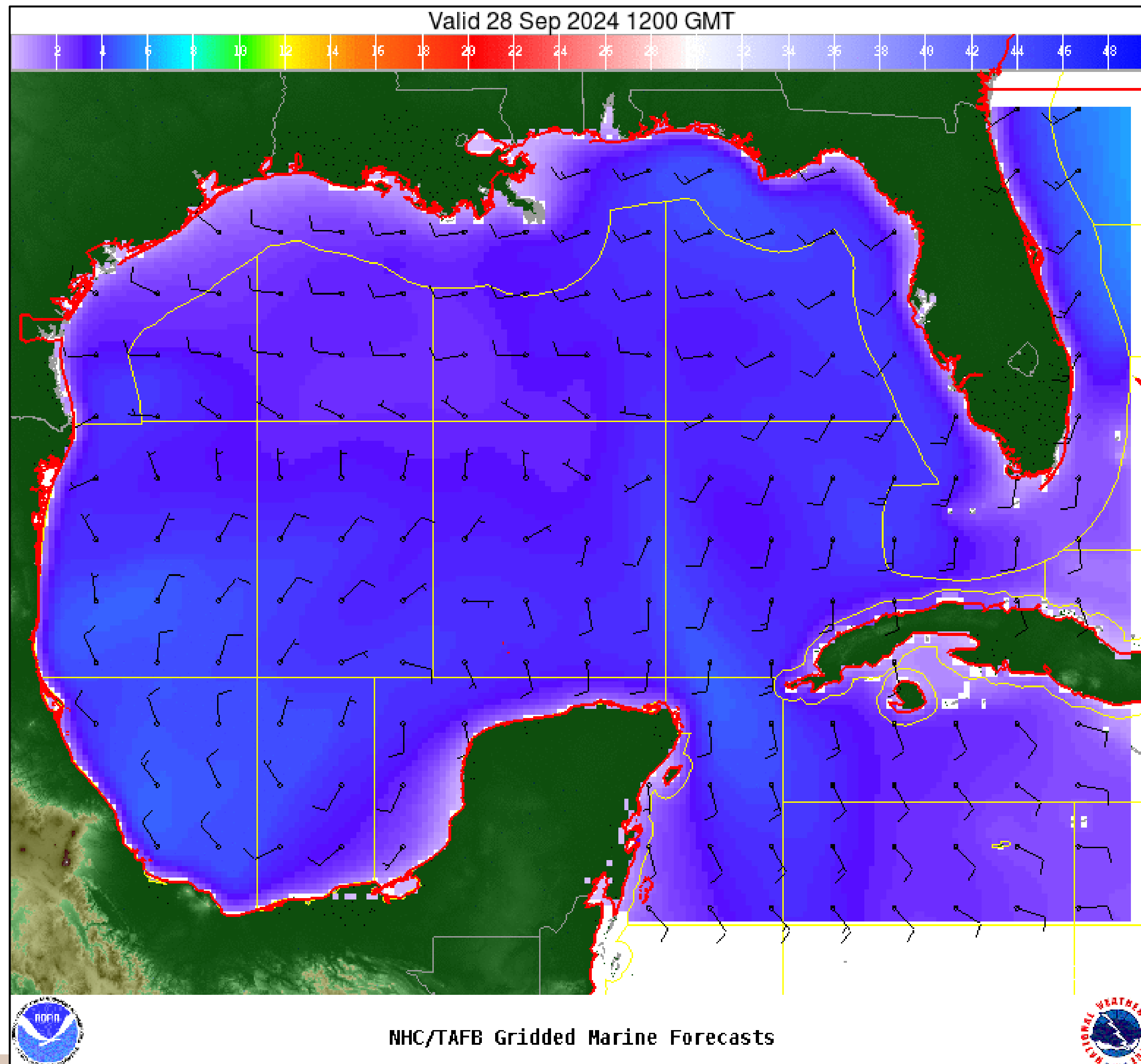
Significant Wave Height (ft)

Wind And Waves

Hurricane Helene



Tropical Analysis and Forecast Branch
NWS National Hurricane Center



72 Hour Forecast

Saturday, September 28 at 7:00 AM CDT

Peak Winds: 15 - 20 kt

Peak Seas: 5 ft

- Wave heights are in feet



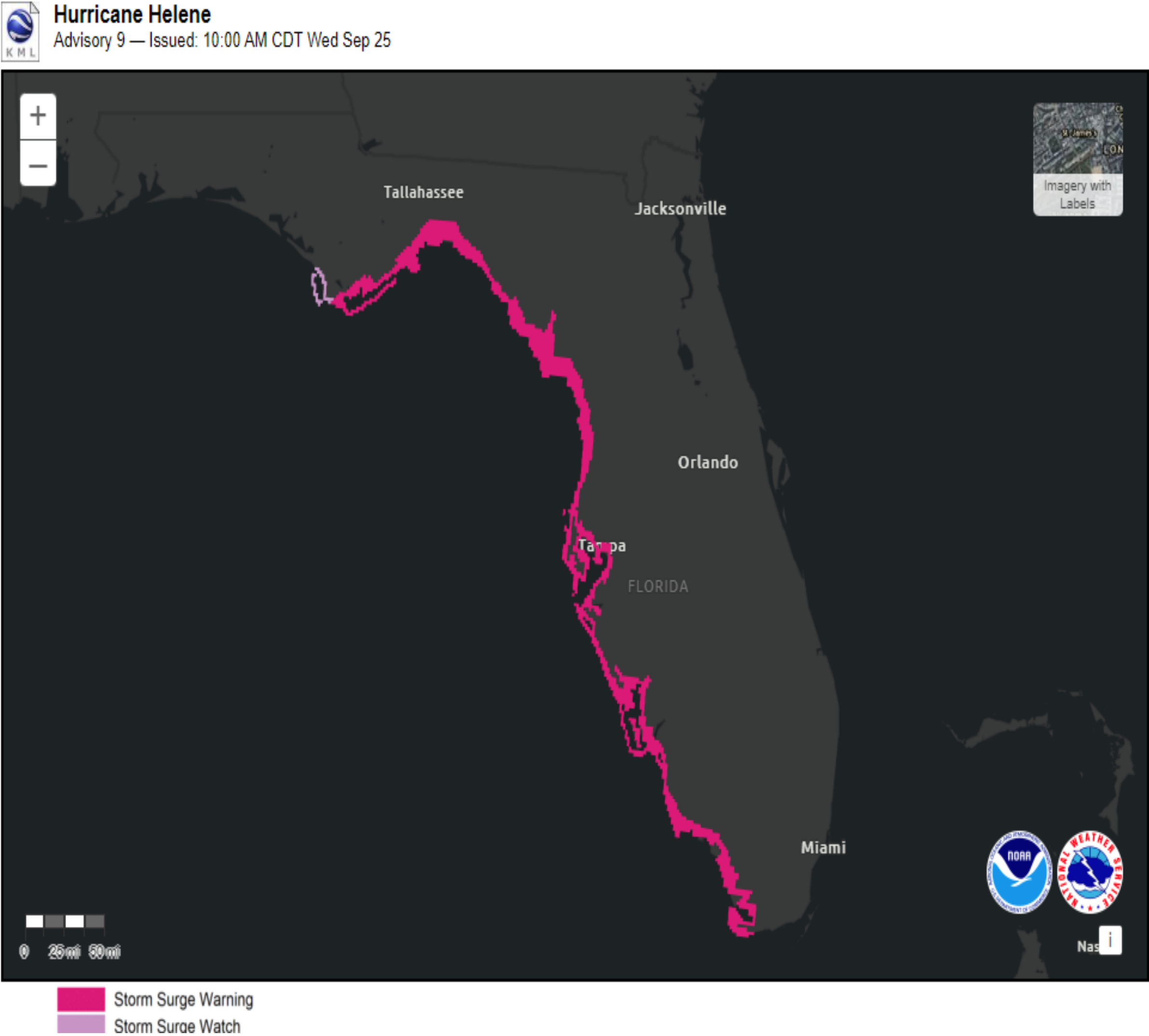
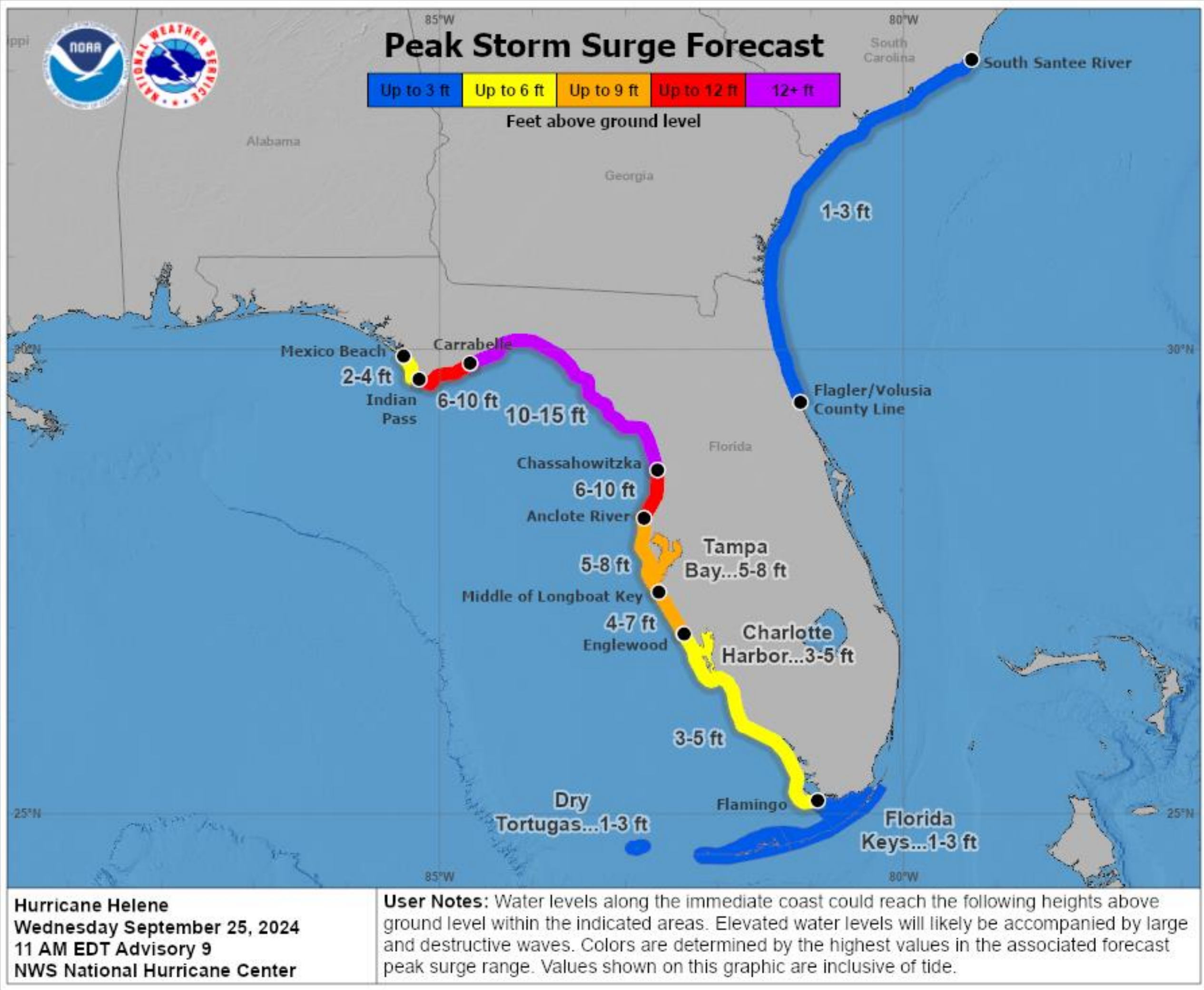
Significant Wave Height (ft)

Potential Peak Storm Surge / Watches and Warnings

Hurricane Helene



Tropical Analysis and Forecast Branch
NWS National Hurricane Center



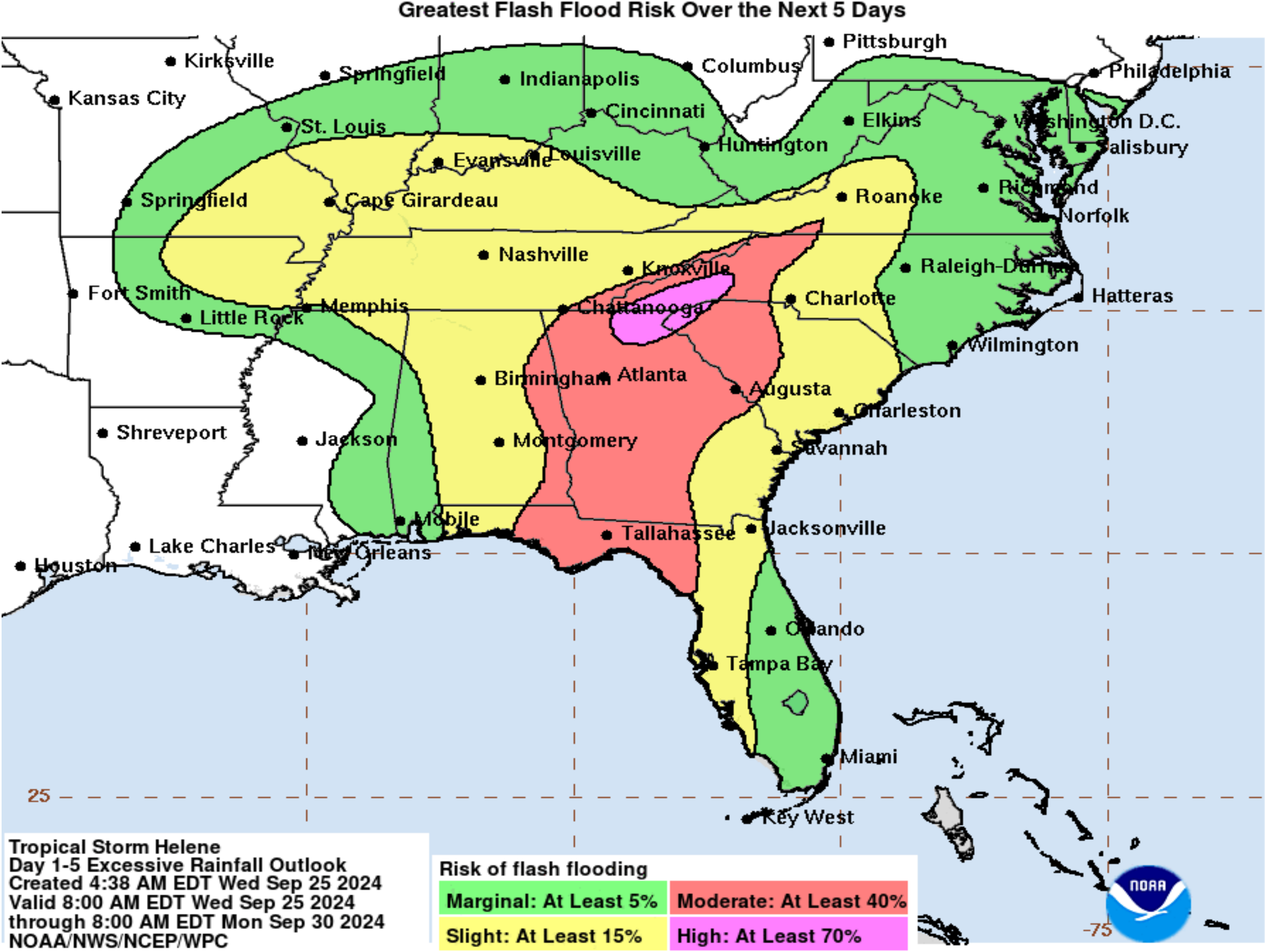
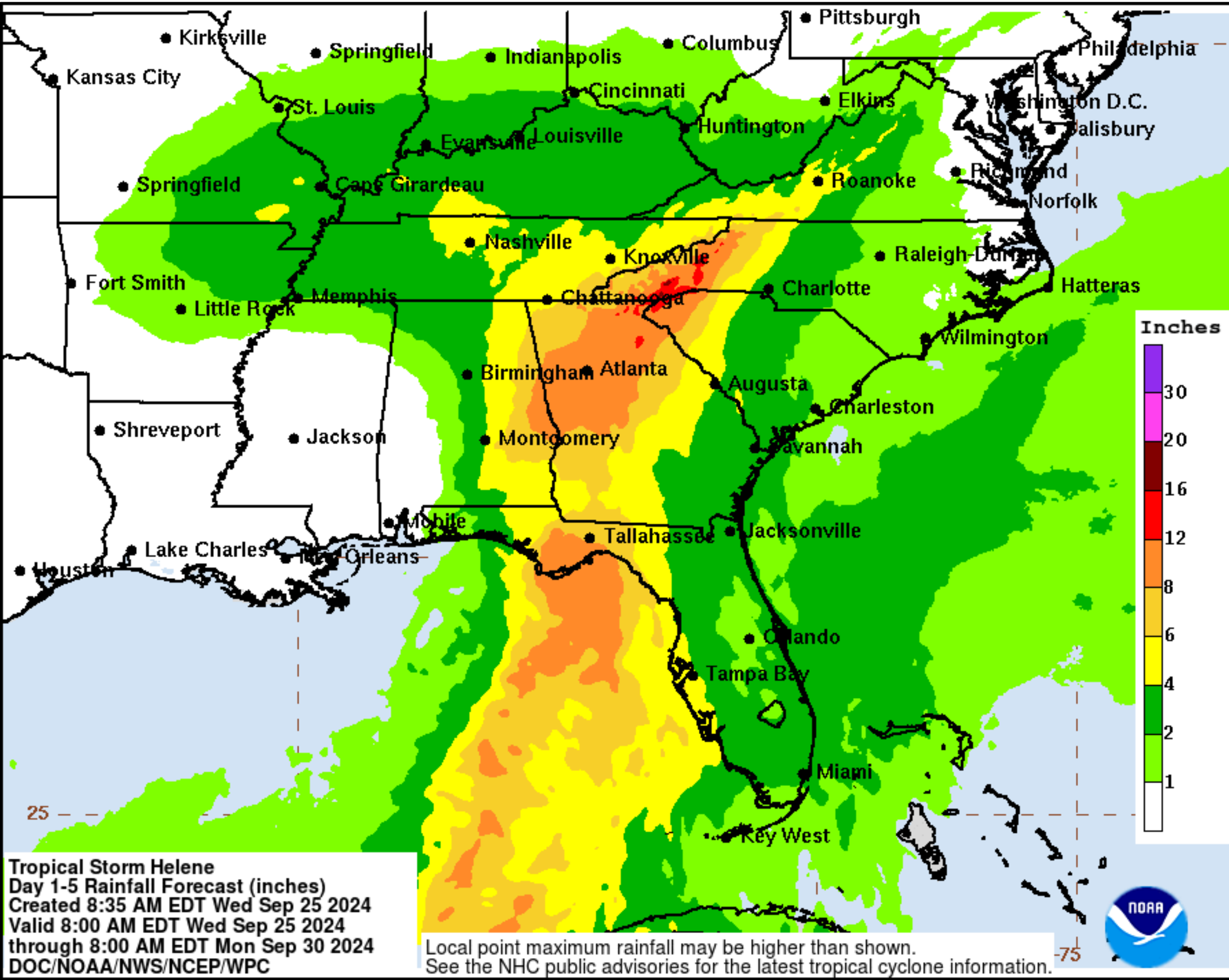
Expected Storm Total Rainfall and Chance of Rainfall Flooding

Hurricane Helene

Images from NWS Weather Prediction Center



Tropical Analysis and Forecast Branch
NWS National Hurricane 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%**

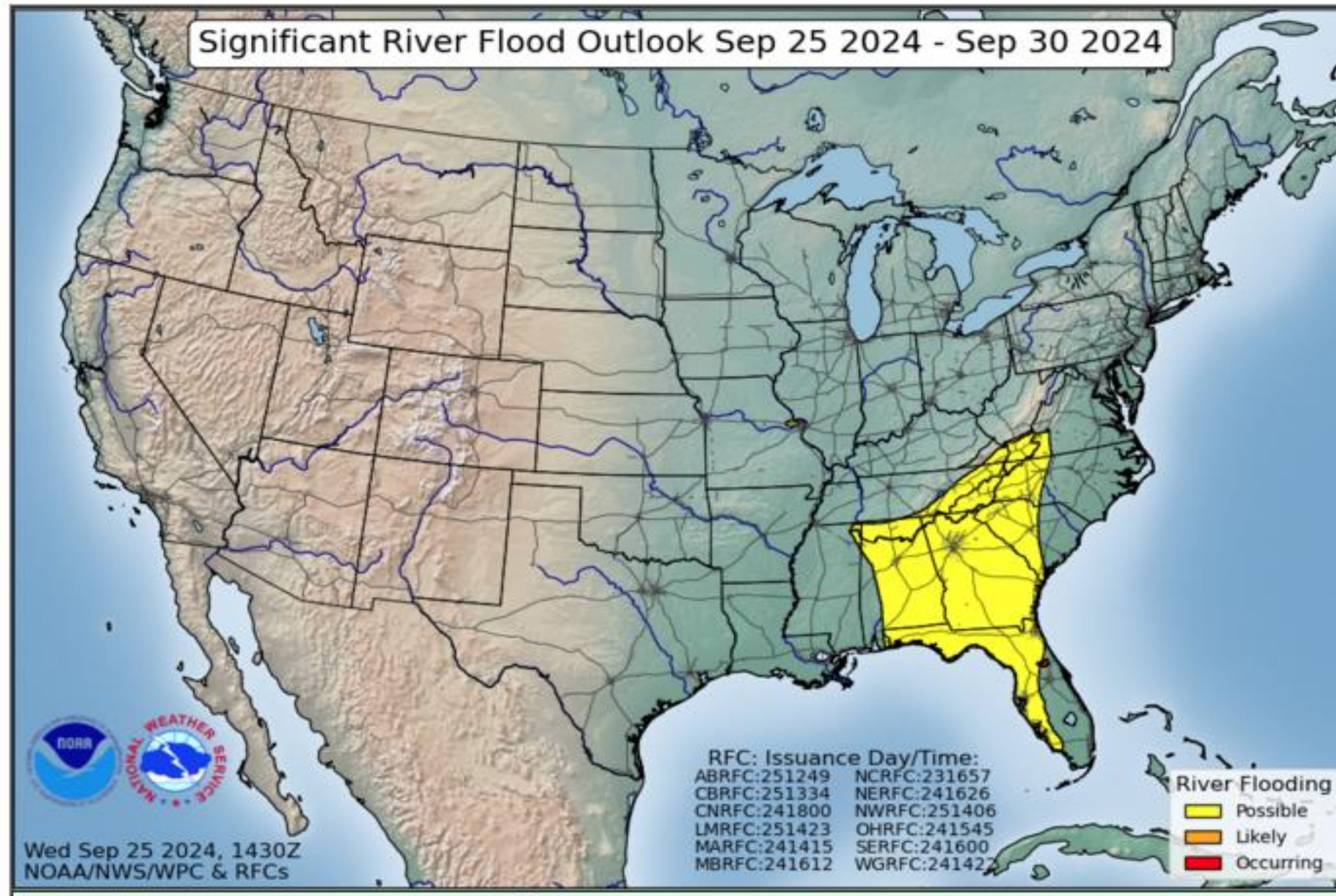
Refer to map legend for Valid Time

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.

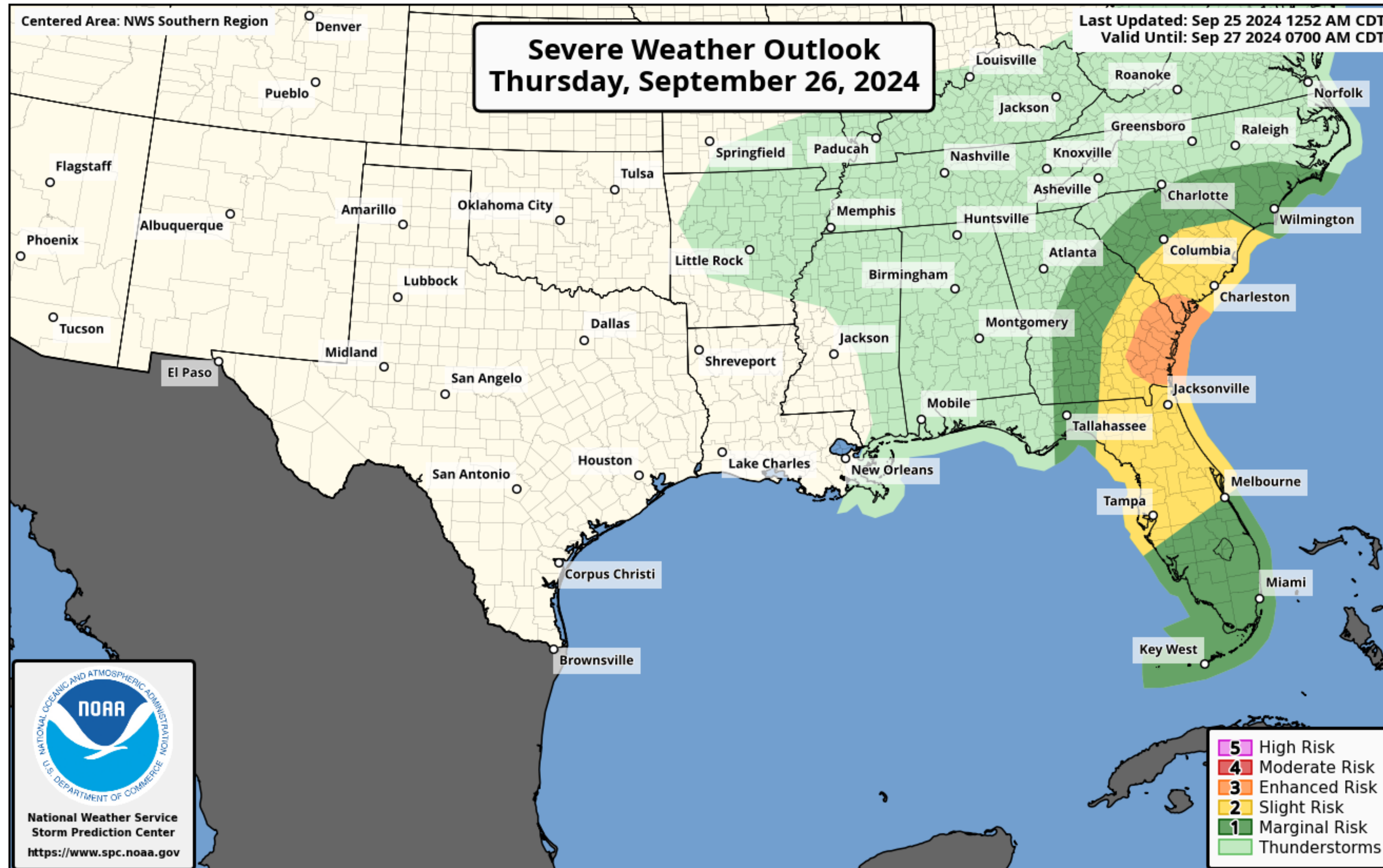
Tornado Outlook – Day 2

Hurricane Helene

Image from NWS Storm Prediction Center



Tropical Analysis and Forecast Branch
NWS National Hurricane Center



Thursday:

**Marginal Risk of tornadoes
in parts of FL.**

Key Messages

Hurricane Helene



Tropical Analysis and Forecast Branch
NWS National Hurricane Center



Key Messages for Hurricane Helene

Advisory 9: 10:00 AM CDT Wed Sep 25, 2024

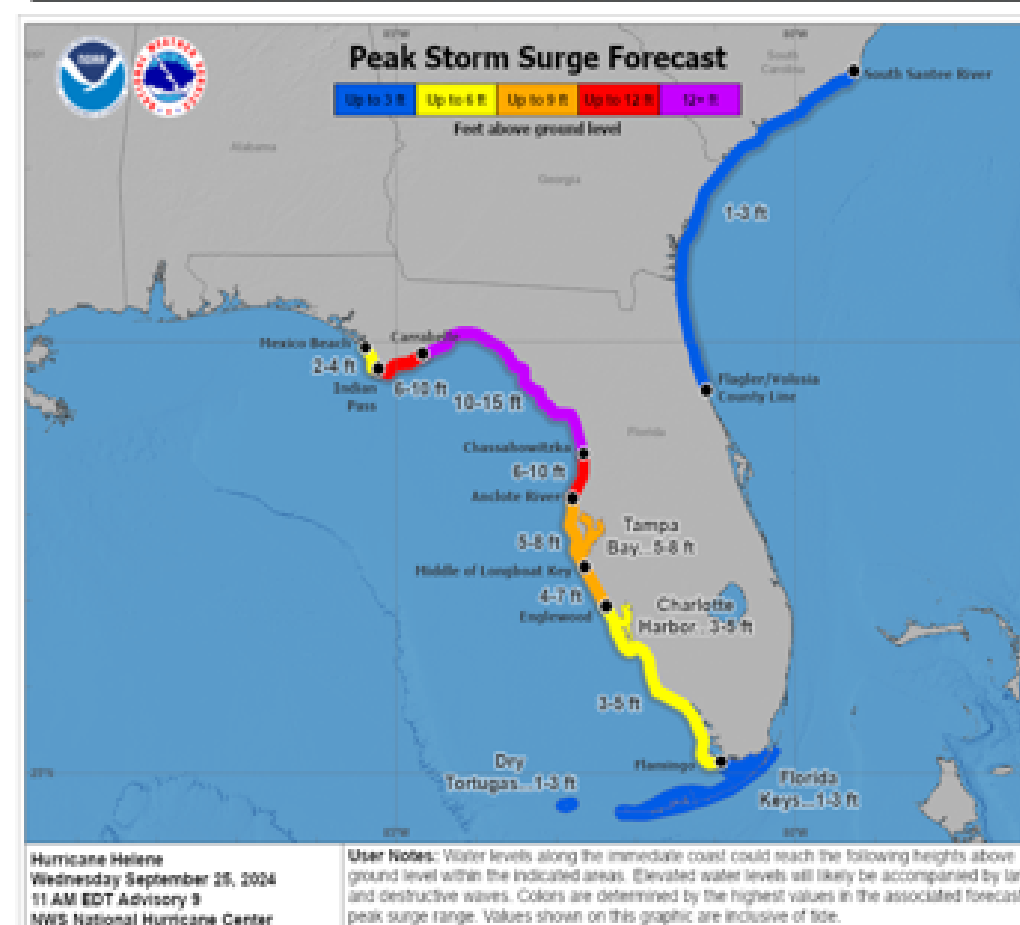
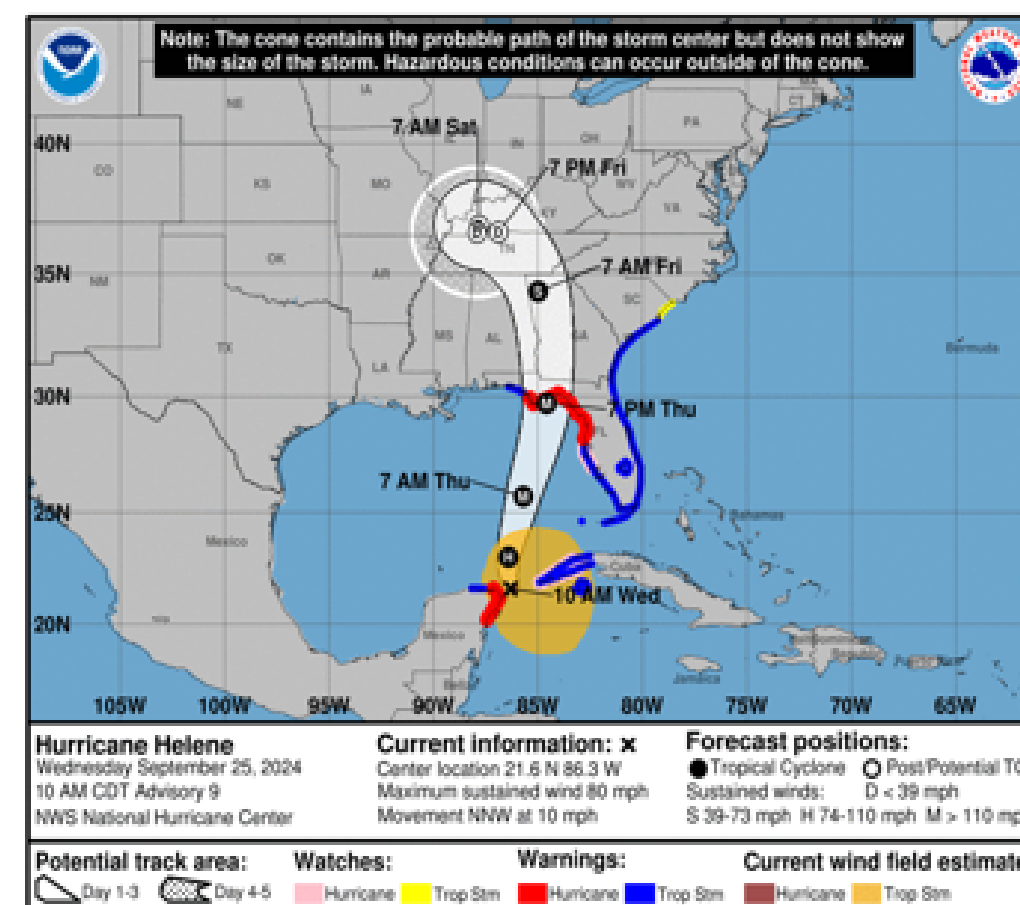


1. Hurricane and tropical storm conditions are expected over northeastern portions of the Yucatan Peninsula of Mexico today where Tropical Storm and Hurricane Warnings are in effect. Tropical storm conditions are occurring over portions of western Cuba within the Tropical Storm Warning area, and hurricane conditions are possible today within the Hurricane Watch area.

2. Due to the large size of Helene, there is a danger of life-threatening storm surge along the entire west coast of the Florida Peninsula and Florida Big Bend. The highest inundation of greater than 10 ft is expected along the Florida Big Bend coast. Residents in those areas should follow advice given by local officials and evacuate if told to do so.

3. Devastating hurricane-force winds are expected across portions of northern Florida and southern Georgia where the core of Helene moves inland. Preparations to protect life and property should be completed by early Thursday since tropical storm conditions are expected to begin within these areas on Thursday. Because of Helene's expected fast forward speed, damaging and life-threatening wind gusts, are expected to penetrate well inland over portions of the southeastern United States, including in the higher terrain of the southern Appalachians.

4. Helene will bring heavy rain to portions of the western Caribbean with potentially significant flooding across western Cuba and the northeastern Yucatan Peninsula into early Thursday. Considerable and potentially life-threatening flash and urban flooding is expected across portions of northwestern and northern Florida, the Southeast, southern Appalachians, and the Upper Tennessee Valley Wednesday through Friday. This includes the risk of landslides across the southern Appalachians. Widespread minor to moderate river flooding is likely, and isolated major river flooding is possible.



For more information go to hurricanes.gov

IMPACTS FOR **D7** through next 5days

Winds/US Coast – **Extreme**

Winds/SRR – **Extreme**

Waves/US Coastal – **Extreme**

Waves/SRR – **Extreme**

US Storm Surge – **Extreme**

US Rainfall/Flash Flooding – **High**

US Tornadoes – **Low**

Marine Key Messages:

- Conditions will rapidly deteriorate in the SE Gulf.
- Thursday afternoon NE Gulf:
 - Peak winds of 110 kt are likely.
 - Peak seas near 45 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:

21 UTC: 4 PM CDT

*The Next Briefing Will Be:
Thursday 1:00 AM CDT*

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



NHC_TAFB

www.nhc.noaa.gov