



TROPICAL UPDATE



5:00 PM EDT

Sunday, October 25, 2020

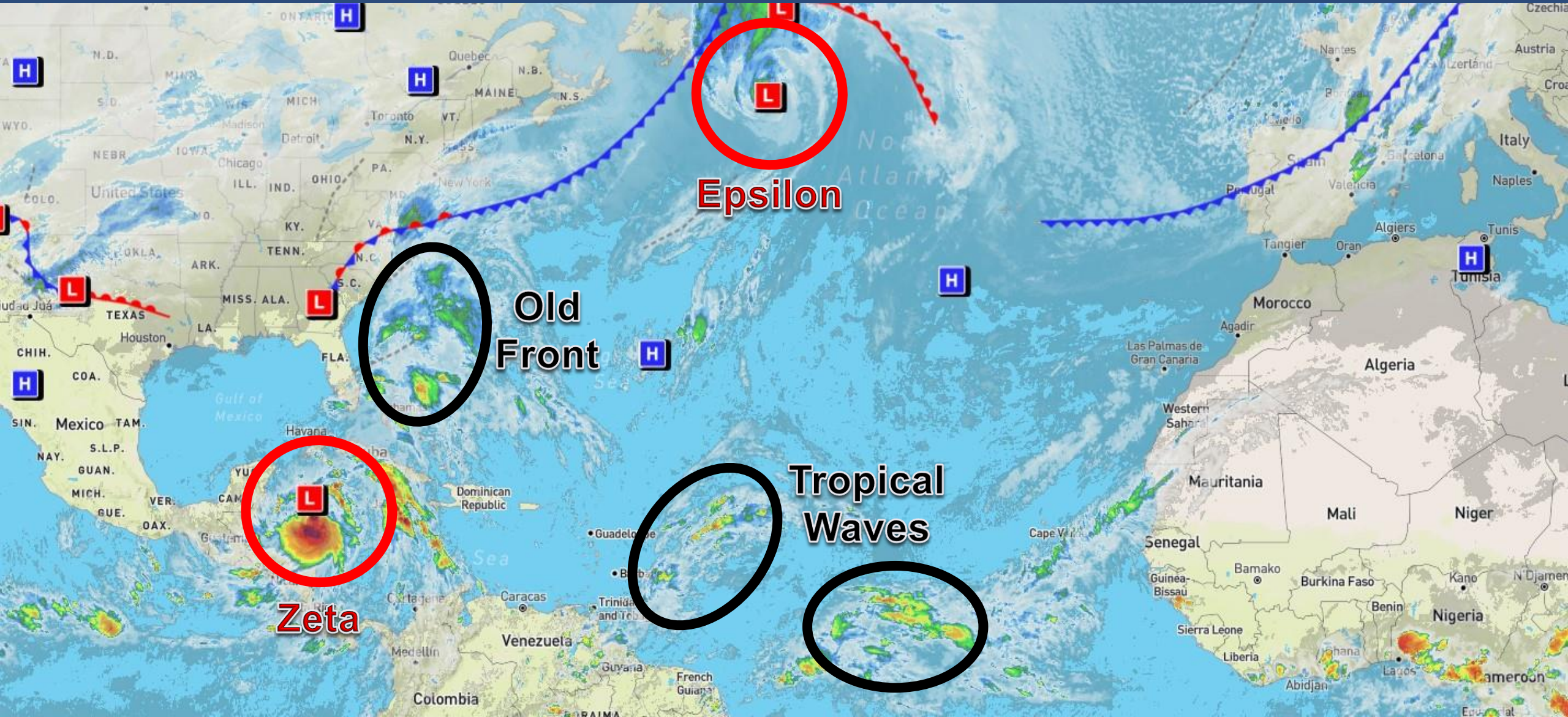
Tropical Storm Zeta

This update is intended for government and emergency response officials, and is provided for informational and situational awareness purposes only. Forecast conditions are subject to change based on a variety of environmental factors. For additional information, or for any life safety concerns with an active weather event please contact your County Emergency Management or Public Safety Office, local National Weather Service forecast office, or visit the National Hurricane Center website at www.hurricanes.gov.



Atlantic Basin Satellite Image

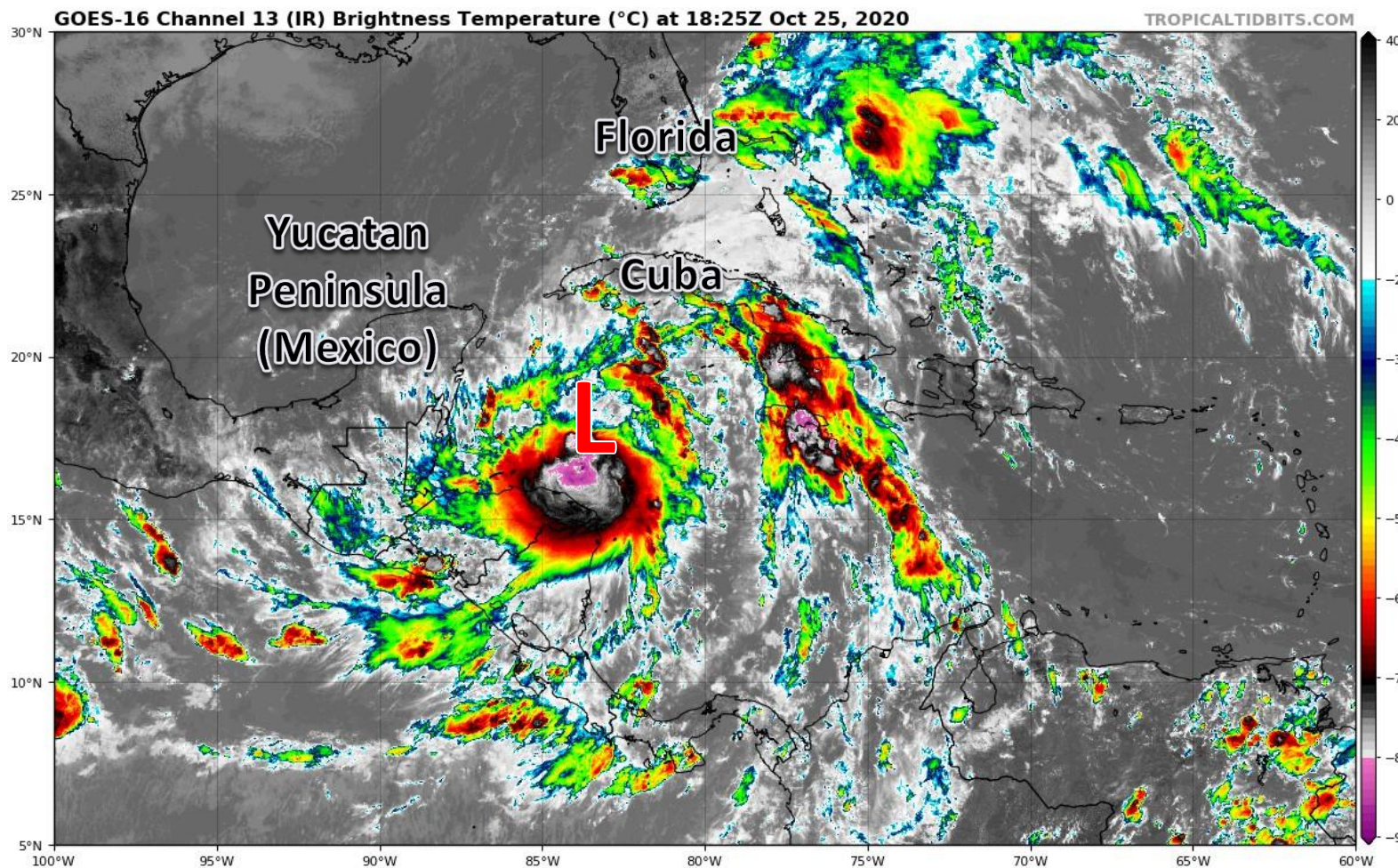
Chance of development: — None — Low — Medium — High



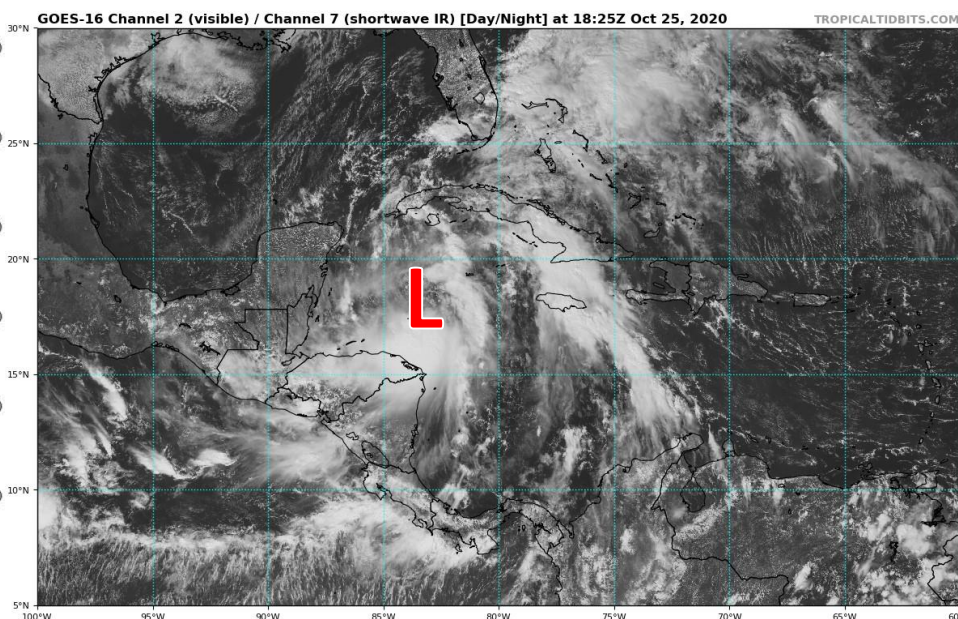


Satellite Imagery

Tropical Storm Zeta



Intense thunderstorms denoted by the whites and pinks have been ongoing to the south of the center of Zeta today. The system is slow to organize. It currently lacks any symmetry as thunderstorms north and east of the center have been minimal. However, the environment remains good for development and additional organization is likely overnight.





Official Forecast Track

From the National Hurricane Center – Tropical Storm Zeta



- Hurricane Hunters have found that Zeta remains disorganized, but is gradually getting stronger.
- The center is located about 300 miles south of the western tip of Cuba and is currently stationary.
- Zeta has maximum sustained winds of 50 mph. Slow strengthening is forecast over the next 24 hours, and is forecast to be a hurricane on Monday as it moves over the Yucatan.
- There is higher uncertainty than usual in the track forecast, and the system is forecast to make landfall as a strong tropical storm on Wednesday anywhere from the Florida Panhandle to Louisiana.



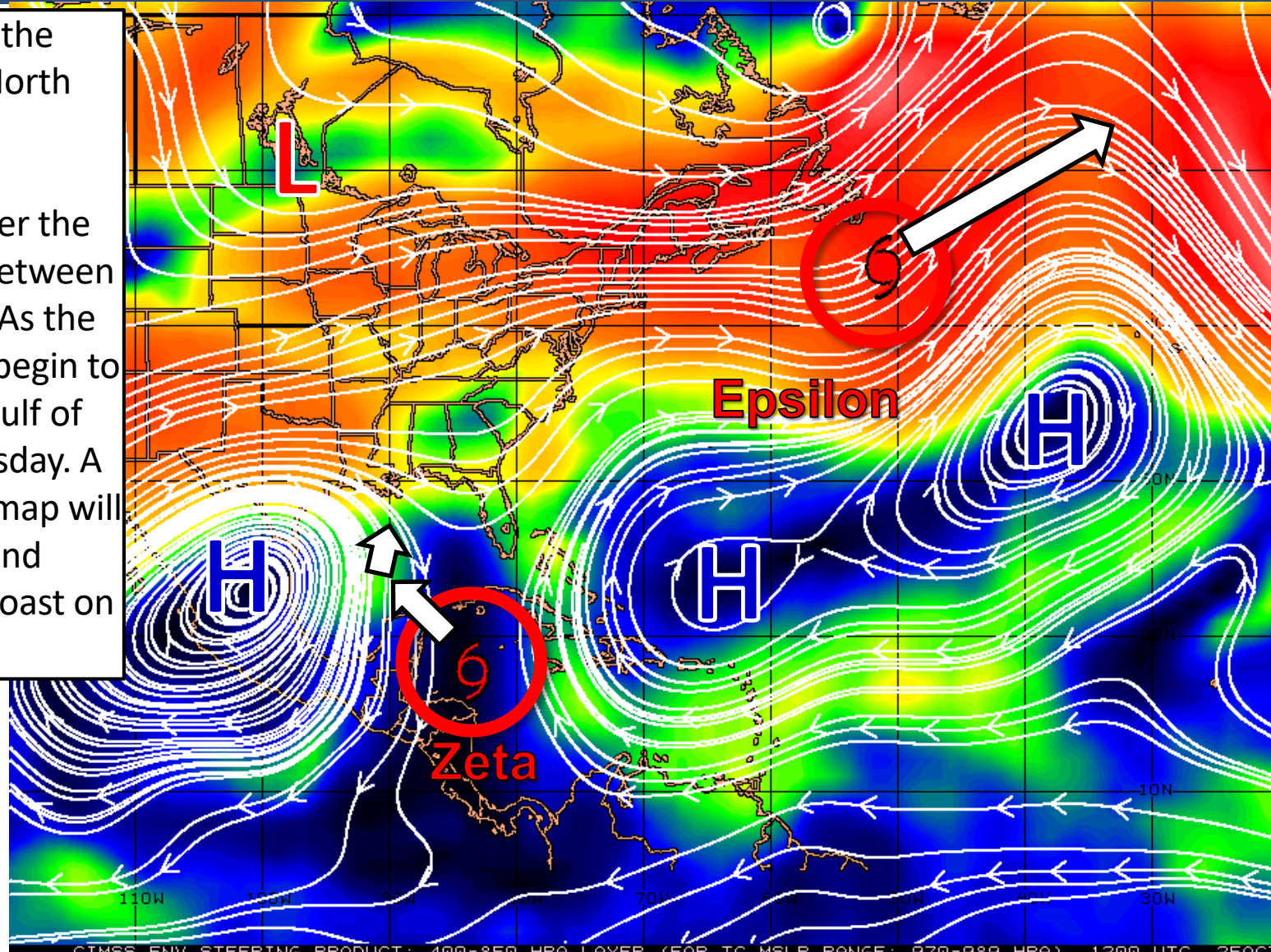
Steering Currents

What is Moving the Systems?

Color denotes the movement speed through the atmosphere and thin white lines denote direction. Tightly clustered white lines represent faster movement as well.

Epsilon will accelerate to the northeast over the open North Atlantic.

Zeta will move very little over the next 24 hours as it remains between two areas of high pressure. As the western one weakens, it will begin to move northwest into the Gulf of Mexico on Monday and Tuesday. A cold front not shown on this map will bring the system north and northeast towards the Gulf Coast on Wednesday.



KTS

100

70

50

30

20

15

10

5

0

Fast Moving Storm

Fast Moving Storm

Typical Moving Storm

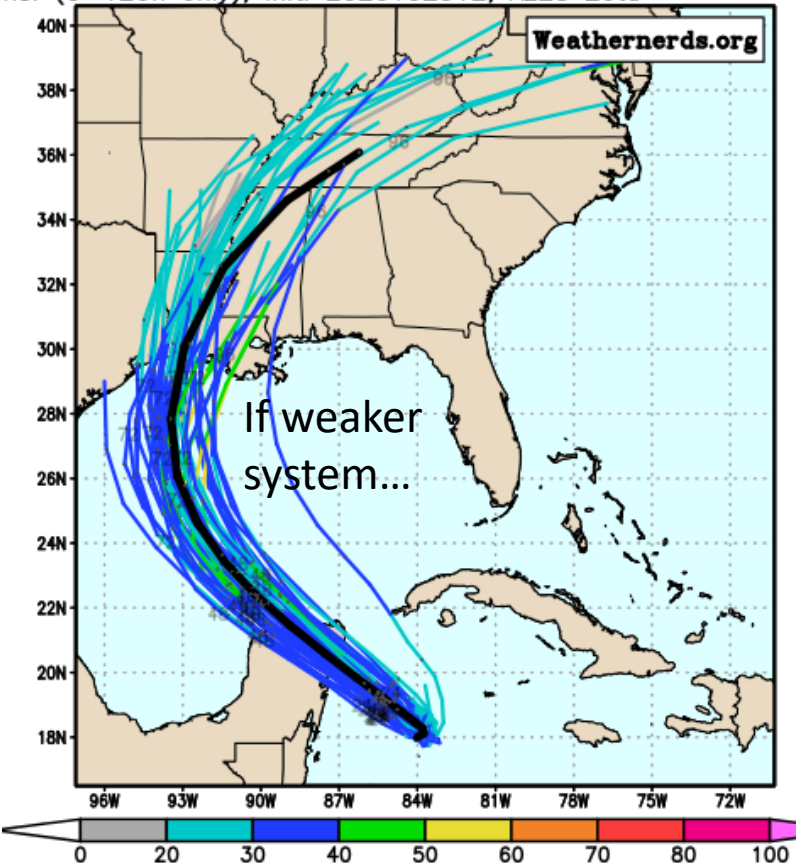
Slow Moving Storm



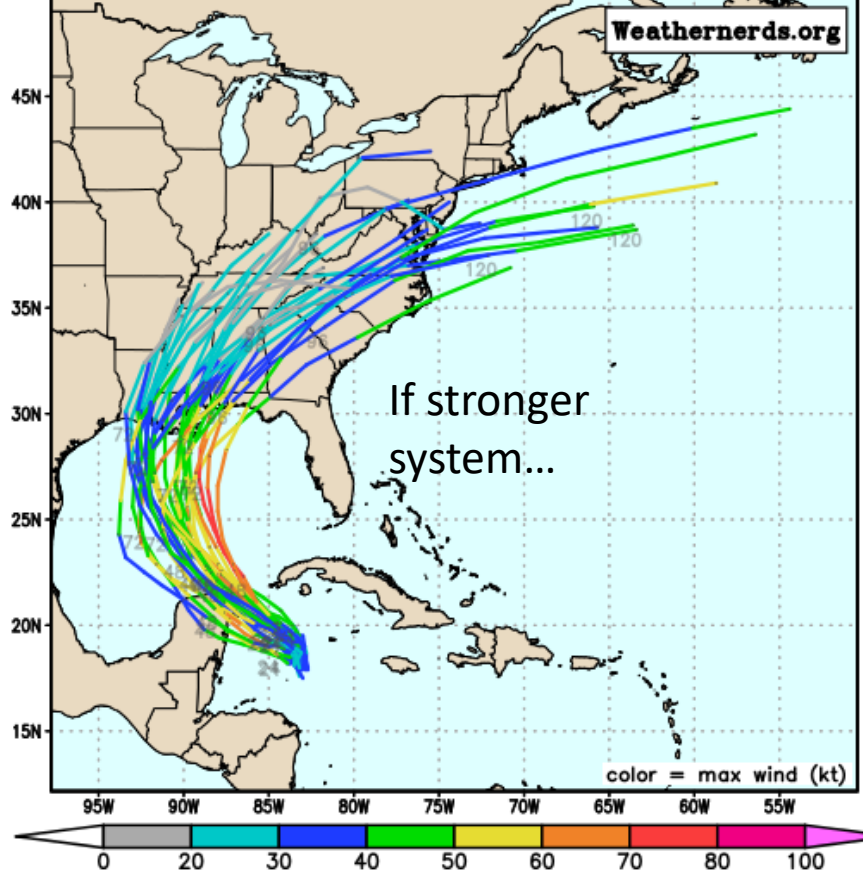
Model Forecast Tracks

Ensemble & Dynamical Models

ns. (0-120h only), init: 2020102512, AL28 Zeta color =



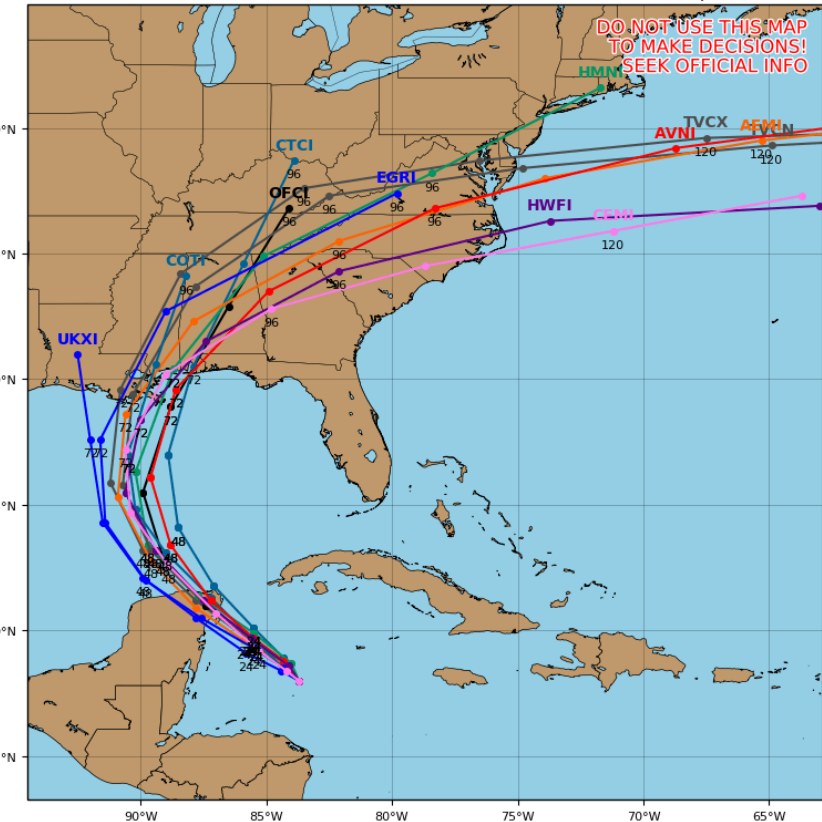
GEFS Ensemble (0-120 h only), init: 2020102512, AL28 Zeta



Tropical Storm ZETA Model Track Guidance

Initialized at 18z Oct 25 2020

Levi Cowan - tropicaltidbits.com



It's important to note that there is still a good amount of spread in the forecast models, showing that there remains uncertainty in the track forecast. The currently slow motion of Zeta as well as timing of the cold front forecast to approach from the west mid-week will have implications on where Zeta will eventually end up. In addition, center reformations/relocations could still occur and may change forecasts. **Track Changes Both Right/Left Towards/Away From the Florida Panhandle Remain Possible**



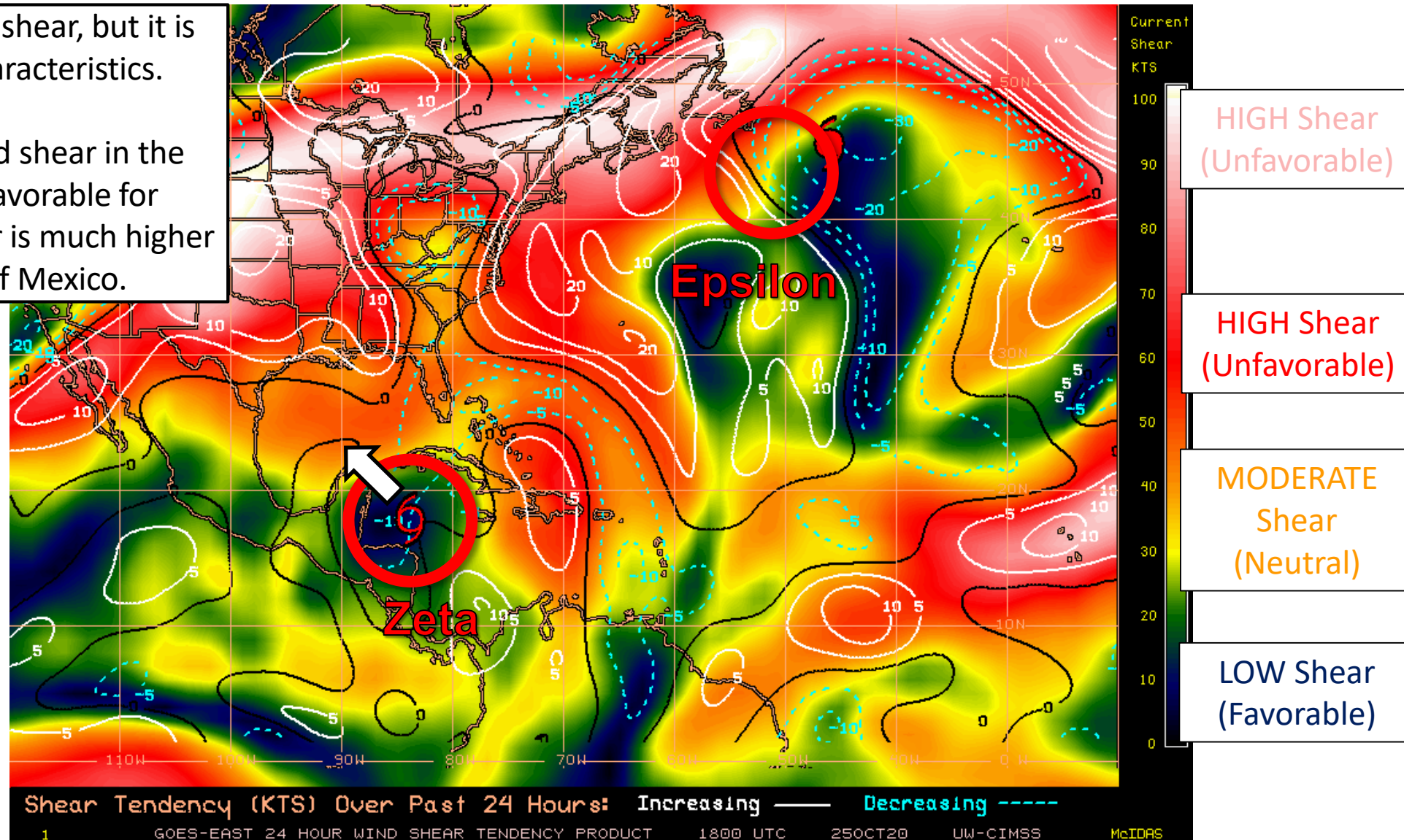
Wind Shear

Is the environment favorable for the system?

Color denotes the amount of wind shear and the lines denote how it have changed over the last 24 hours (dotted lines show decreasing shear and solid lines show increasing).

Epsilon is still fending off the shear, but it is starting to lose tropical characteristics.

Zeta is in an area of low wind shear in the northwestern Caribbean favorable for strengthening. However, shear is much higher to its north in the Gulf of Mexico.

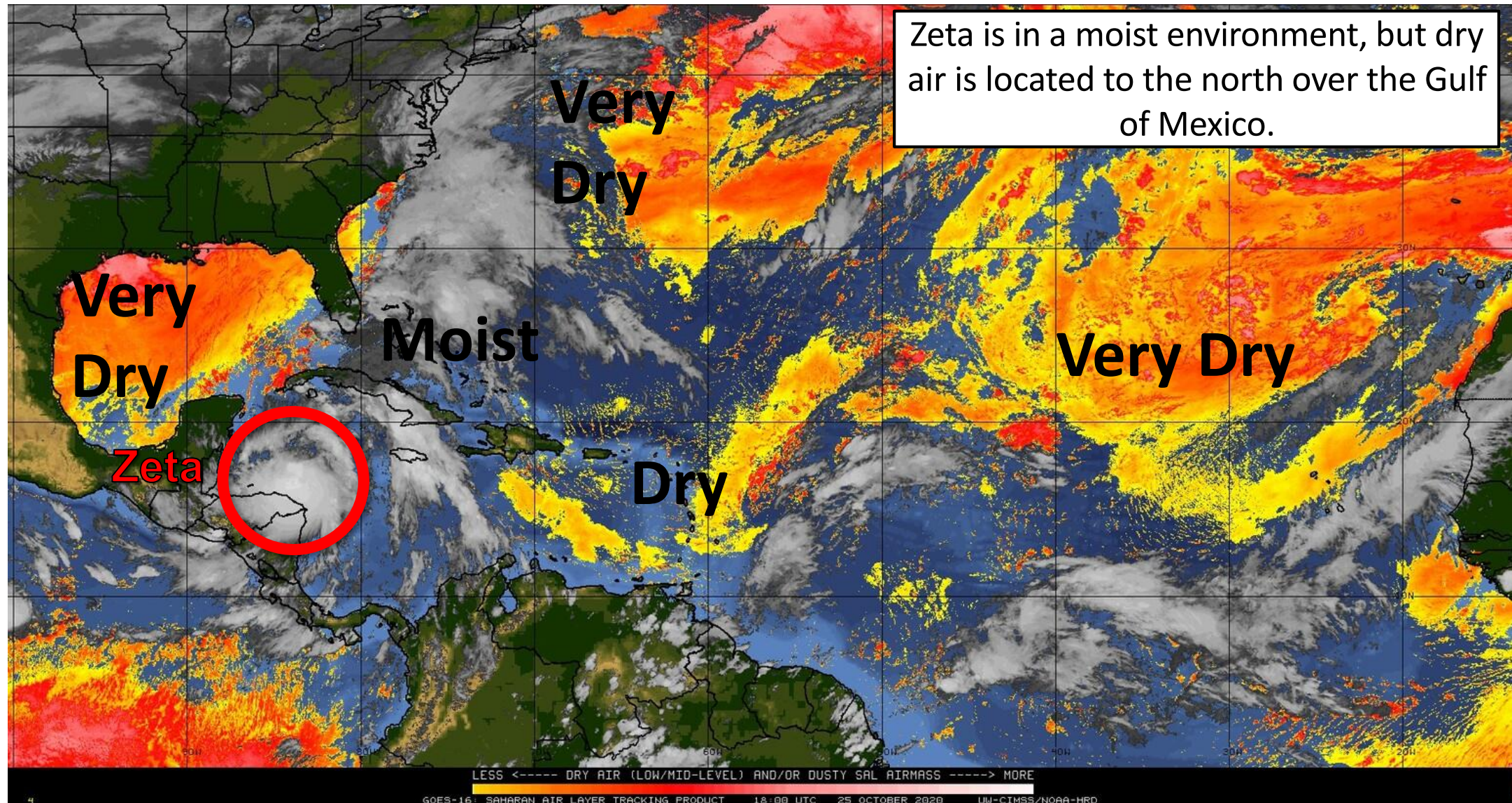




Dry Air & Saharan Dust

Is the environment favorable for the system?

Color denotes concentration of Saharan Dust or dry, stable air.



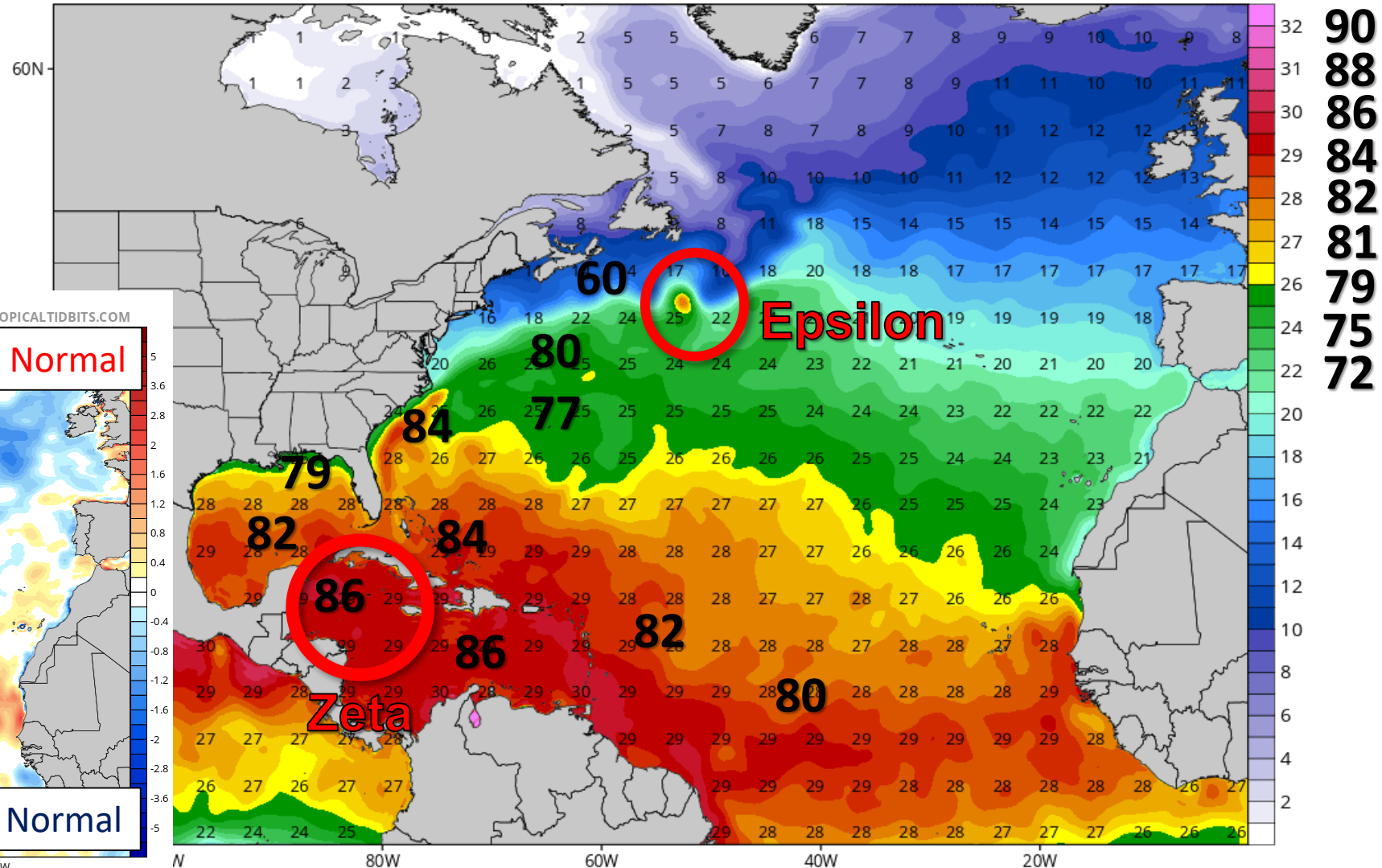


Sea Surface Temperatures & Anomalies

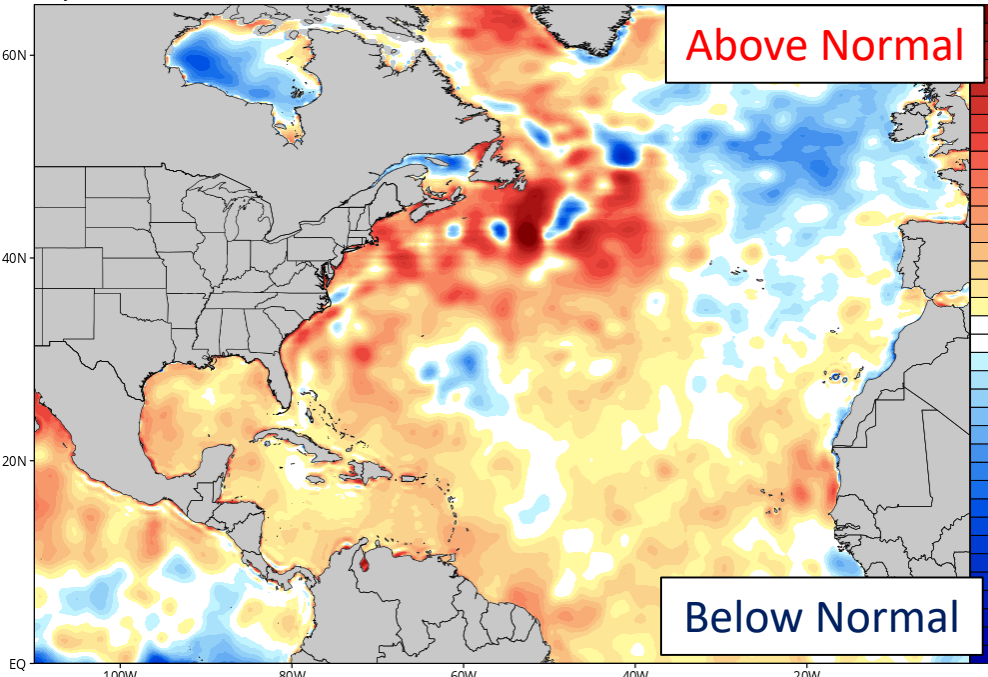
Is the ocean favorable for the system?

Much colder water lies ahead of Epsilon. The Caribbean has warm, deep water to support strong tropical systems. In the Gulf, temperatures cool as a system moves north, they remain warm enough to support a system.

CDAS Sea Surface Temperature (°C)
Analysis Time: 12z Oct 25 2020



CDAS Sea Surface Temperature Anomaly (°C) (based on CFSR 1981-2010 Climatology)
Analysis Time: 12z Oct 25 2020





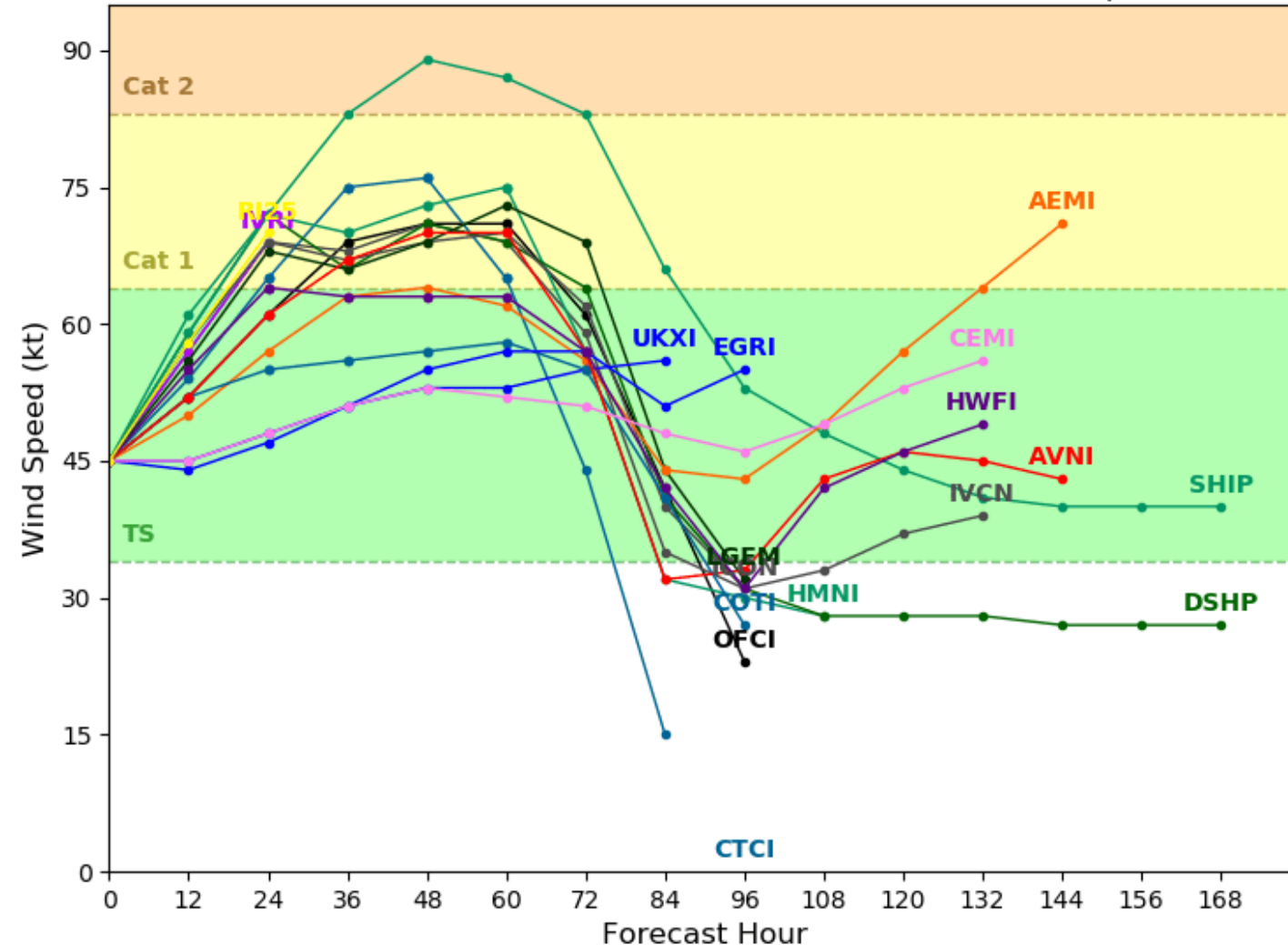
Model Forecast Intensity

Dynamical and Statistical Models

Tropical Storm ZETA Model Intensity Guidance

Initialized at 18z Oct 25 2020

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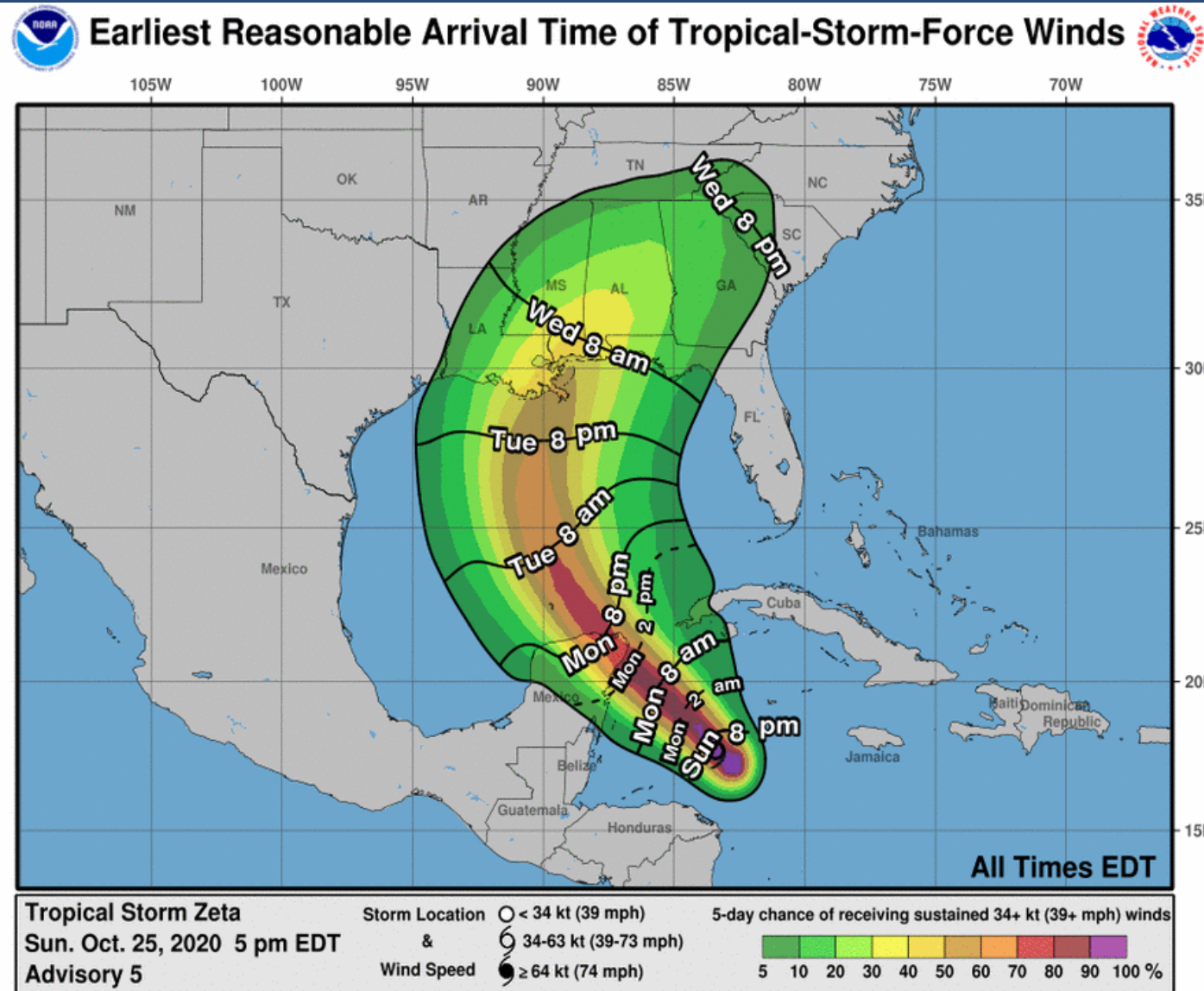
In general, Zeta will gradually strengthen over the next 36 hours into a moderate tropical storm or Category 1 hurricane near the Yucatan Peninsula.

Wind shear and dry air do appear to be present in the northern Gulf of Mexico mid-week, so additional strengthening before landfall is not forecast. (In the 48-72 hour forecast hour).



Time of Arrival & Wind Speed Probabilities

EARLIEST REASONABLE Time of Arrival of Tropical Storm Force Winds (>39 mph)



Pensacola NAS: 33% (+9)

Pensacola: 31% (+13)

Milton: 30% (+14)

Destin: 24% (+10)

Panama City: 16% (+3)

Apalachicola: 11% (+2)

Tallahassee: 9% (+5)

Numbers in Parentheses are changes in probabilities since the last packet

Tropical storm force winds could begin as sunrise Wednesday in the Panhandle, but would most likely begin late morning or early afternoon. The odds of tropical storm force winds remain have increased ~5-10% since this morning, and are now 1 in 3 in the western Panhandle.



Key Messages

From the National Hurricane Center



Key Messages for Tropical Storm Zeta

Advisory 4: 11:00 AM EDT Sun Oct 25, 2020



1. Tropical storm conditions are expected in portions of the northern Yucatan Peninsula of Mexico Monday night and early Tuesday, with hurricane conditions possible. Tropical storm conditions could occur over extreme western Cuba on Monday.

2. Through Wednesday, heavy rainfall is expected from Zeta across portions of central and western Cuba, the Cayman Islands, Jamaica, the northeast Yucatan peninsula of Mexico, southern Florida and the Keys. This rainfall may lead to flash flooding in urban areas.

3. Zeta could be at or just below hurricane strength when it approaches the northern Gulf Coast on Wednesday, and could bring storm surge rainfall, and wind impacts to areas from Louisiana to the Florida Panhandle. Residents in these areas should monitor the progress of Zeta and updates to the forecast.



For more information go to hurricanes.gov



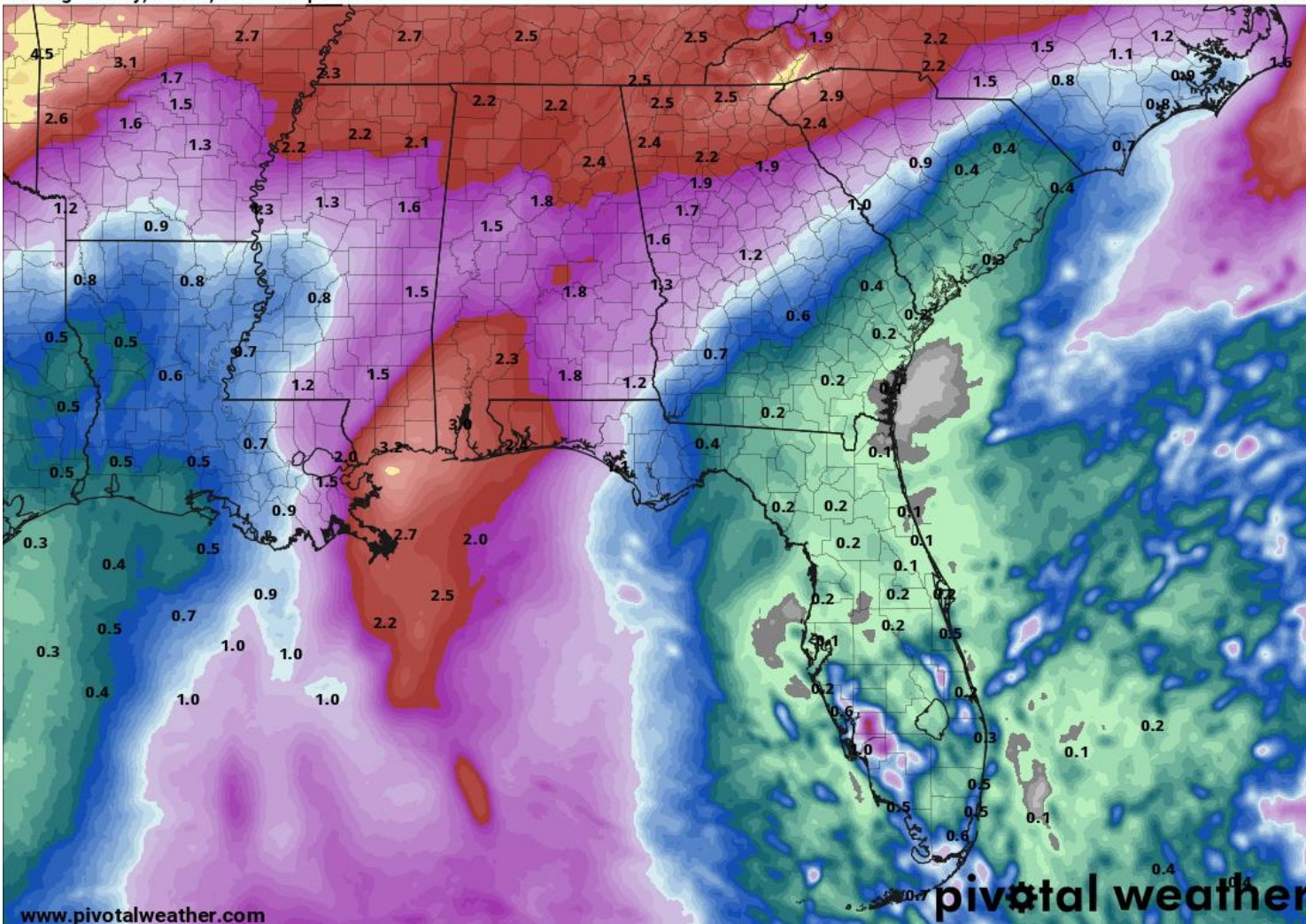
Rainfall Totals Next 7 Days

Ending 8 AM ET Saturday

7-Day Precipitation (in)

Ending Sunday, Nov. 1, 2020 at 7 p.m. EST

Init: Mon 2020-10-26 00z WPC



Rainfall totals of 1-2", locally higher, remain in the forecast tonight in South Florida.

Most of metro Southeast Florida and the Keys have seen 6-12" of rain in the last 7 days.

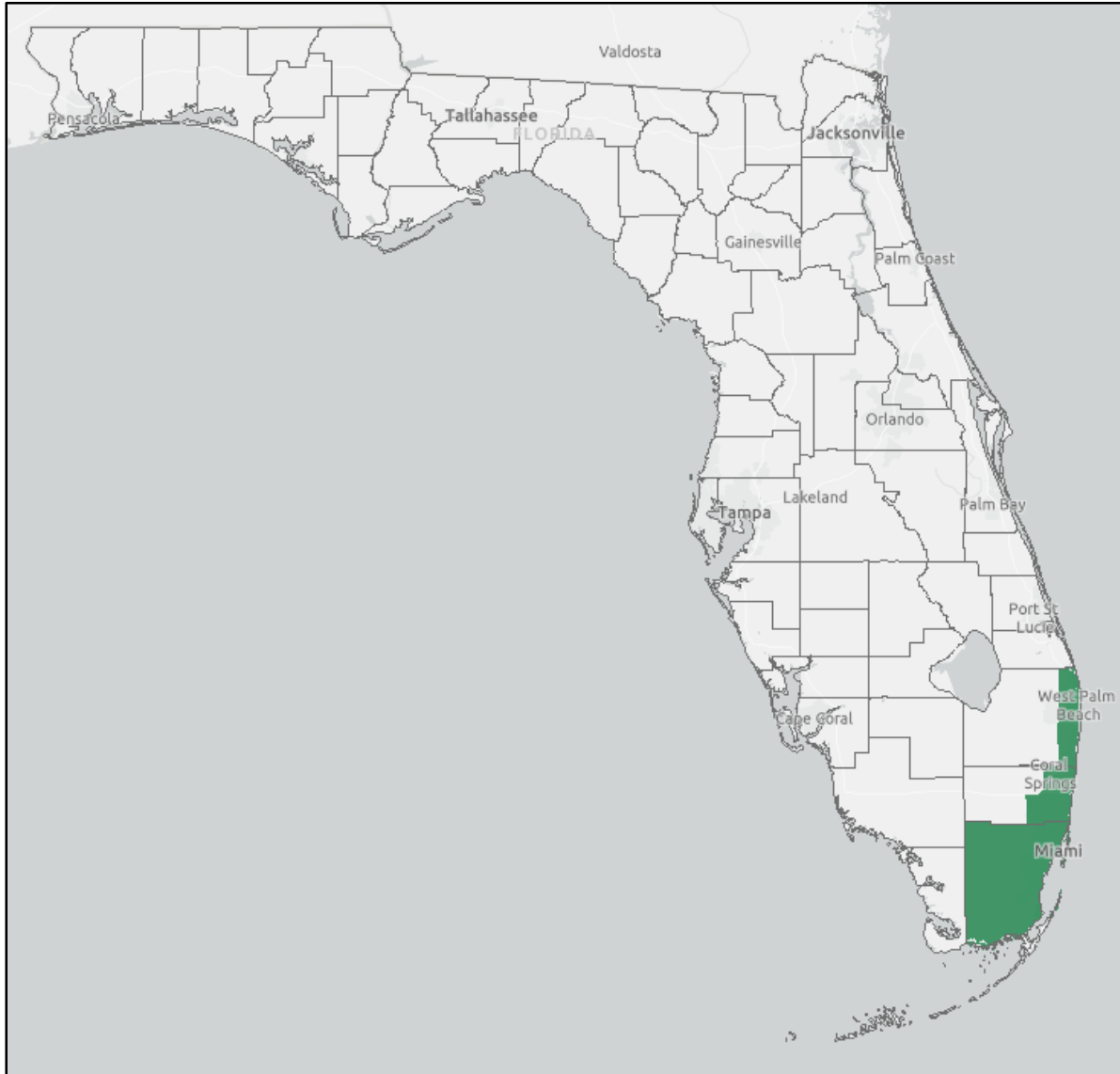
Most of the rain will be on Zeta's east side—meaning even a landfall west in Louisiana will bring heavy rainfall into the Panhandle.

However, Zeta will be moving quick. 1-3" of rain is currently expected across the Panhandle mid-week with locally higher amounts of 4-6".



Flood Watches

Links: [NWS Miami](#)



A Flood Watch remains in effect for parts of Southeast Florida.

***WHEN:** Until 8 PM MONDAY

***WHERE:** coastal & metro Palm Beach, coastal & metro Broward, and all of Miami-Dade Counties

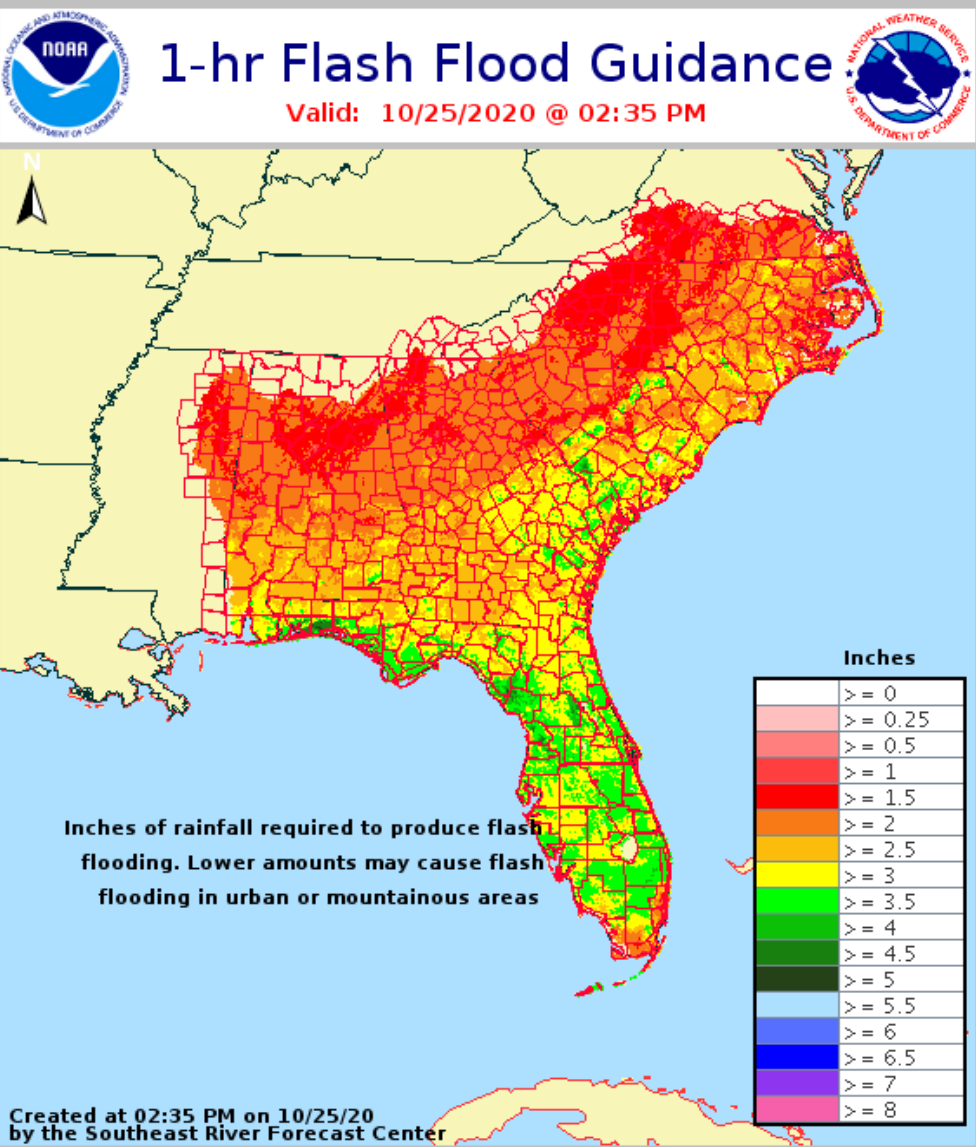
Periods of heavy rainfall are possible through the weekend. Additional rain accumulations of 3 to 6 inches, with isolated higher amounts possible.

Heavy rainfall may produce flooding and/or flash flooding in urban locations as well as small creeks, streams, and canals. This is especially true for areas that recently received heavy rainfall, and for areas near the coast due to the combination of heavy rain and astronomically high tides.



Flash Flood Guidance

How Much Rain is Needed to Create Flash Flooding?



With heavy rainfall across the Panhandle and South Florida yesterday, only 1-3" of rain within 1 hour or about 2-4" within 6 hours is needed to cause flash flooding.

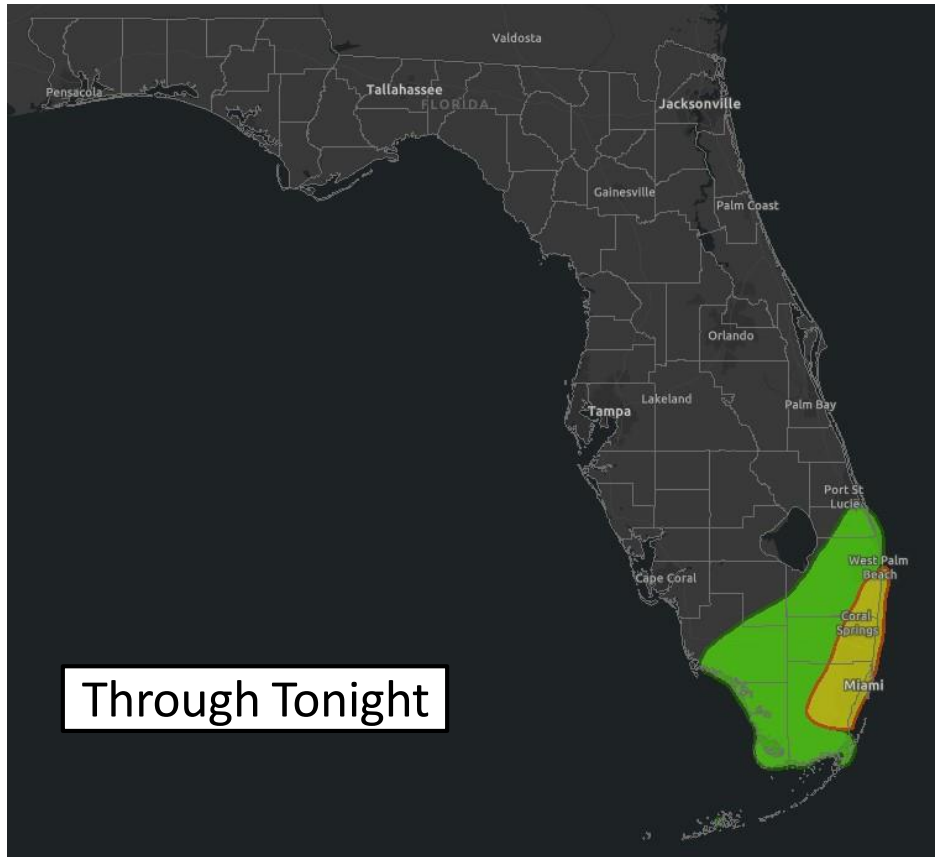
Soils remain super-saturated in these areas, and rainfall will more easily run off, causing flooding concerns.

Widespread rainfall totals over 4" would generally cause river flooding across the Panhandle.



Flash Flood Outlooks

From the Weather Prediction Center



Through Tonight

Risk of rainfall exceeding flash flood guidance within 25 miles of a point to the right of a line

HIGH: > 50%

SLGT: 10%-20%

MDT: 20%-50%

MRGL: 5%-10%



Wednesday-
Thursday

Heavy Rain
10/28 -
10/29

Because of the recent heavy rainfall, an isolated case of flash flooding is possible across parts of Southeast Florida again tonight.

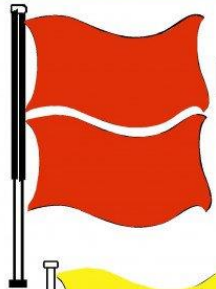
A flash flood threat of some extent is expected in the Florida Panhandle on Wednesday/Thursday as Zeta makes landfall.



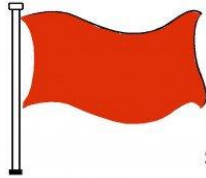
Rip Current Outlook

Today

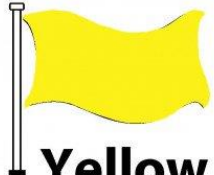
BEACH FLAG WARNING SYSTEM



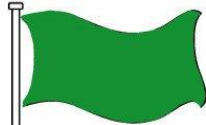
Double Red
Water Closed to
Public Use



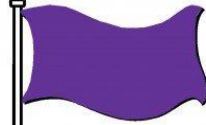
Red
High Hazard
(rough conditions,
such as strong surf
and or currents)



Yellow
Medium Hazard
(light surf and or
currents)

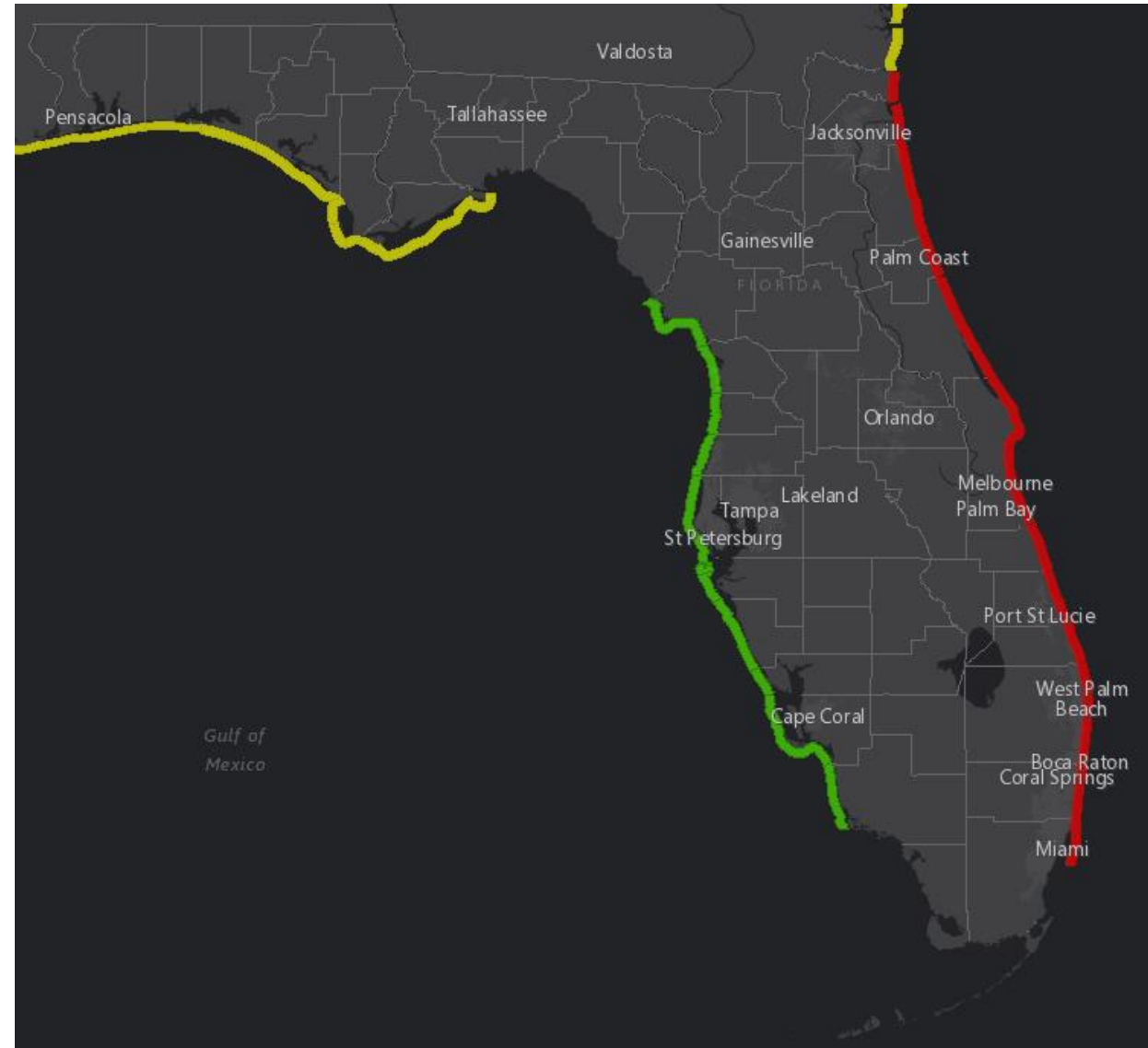


Green
Low Hazard
(calm conditions)



Purple
Marine Pest
(jellyfish, stingrays
& dangerous fish)

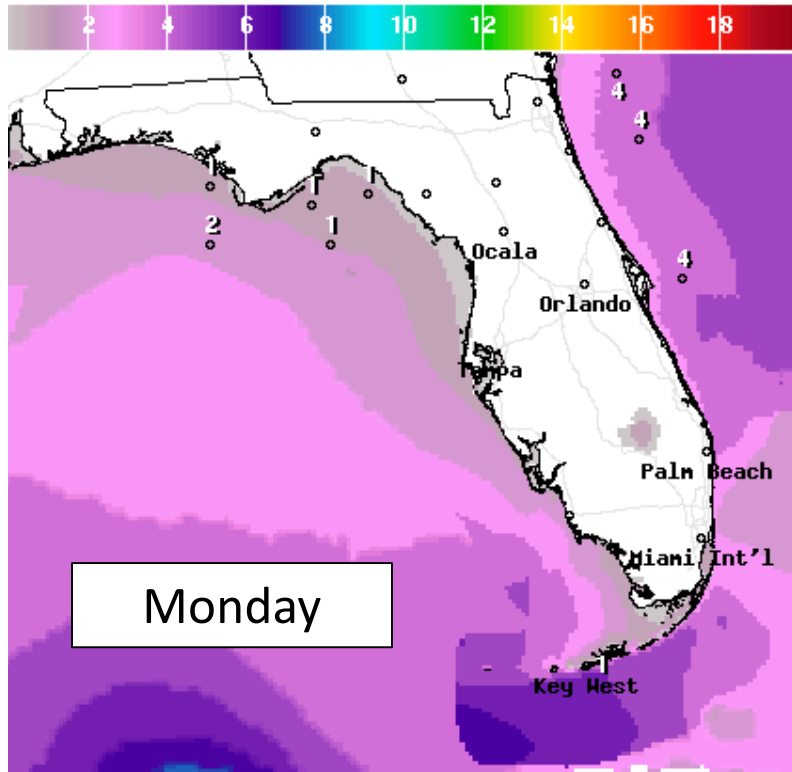
Long period swells from distant Hurricane Epsilon will keep the rip current risk high at Atlantic beaches. The rip current risk along the Gulf Coast will increase by mid-week with breaking waves of 4-6' (possibly higher).





Forecast Wave Heights

Early This Week



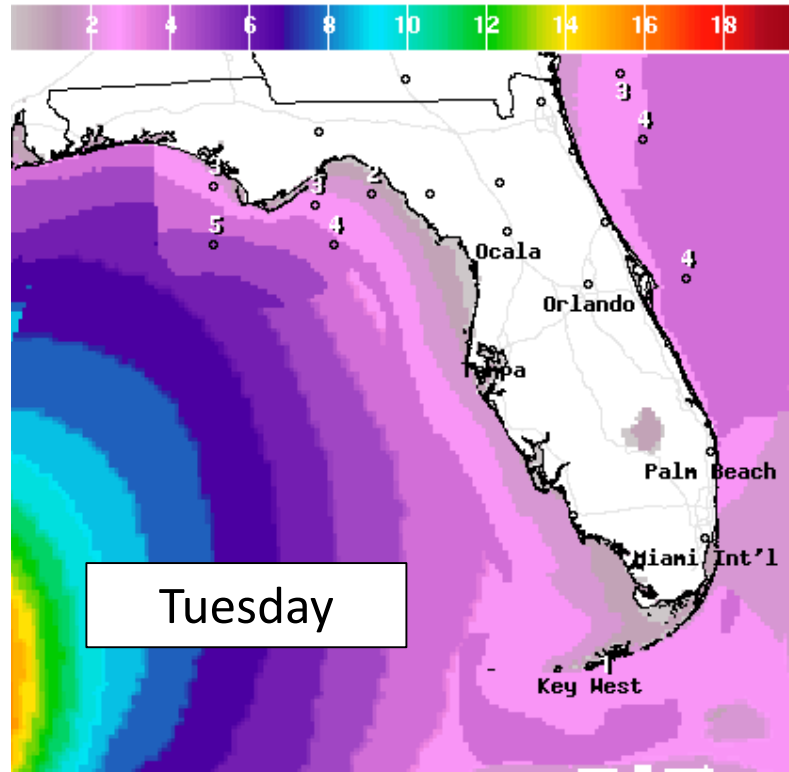
Monday

Wave Height(ft) Ending Mon Oct 26 2020 8PM EDT
(Tue Oct 27 2020 00Z)



National Digital Forecast Database

18z issuance Graphic created-Oct 25 3:04PM EDT



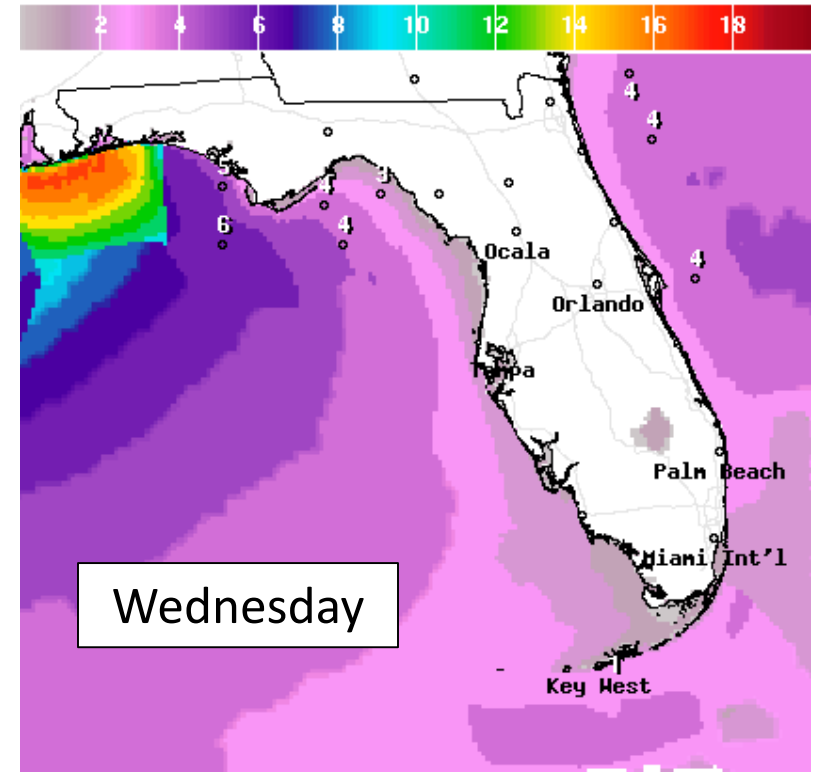
Tuesday

Wave Height(ft) Ending Tue Oct 27 2020 8PM EDT
(Wed Oct 28 2020 00Z)



National Digital Forecast Database

18z issuance Graphic created-Oct 25 3:04PM EDT



Wednesday

Wave Height(ft) Ending Wed Oct 28 2020 8PM EDT
(Thu Oct 29 2020 00Z)



National Digital Forecast Database

18z issuance Graphic created-Oct 25 3:05PM EDT



Wave heights will gradually build over the Gulf with breaking waves of 3-6' by Tuesday and 4-8' on Wednesday. Wave heights could be over 10' in the western Panhandle. This will result in dangerous rip currents at Gulf beaches. Minor beach erosion is also likely with a few spots of more significant erosion possible in the western Panhandle.



Overall Summary

Tropical Storm Zeta

- Hurricane Hunters investigated the system again this afternoon and found that it remains disorganized.
- However, maximum sustained winds have increased to 50 mph.
- The center is located about 300 miles south of the western tip of Cuba and is currently stationary.
- Slow strengthening is forecast over the next 24 hours, and Zeta is forecast to be a hurricane Monday afternoon and Tuesday as it moves across/near the Yucatan Peninsula and into the Gulf of Mexico.
- However, conditions become unfavorable in the northern Gulf of Mexico and additional intensification is not anticipated through landfall.
- There is higher uncertainty than usual in the track forecast, and the system is forecast to make landfall at or near hurricane intensity on Wednesday anywhere from the Florida Panhandle to Louisiana.

Tropical Storm Epsilon

- Epsilon is close to becoming a post-tropical low as it moves over the cold waters of the North Atlantic. It has weakened to a tropical storm.
- Swells from the system will continue to impact the East Coast for a few more days, however.
- The National Hurricane Center will likely issue their last advisory tonight.



Florida Outlook

Florida Outlook:

- Epsilon poses no threat to Florida. Swells from Epsilon will impact the East Coast through mid-week, resulting in a high rip current risk.
- Urban flooding continues in Southeast Florida and a Flood Watch is in effect until 8 PM ET Monday.
- Tropical Storm Zeta poses a direct threat to the Florida Panhandle mid-week, but the details are unclear. *Watches could be issued for parts of the Panhandle tomorrow morning.*
- Heavy rainfall is possible across the Panhandle and Big Bend Tuesday Night-Thursday. 1-3" of rain is likely, but locally higher amounts of 4-6" are possible. Flash flooding and minor river flooding are possible.
- Dangerous rip currents and building waves/beach erosion will be possible this week along Gulf Coast beaches.
- Storm surge, damaging winds, and tornadoes are possible in the Florida Panhandle/Big Bend Wednesday; however, **it remains too early to determine the extent of these threats.**
- It's important to not focus on the center of the cone as impacts will extend well outside of the cone, *particularly to the east of where the systems makes landfall.* Zeta is forecast to be lopsided to the east at landfall.
- **The forecast remains low confidence. Anticipate changes in track and/or intensity over the next 24 hours!**

The next briefing packet will be issued Monday morning. For the latest information on the tropics, please visit the National Hurricane Center website at www.hurricanes.gov.



TROPICAL UPDATE



Created by:

Michael Spagnolo, Deputy State Meteorologist

Michael.Spagnolo@em.myflorida.com

State Meteorological Support Unit

Florida Division of Emergency Management

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