

IMPACTS FOR D8

Winds/US Coast – Extreme

Winds/SRR – Extreme

Waves/US Coastal – Extreme

Waves/SRR – Extreme

through next 5 days

US Storm Surge – High

US Rainfall/Flash Flooding – Medium

US Tornadoes – Unknown

TROPICAL STORM HELENE BRIEFING



11:00 AM CDT
Tuesday, September 24, 2024
Prepared by:

Scott Stripling

*Tropical Analysis and Forecast Branch
NWS National Hurricane Center*



NHC_TAFB

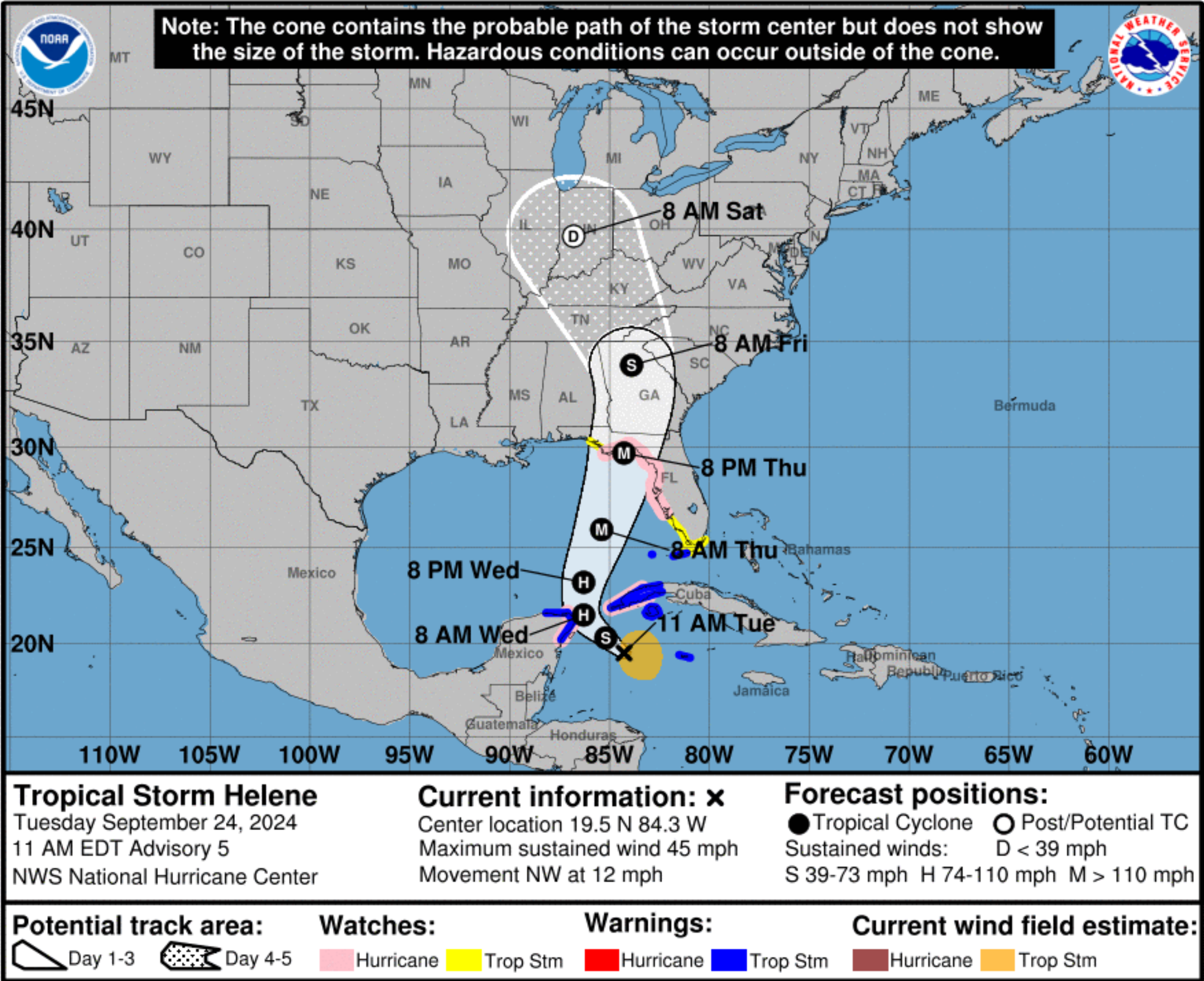
www.nhc.noaa.gov

Situation Overview

Tropical Storm Helene



Tropical Analysis and Forecast Branch
NWS National Hurricane Center



...TROPICAL STORM WARNINGS ISSUED FOR LOWER KEYS WEST OF SEVEN MILE BRIDGE AND DRY TORTUGAS...

...TROPICAL STORM WATCHES ISSUED FROM THE MIDDLE FLORIDA KEYS TO CHANNEL 5 BRIDGE...

...HURRICANE WATCHES ISSUED FOR ENGELWOOD TO INDIAN PASS, TAMPA BAY...

SUMMARY OF 1000 AM CDT...INFORMATION

LOCATION...19.5N 84.3W
ABOUT 180 NM... ESE OF COZUMEL MEXICO
ABOUT 170 NM...SSE OF THE WESTERN TIP OF CUBA
MAXIMUM SUSTAINED WINDS...40 KT
PRESENT MOVEMENT... NW AT 10 KT

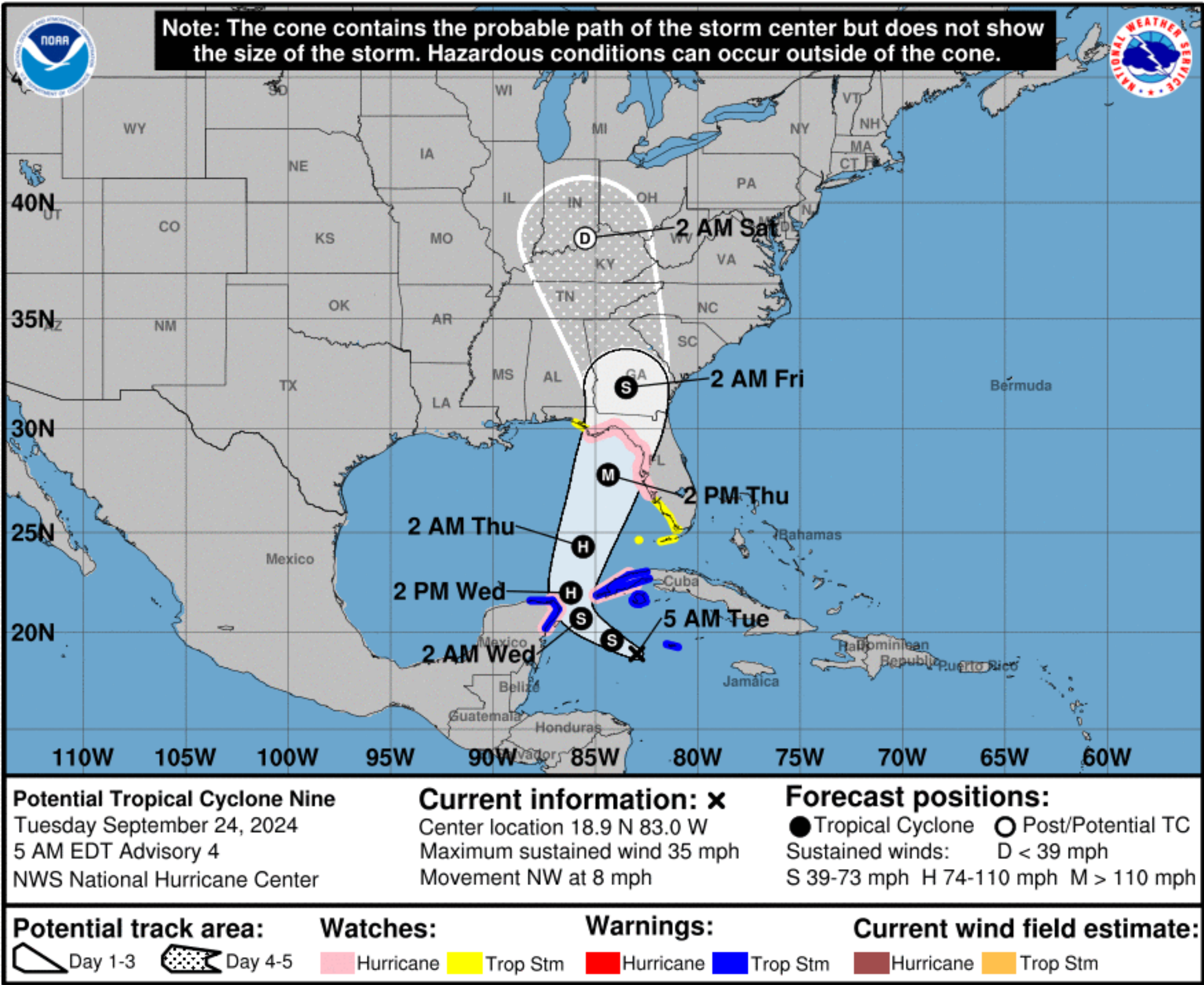
SIZE
34 KT.....100NE 120SE 0SW 0NW.
12 FT SEAS.. 90NE 120SE 0SW 0NW.
PEAK SEAS 13 FT

Forecast Information

Tropical Storm Helene



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

- A northwestward motion is expected to continue today, followed by a northward to north-northeastward motion Wednesday then faster motion on Thursday.
- On the forecast track, the center of Helene is forecast to move across the northwestern Caribbean Sea through tonight, and then over the eastern Gulf of Mexico on Wednesday and Thursday.
- Significant strengthening is expected during the next few days, and Helene is forecast to become a hurricane on Wednesday and a major hurricane on Thursday as it moves across the eastern Gulf of Mexico.
- Helene is expected to make landfall as either a Category 2 or 3 hurricane either Thursday afternoon or evening between Tampa Bay and Apalachicola.

- 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

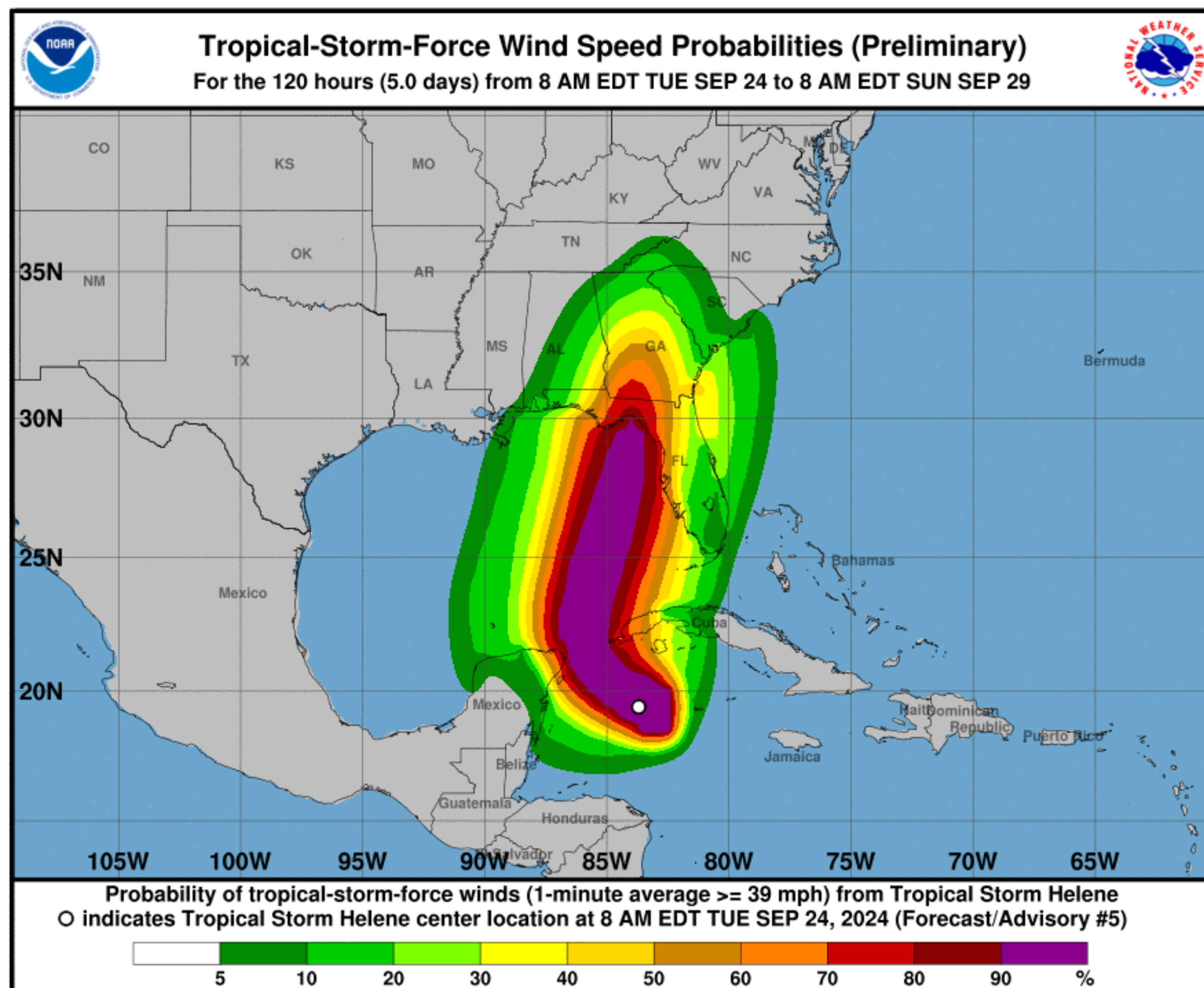
** Swaths are calculated using average track errors and actual track may be well inside, or possibly outside the potential track areas indicated.

T.S. Wind Speed Probabilities

Tropical Storm Helene



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- KEY WEST FL 31%
- CEDAR KEY FL 81%
- TAMPA FL 70%
- MOBILE AL 6%
- PENSACOLA FL 15%
- WHITING FLD FL 16%
- PANAMA CITY FL 67%
- APALACHICOLA 80%
- ST MARKS FL 74%
- TALLAHASSEE FL 70%

-**Green** indicates probabilities have gone down since last briefing

-**Red** indicates probabilities have gone up since last briefing

-**Black** indicates probabilities remain the same

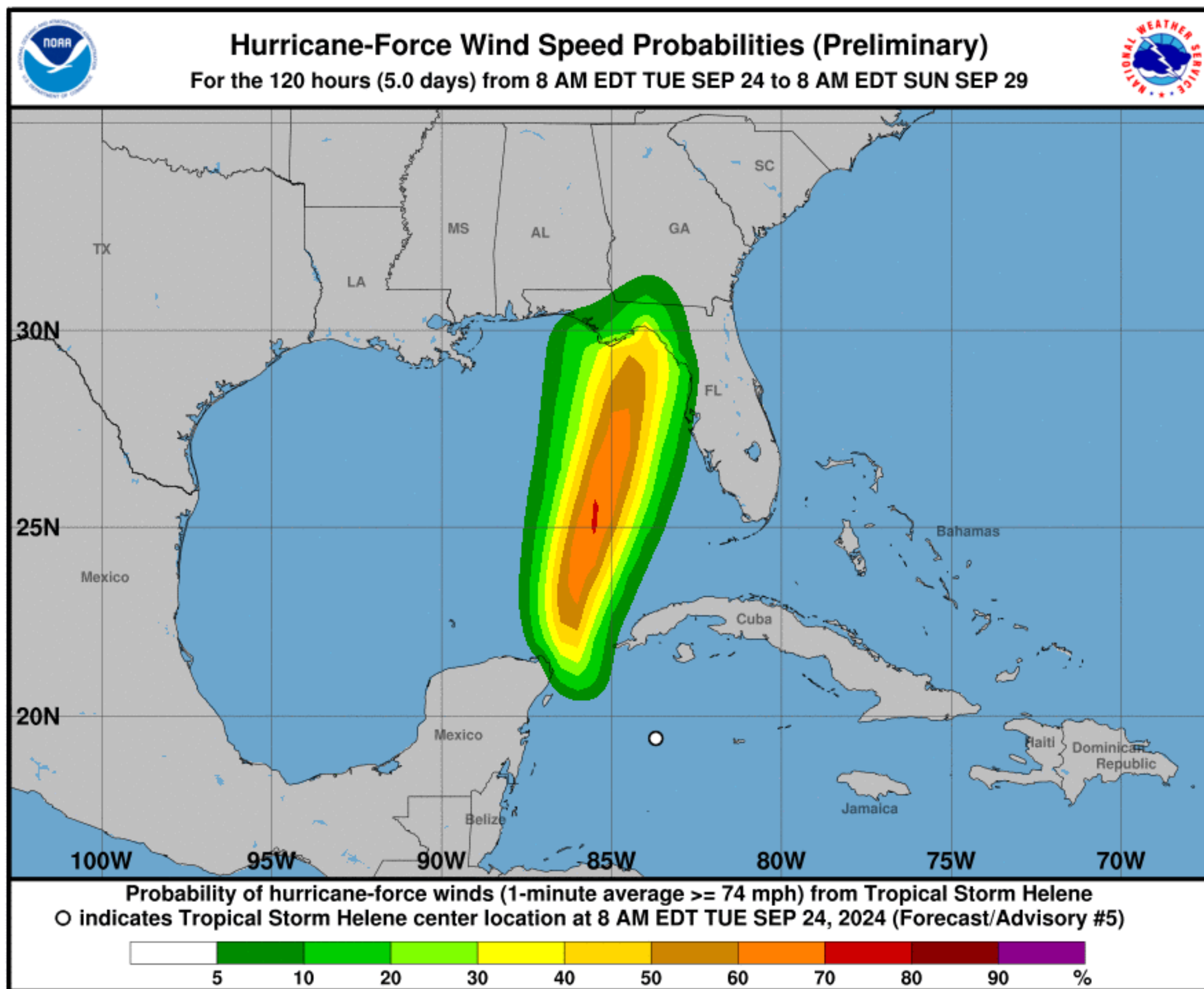
- Probabilities of sustained tropical storm force winds (34 kt to 63 kt) over the next 5 days, based off this cyclone's wind radii and track.
- Clear or dark green are the lowest chances of 0-30%.
- Yellow to orange is 31-70%
- Red through purple are the highest probabilities of 71%-100%
- See the color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

Hurricane Wind Speed Probabilities

Tropical Storm Helene



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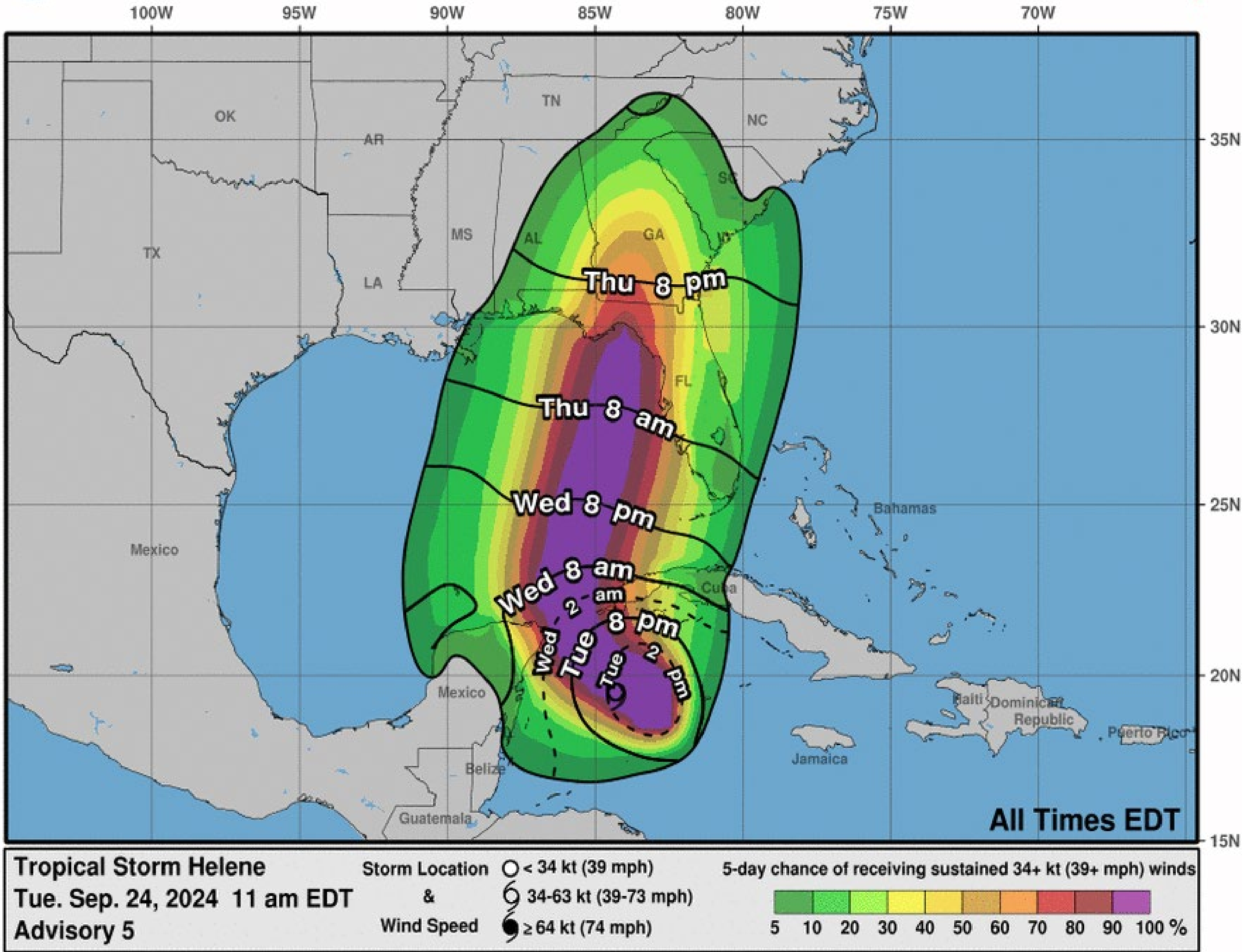
- CEDAR KEY FL 20%
 - TAMPA FL 8%
 - PANAMA CITY FL 19%
 - APALACHICOLA 32%
 - TALLAHASSEE FL 9%
- Probabilities of sustained hurricane force winds (64 kt +) over the next 5 days, based off this cyclone's wind radii and track.
 - Clear or dark green are the lowest chances of 0-30%.
 - Yellow to orange is 31-70%
 - Red through purple are the highest probabilities of 71%-100%
 - See the color bar below the image for more details.



Tropical Storm Helene



Most Likely Arrival Time of Tropical-Storm-Force Winds



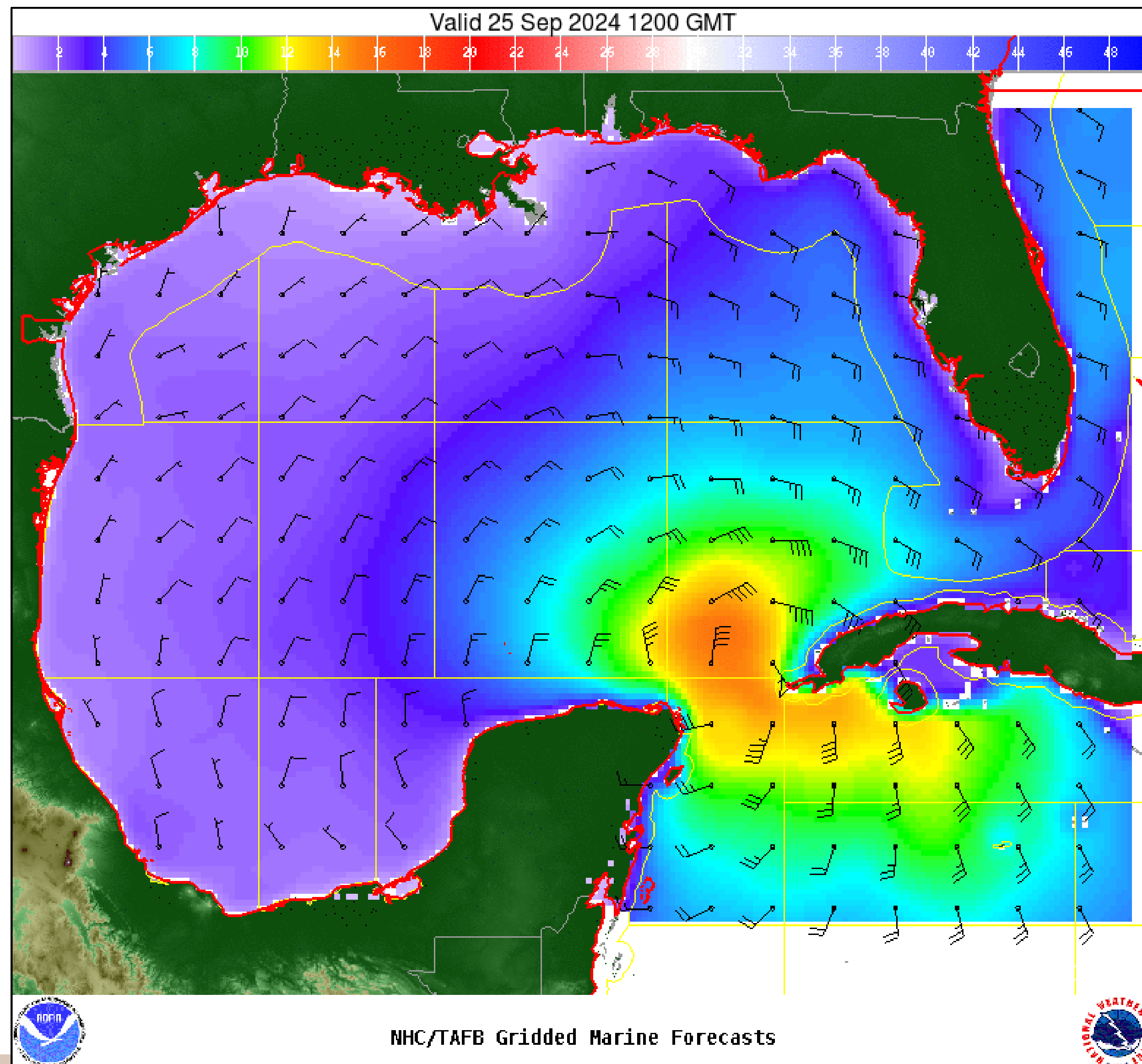
- Thursday morning - Tampa Bay
- Thursday midday - Florida Big Bend and Florida Panhandle
- The most likely time of arrival of Tropical Storm Force Winds (34kt to 63 kt) for this cyclone based off the current track and wind radii.
- Clear or dark green are the lowest chances of 0-30%.
- Yellow to orange 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 Helene



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24 Hour Forecast

Wednesday, September 25 at 7:00 AM CDT

Peak Winds: 65 kt

Peak Seas: ~ 20 ft

- Wave heights are in feet



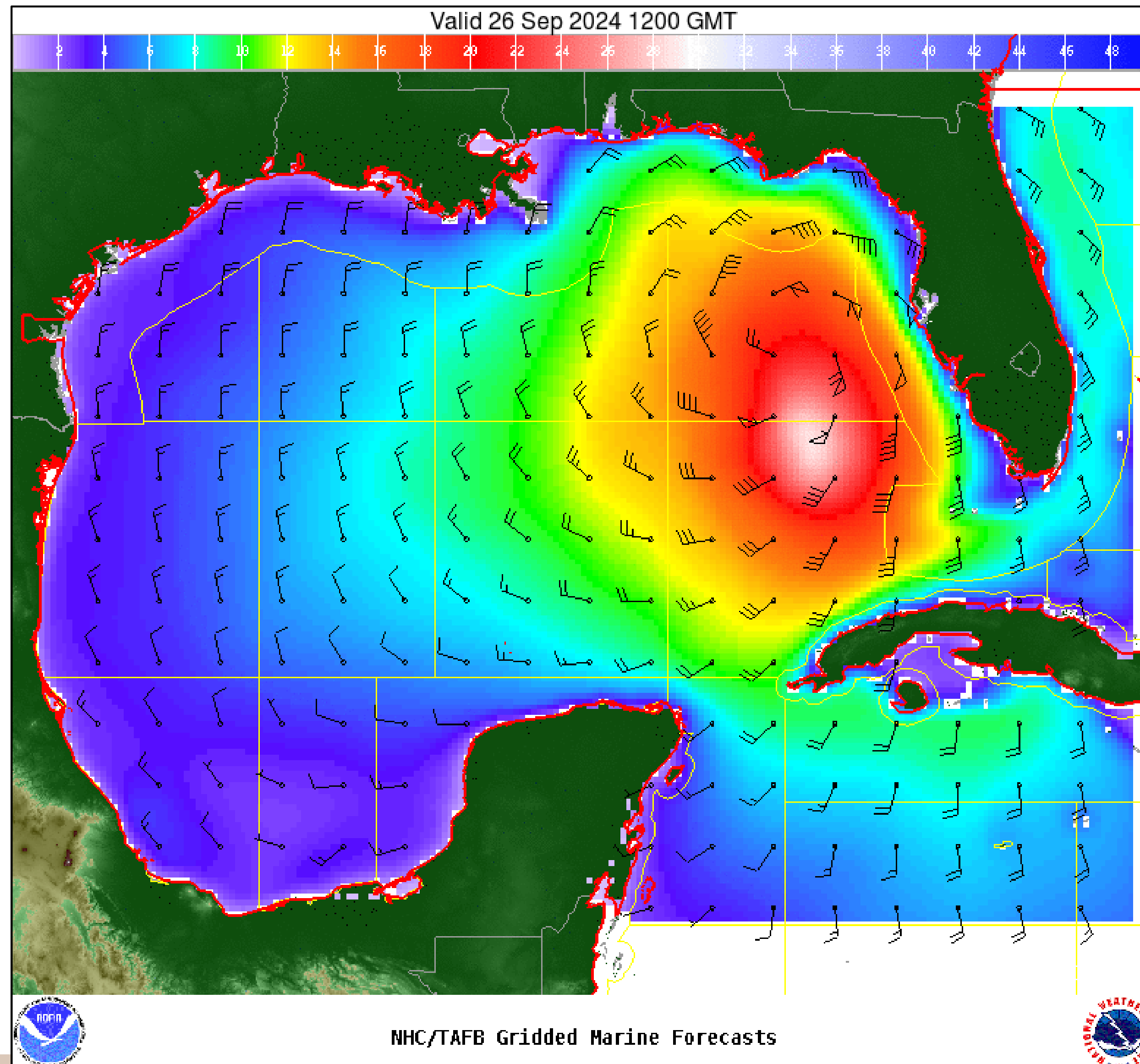
Significant Wave Height (ft)

Wind And Waves

Tropical Storm Helene



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48 Hour Forecast

Thursday, September 26 at 7:00 AM CDT

Peak Winds: 100 kt

Peak Seas: 35-40 ft

- Wave heights are in feet



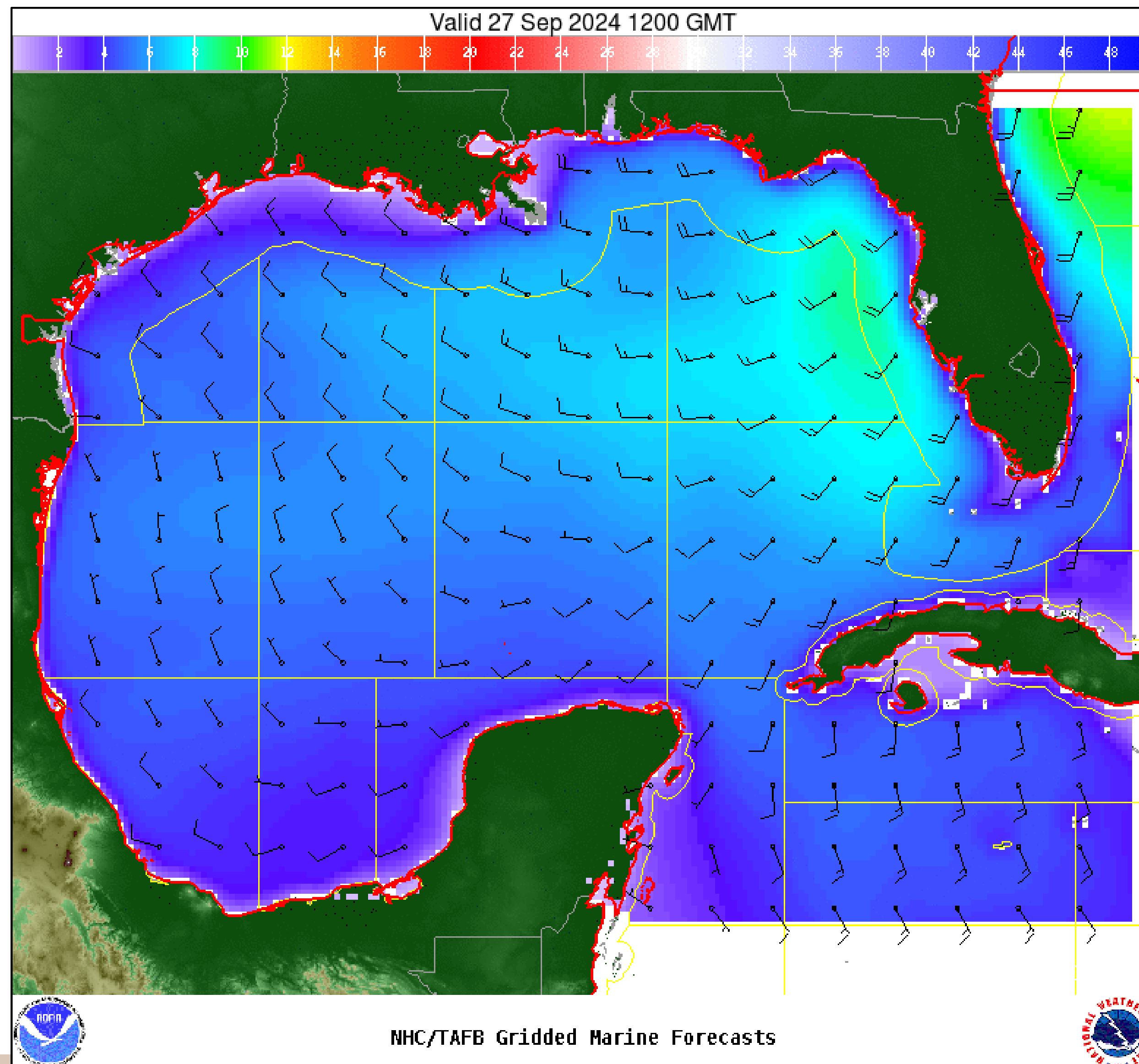
Significant Wave Height (ft)

Wind And Waves

Tropical Storm Helene



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72 Hour Forecast

Friday, September 27 at 7:00 AM CDT

Peak Winds: 20 kt

Peak Seas: ~ 9 ft

- Wave heights are in feet



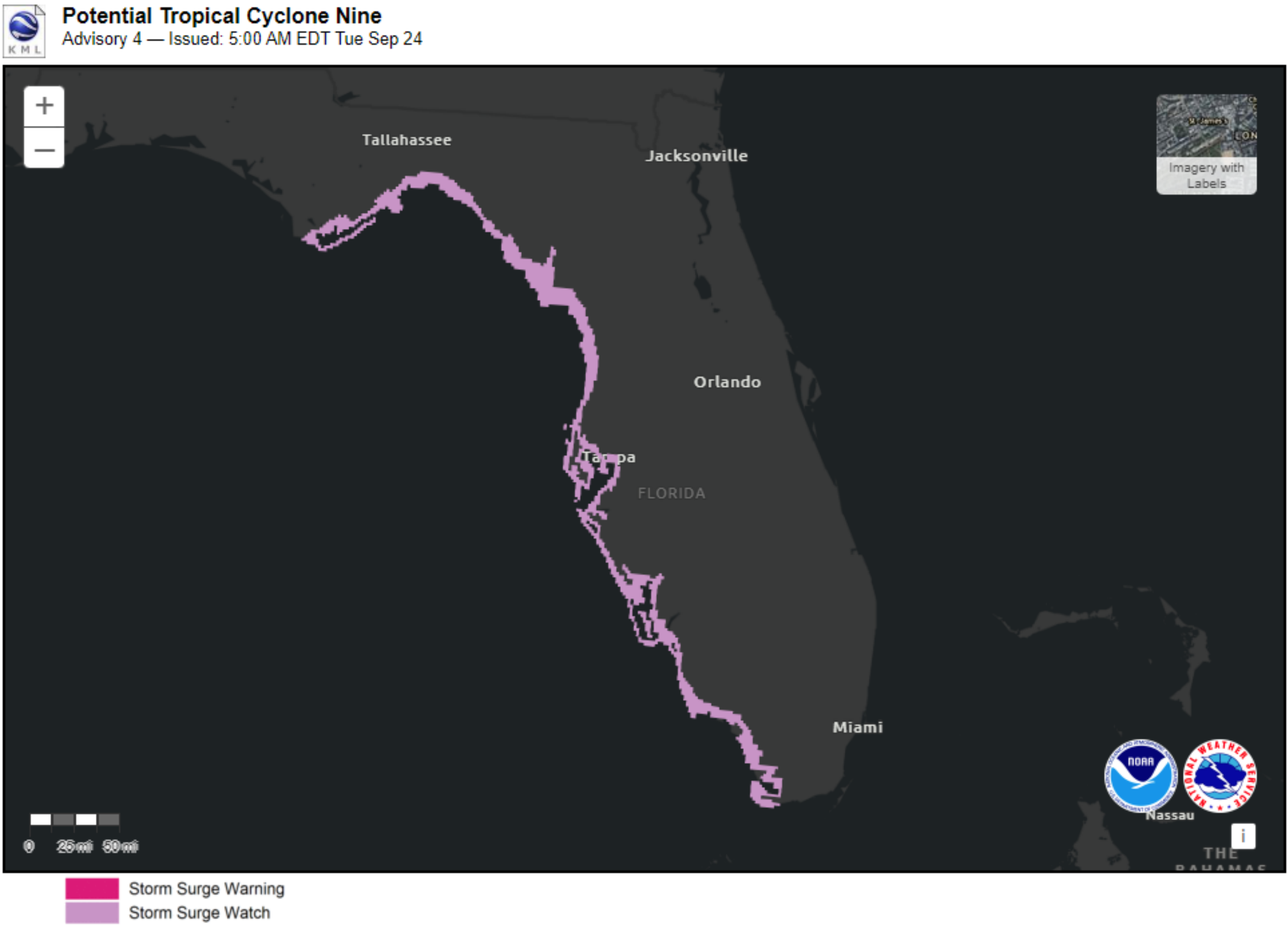
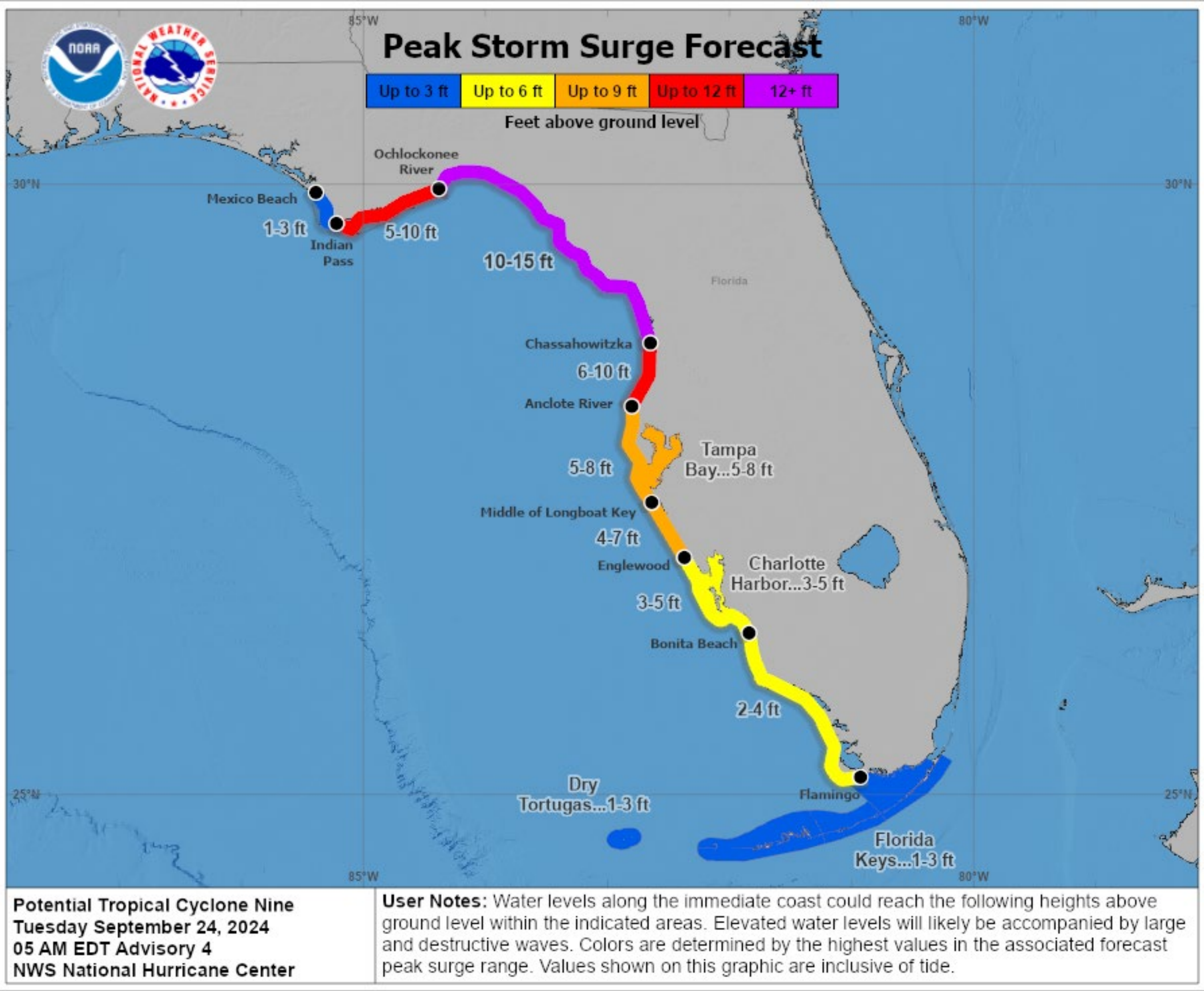
Significant Wave Height (ft)

Potential Peak Storm Surge / Watches and Warnings

Tropical Storm Helene



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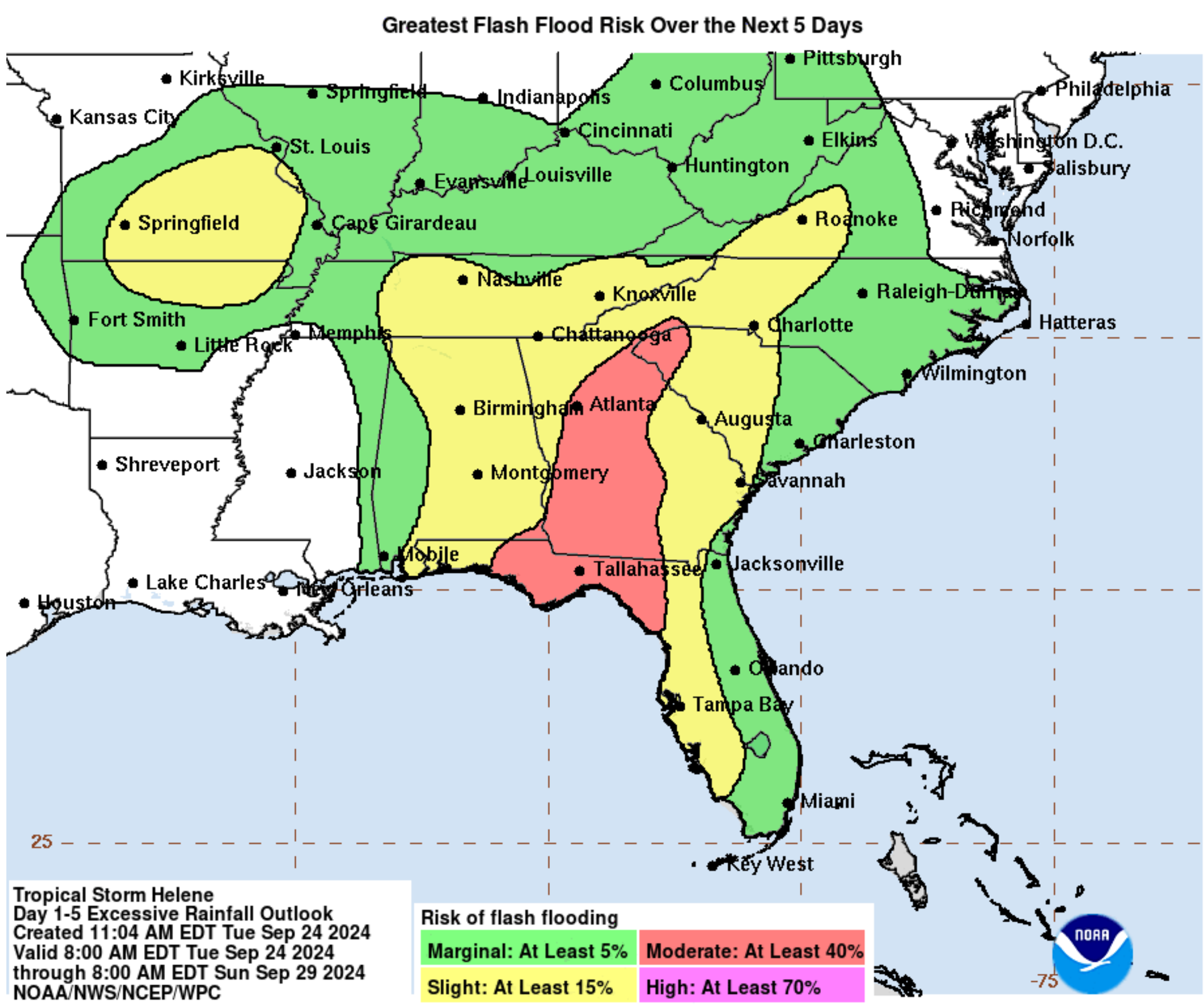
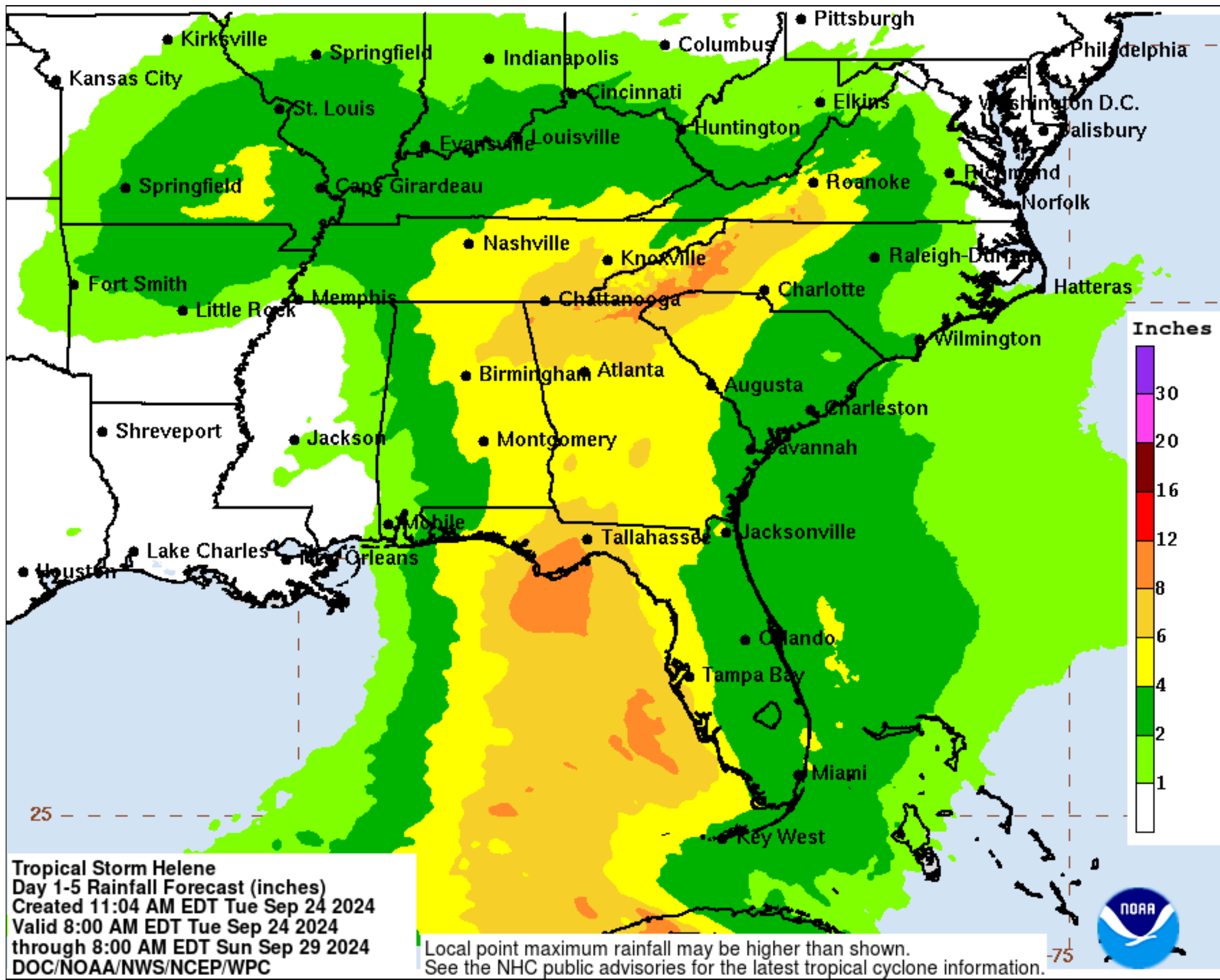
Expected Storm Total Rainfall and Chance of Rainfall Flooding



Tropical Analysis and Forecast Branch
NWS National Hurricane Center

Tropical Storm Helene

Images from NWS Weather Prediction Center



Over the Southeastern U.S., Helen is expected to produce total rain accumulations of 4 to 8 inches with isolated totals around 12 inches, bringing a considerable risk of flooding, some of which could be considerable.

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

Key Messages

Tropical Storm Helene



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NWS National Hurricane Center



Key Messages for Tropical Storm Helene

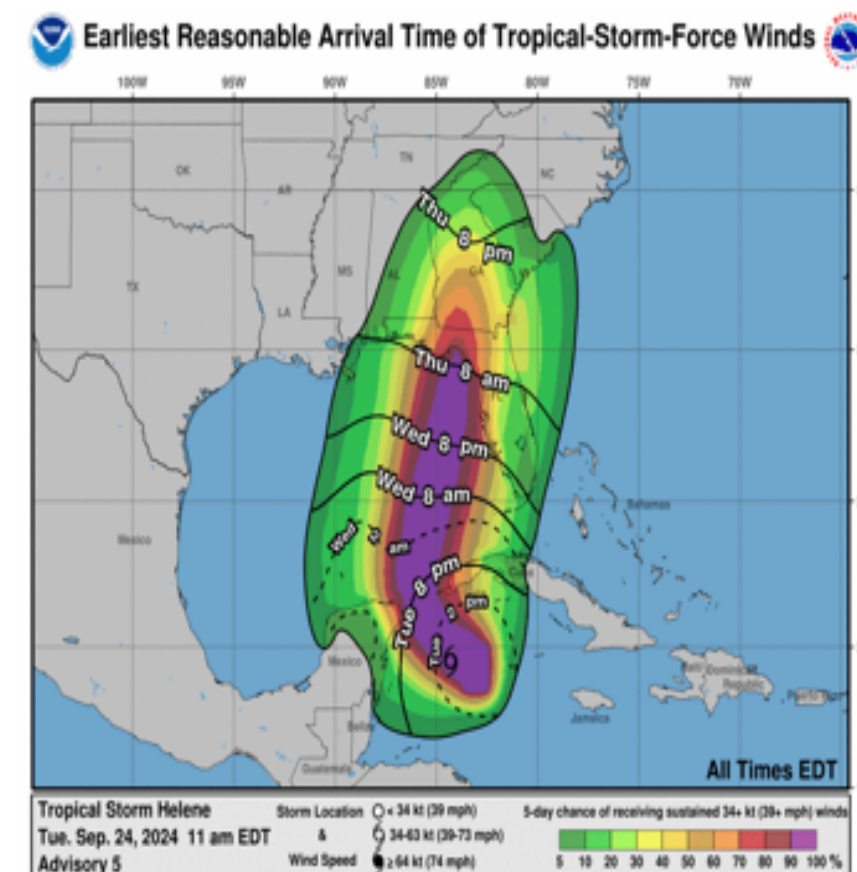
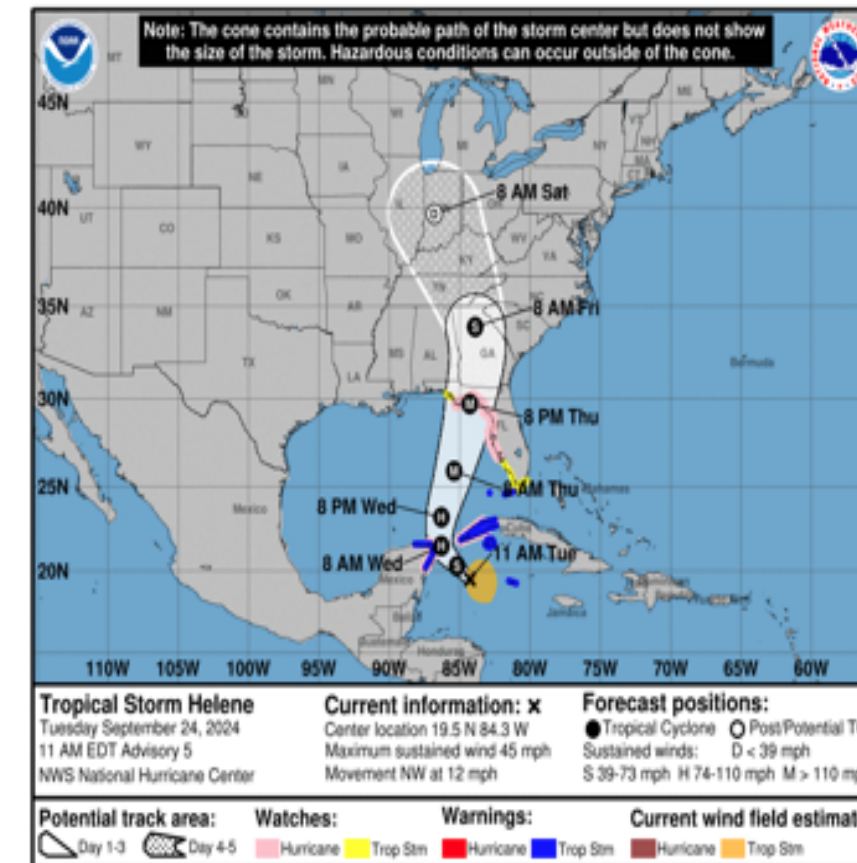
Advisory 5: 11:00 AM EDT Tue Sep 24, 2024



1. Helene is forecast to intensify and be near hurricane strength when it reaches the far northwestern Caribbean Sea early Wednesday. Tropical storm conditions are expected over portions of western Cuba and the northeastern coast of the Yucatan Peninsula with hurricane conditions possible.

2. Helene is expected to rapidly intensify over the eastern Gulf of Mexico and be a major hurricane when it approaches the northeastern Gulf Coast on Thursday. The risk of impacts from life-threatening storm surge and damaging hurricane-force winds continues to increase along the coast of the Florida Panhandle and the Florida west coast. Hurricane and Storm Surge Watches are in effect for much of that area and residents in those areas should follow advice given by local officials.

3. Helene will bring heavy rain to portions of the western Caribbean, which will cause considerable flooding and mudslides across western Cuba. Heavy rainfall will likely result in locally considerable flash and urban flooding across portions of Florida, with isolated flash and urban flooding possible across the Southeast, Southern Appalachians, and the Tennessee Valley Wednesday through Friday. Minor to isolated moderate river flooding will be possible.



For more information go to hurricanes.gov

IMPACTS FOR **D8** through next 5days

Winds/US Coast – Extreme

US Storm Surge – High

Winds/SRR – Extreme

US Rainfall/Flash Flooding – Medium

Waves/US Coastal – Extreme

US Tornadoes – Unknown

Waves/SRR – Extreme

Marine Key Messages:

- Marine conditions will quickly deteriorate over the SE Gulf beginning tonight and across the D8 area Wednesday.
- Helen is expected to rapidly intensify and become a hurricane on Wednesday and a major hurricane on Thursday when it approaches the NE Gulf coast
- Peak wind of 100 kt and seas of 35-40 ft are likely to occur on Thursday.

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



TROPICAL STORM HELENE BRIEFING

TIME of NEXT NHC Advisory:

2100 UTC: 4 PM CDT

*The Next Briefing Will Be:
Tuesday 6:00 PM EDT*

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



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www.nhc.noaa.gov