



# Tropical Update



12:00 PM EDT

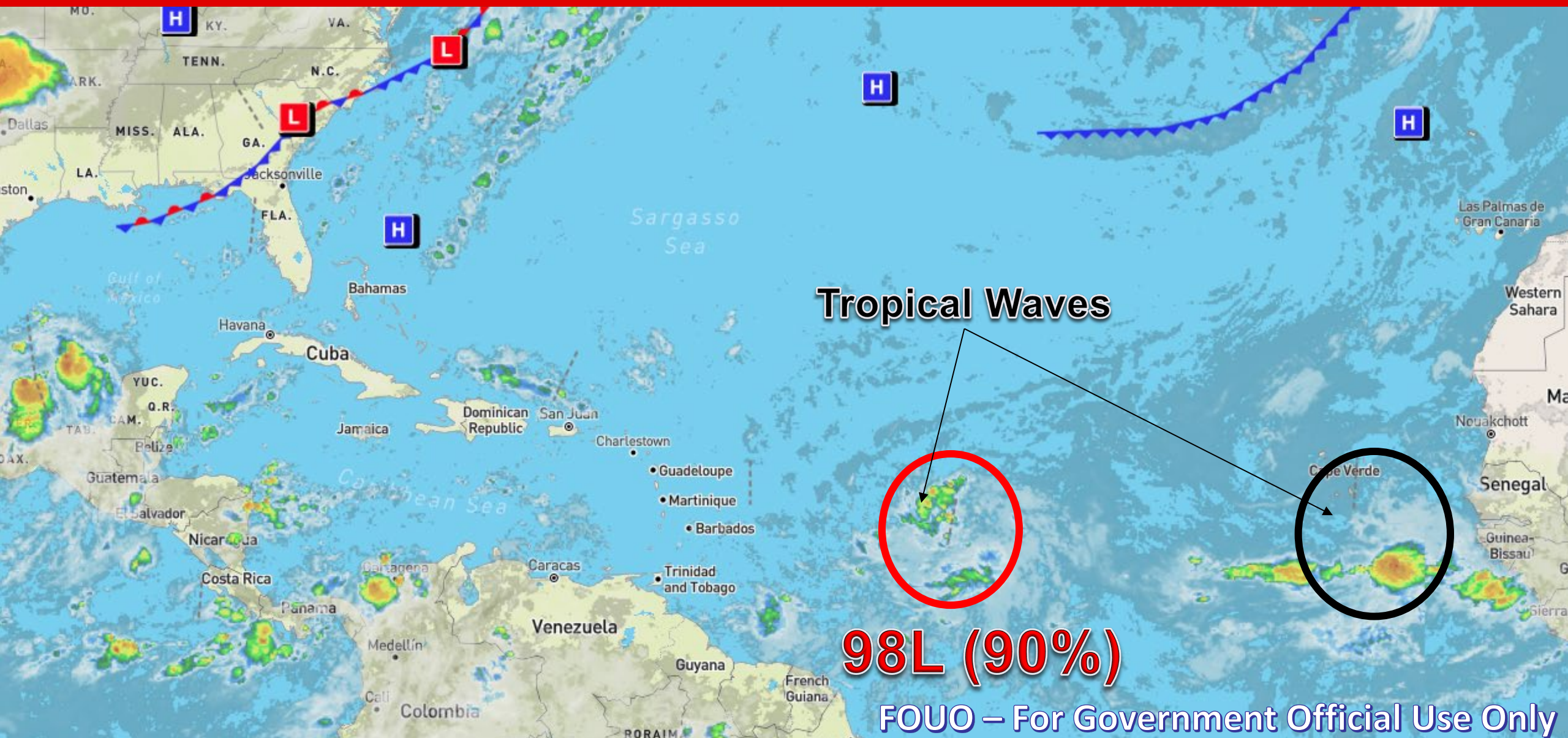
Sunday, August 11, 2024

**Post-Debby Florida Outlook & Hydrology;  
Invest 98L (90%) Likely to Become a Tropical Depression  
Within the Next Couple of Days Near the Leeward Islands**

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](http://www.hurricanes.gov).



Chance of development:  None  Low  Medium  High







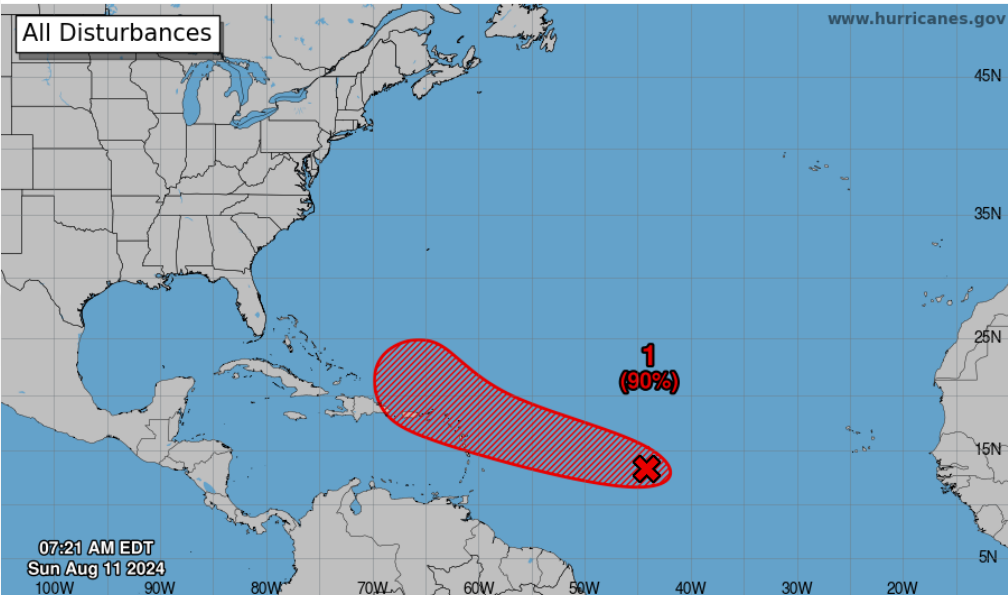
# Tropical Weather Outlook

Disturbance 1 – Invest 98L ([LINK](#))

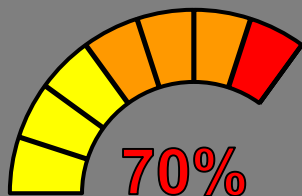


## Seven-Day Graphical Tropical Weather Outlook

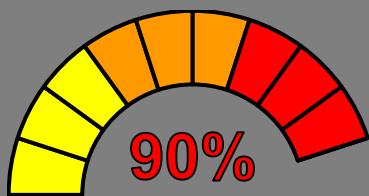
National Hurricane Center Miami, Florida



Current Disturbances and Seven-Day Cyclone Formation Chance: < 40% 40-60% > 60%  
Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane  
 Post-Tropical Cyclone or Remnants



48 Hour Formation



7 Day Formation

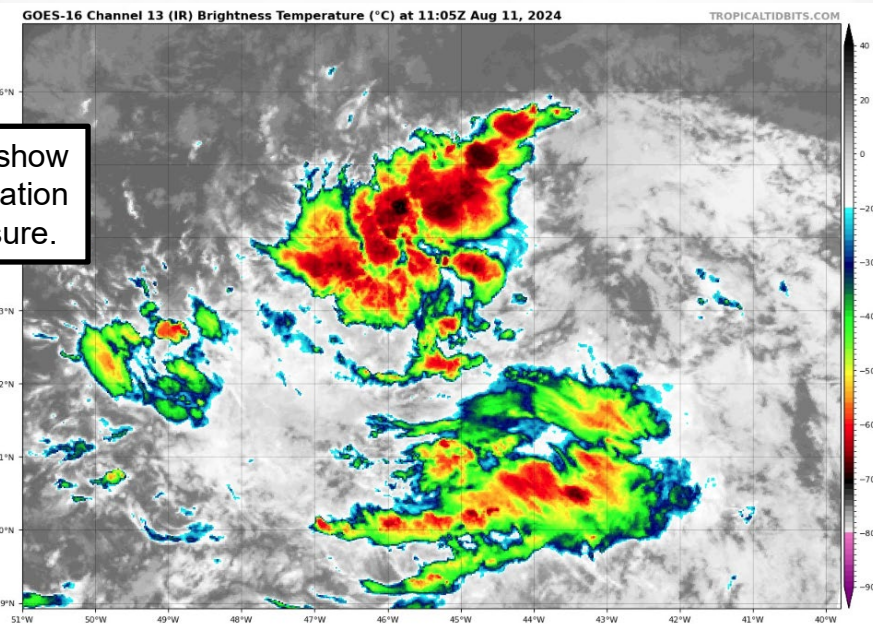
Showers and thunderstorms continue to show some signs of organization in association with a broad area of low pressure, located about 1,000 miles east of the Lesser Antilles. Environmental conditions appear conducive for gradual development of this system, and a tropical depression is likely to form within the next couple of days while the system approaches and then moves near or over the Leeward Islands. Watches and warnings could be required for portions of the Leeward Islands as soon as later today. Invest 98L could approach portions of the Greater Antilles by the middle of the week.

*This system poses no direct threat to Florida during the next 7 days at least, but this system will continue to be monitored.*

\* Formation chance through 48 hours...**high...70%.**

\* Formation chance through 7 days...**high...90%.**

Satellite imagery continues to show signs of organization in association with the broad area of low pressure.





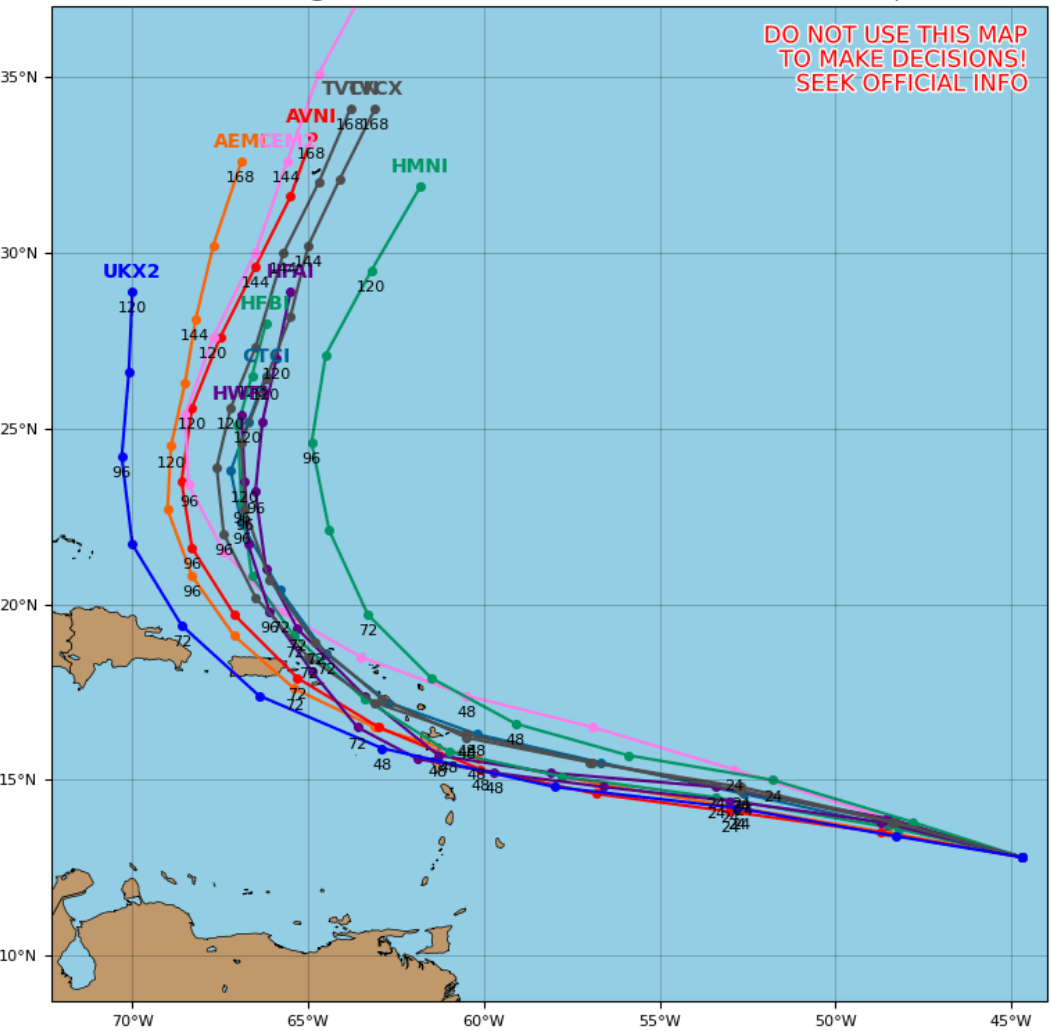
# Model Forecasts – Next 5 Days

## Invest 98L

### Invest 98L Model Track Guidance

Initialized at 12z Aug 11 2024

Levi Cowan - tropicaltidbits.com



Computer models are in good agreement that Invest 98L will continue a westward to west-northwestward motion toward the Lesser Antilles over the next 48 hours. The system still has not developed a center of circulation; however, satellite imagery this morning show signs of gradual consolidation of shower and thunderstorm activity. Around the 72-hour mark, near the Greater Antilles, computer model guidance is hinting at a gradual curve toward the northwest and north; the timing of this turn and the organization of Invest 98L at that time will play a pivotal role in the eventual path.

Computer models indicate that a stronger system would likely make a stronger turn toward the northwest and north around the western periphery of the dominant high pressure system, while a weaker system would likely continue a more westward track for a longer period before making a weaker turn to the northwest and north.

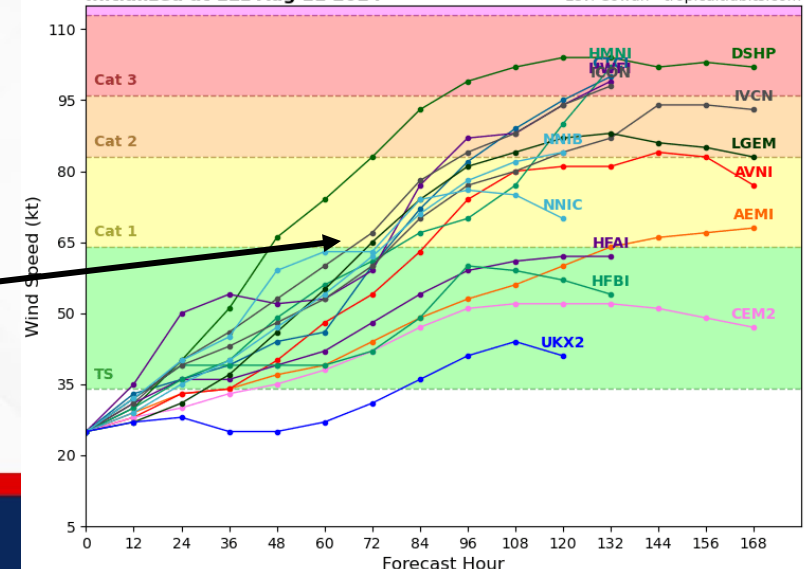
Computer models show steady strengthening and organization of Invest 98L within the next several days, with the system becoming a tropical depression or storm as early as the next 36 to 48 hours.

While gradual strengthening of Invest 98L is expected, there is uncertainty regarding the extent of strengthening. There are more computer models this morning in agreement that Invest 98L could intensify into a hurricane within the 72 to 96-hour forecast window.

### Invest 98L Model Intensity Guidance

Initialized at 12z Aug 11 2024

Levi Cowan - tropicaltidbits.com





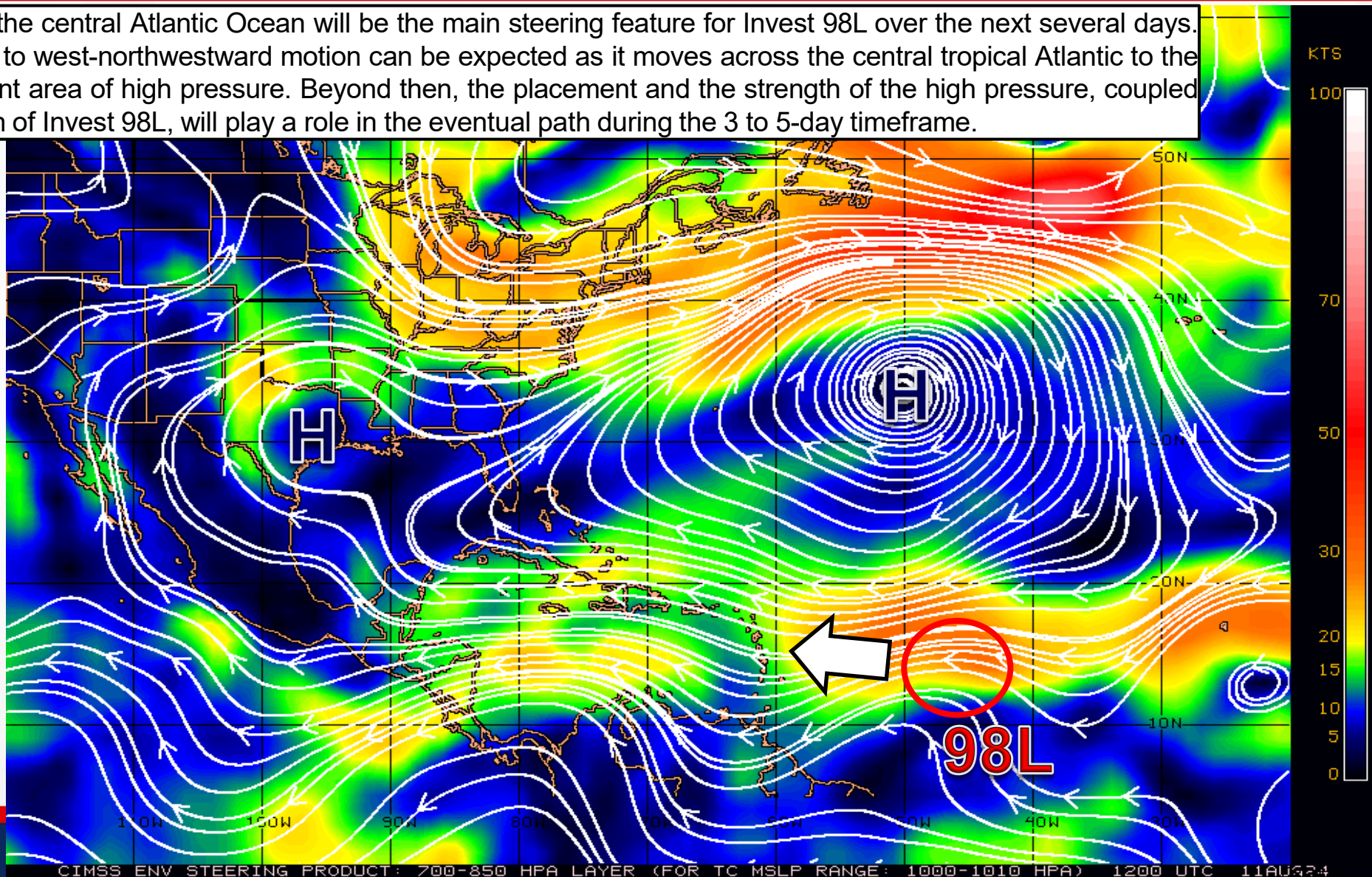


# Steering Currents

## What is Moving the System?

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

High pressure over the central Atlantic Ocean will be the main steering feature for Invest 98L over the next several days. A general westward to west-northwestward motion can be expected as it moves across the central tropical Atlantic to the south of the dominant area of high pressure. Beyond then, the placement and the strength of the high pressure, coupled with the organization of Invest 98L, will play a role in the eventual path during the 3 to 5-day timeframe.



Fast Moving Storm

Fast Moving Storm

Typical Moving Storm

Slow Moving Storm

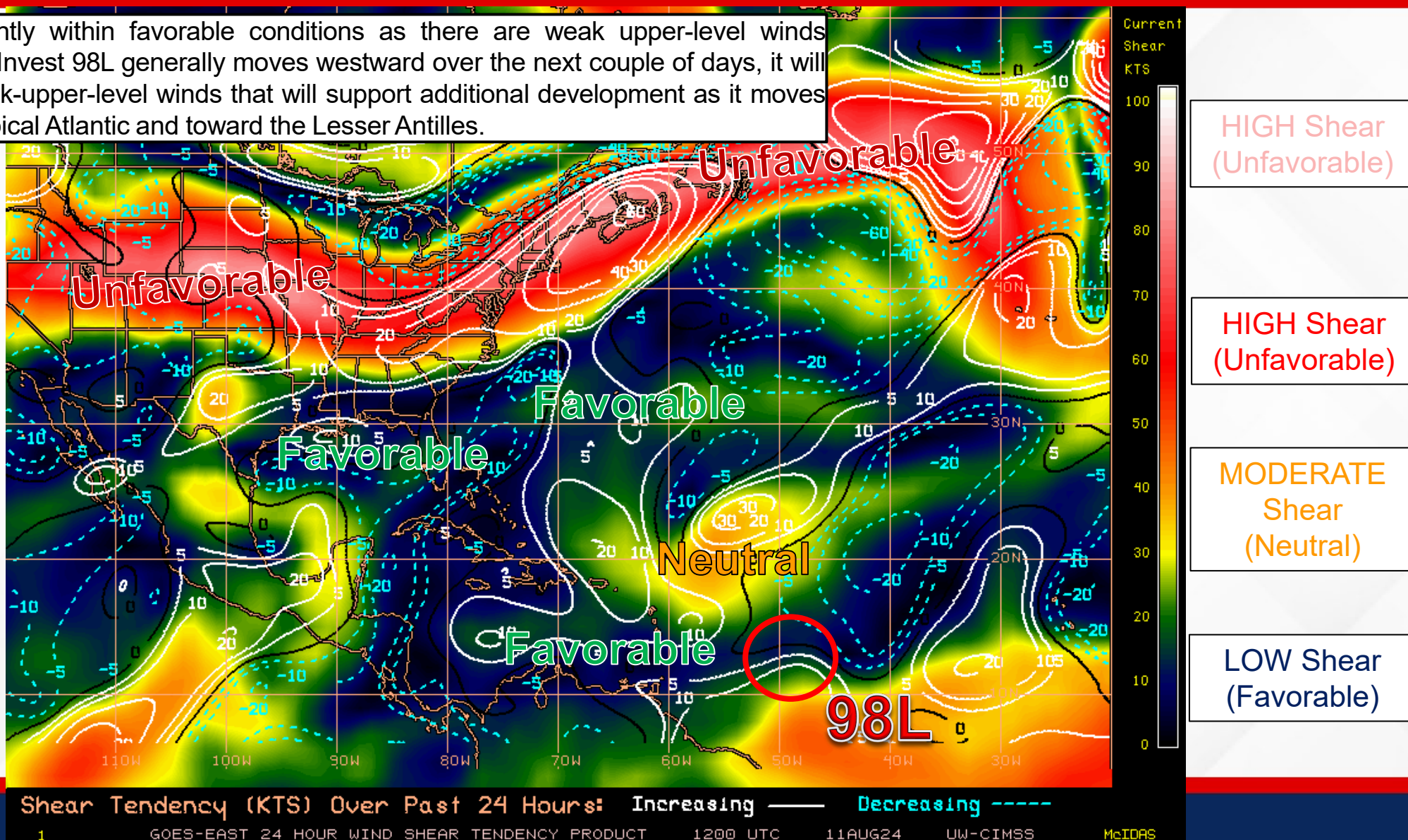


# Wind Shear

## 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).

The Invest 98L is currently within favorable conditions as there are weak upper-level winds surrounding the area. As Invest 98L generally moves westward over the next couple of days, it will continue to be within weak-upper-level winds that will support additional development as it moves into the southwestern tropical Atlantic and toward the Lesser Antilles.





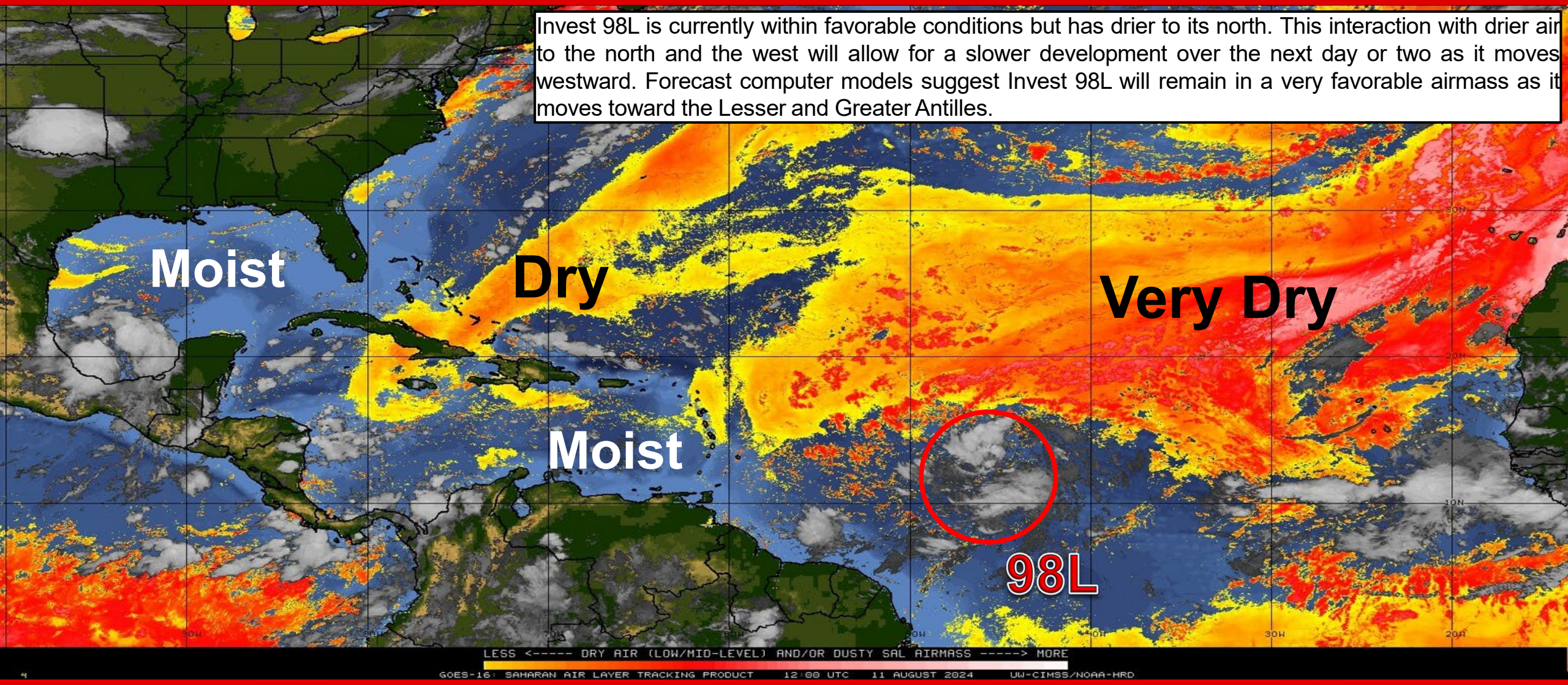


# Dry Air & Saharan Dust

Is the environment favorable for the system?

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

Invest 98L is currently within favorable conditions but has drier to its north. This interaction with drier air to the north and the west will allow for a slower development over the next day or two as it moves westward. Forecast computer models suggest Invest 98L will remain in a very favorable airmass as it moves toward the Lesser and Greater Antilles.



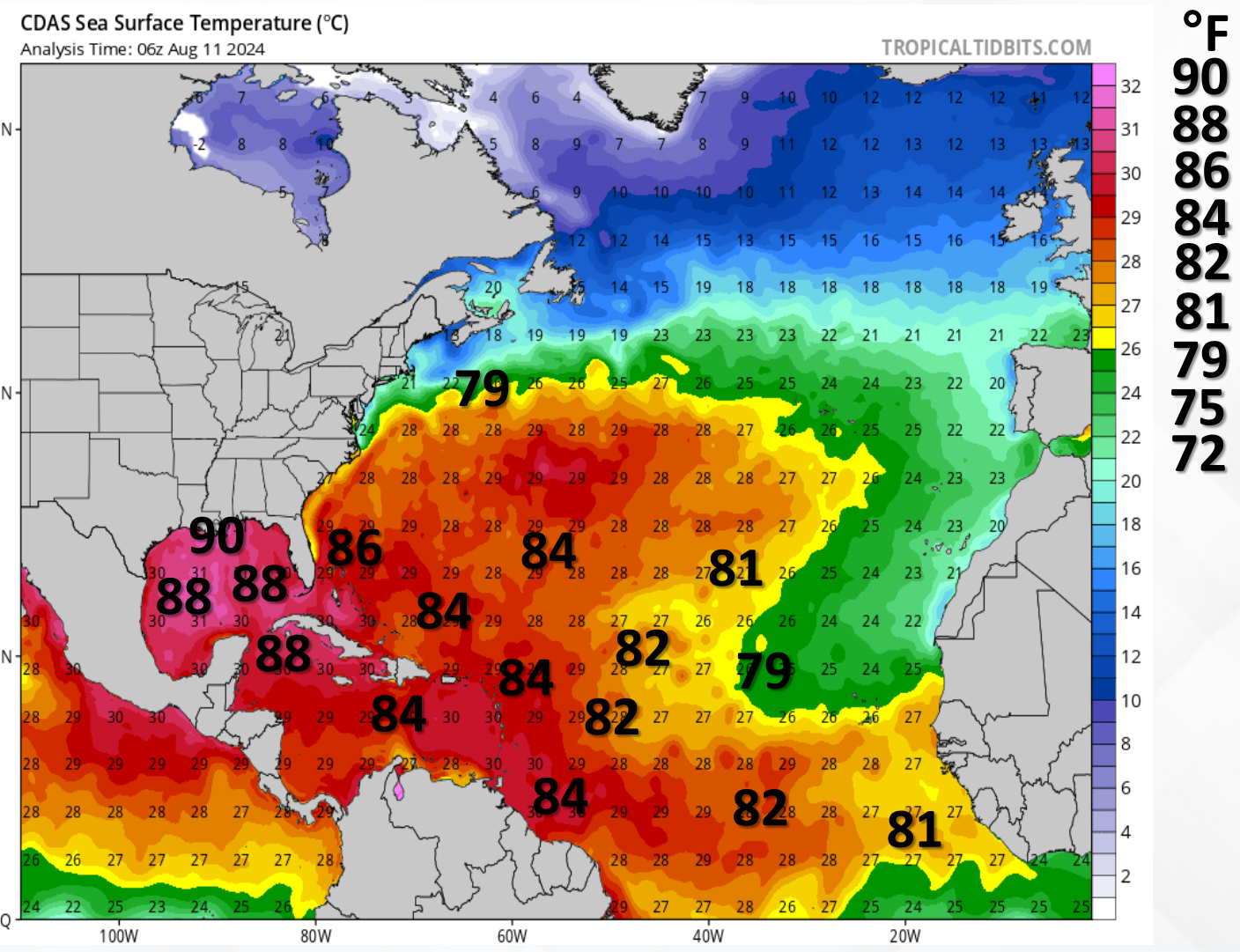
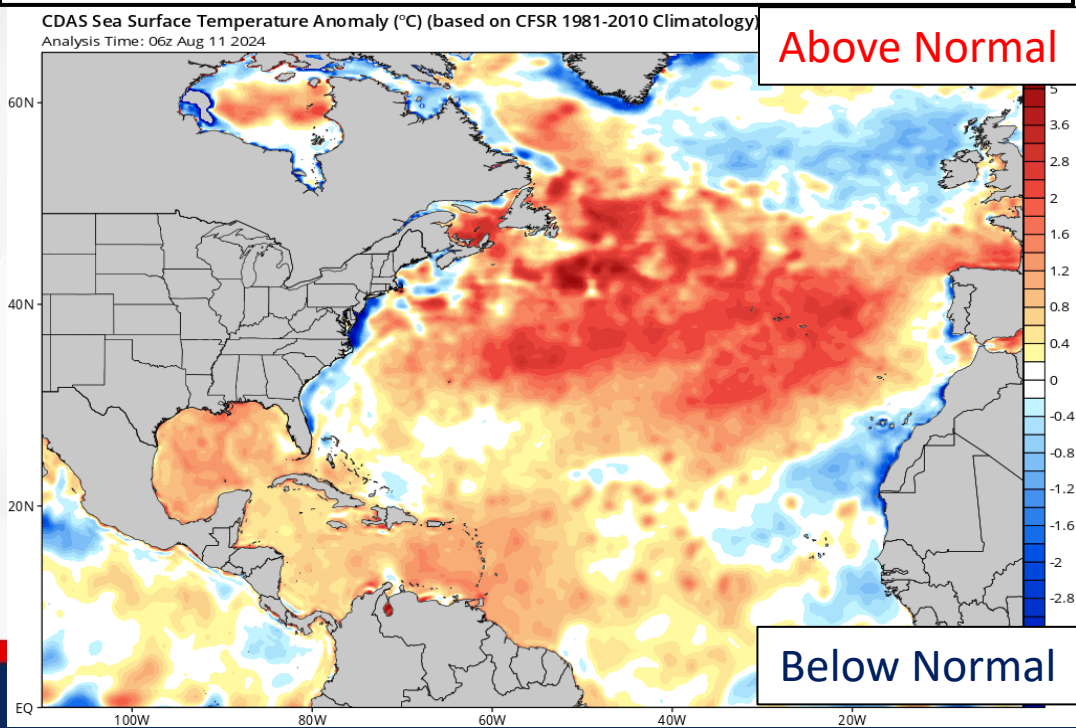




# Sea Surface Temperatures & Anomalies

Is the ocean favorable for the system?

Temperatures across the Atlantic Basin are supportive of tropical cyclone development. Waters across the deep tropical Atlantic and Gulf of Mexico 0.5 to 1.5-degrees above normal for this time of year.

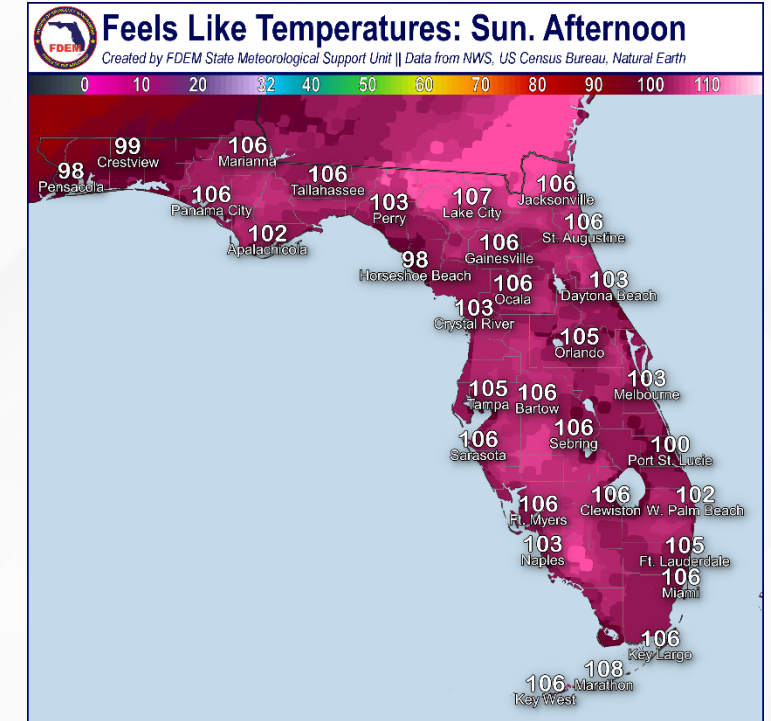
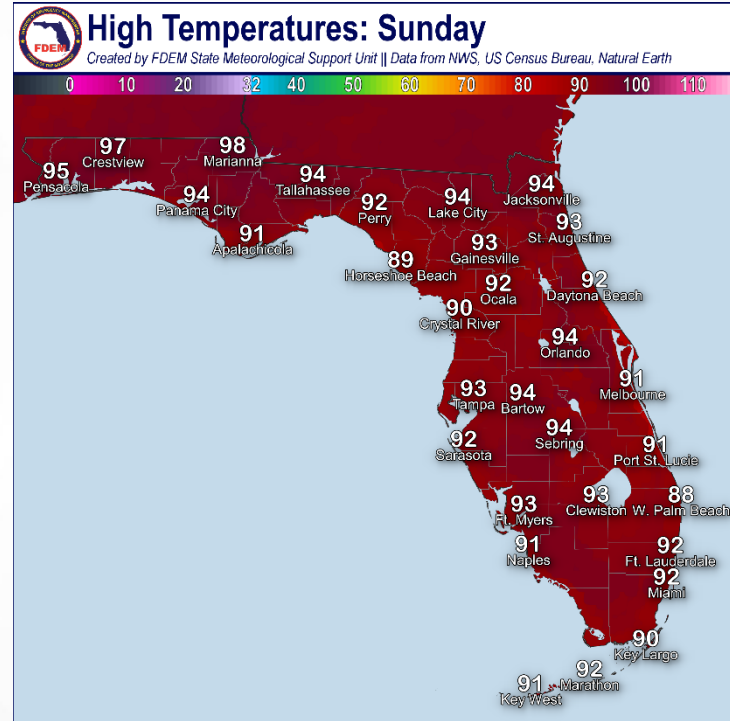
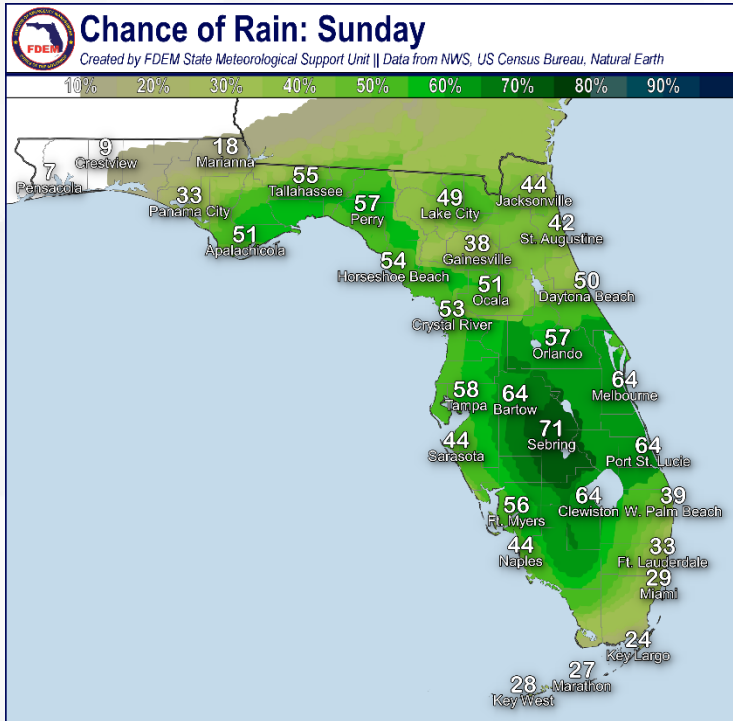






# Recovery Weather - Sunday

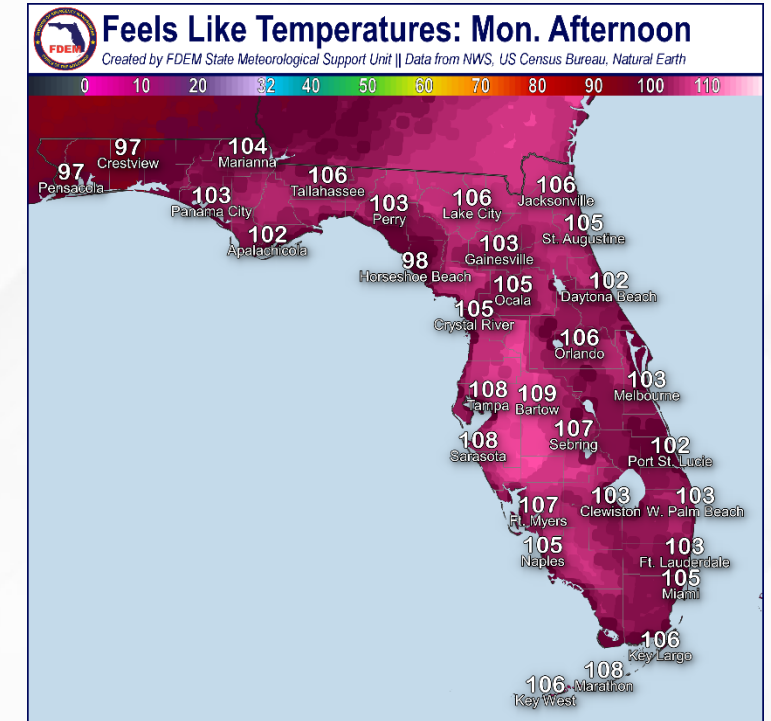
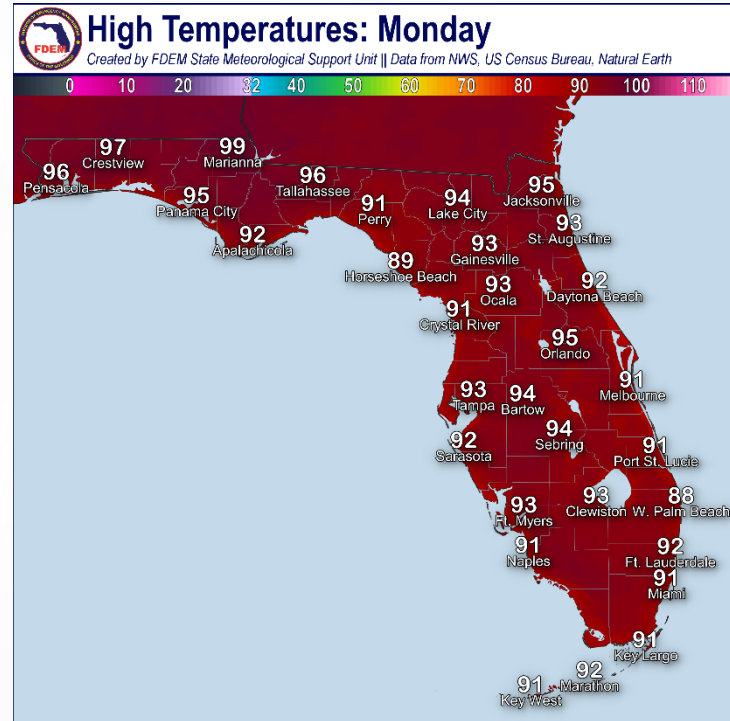
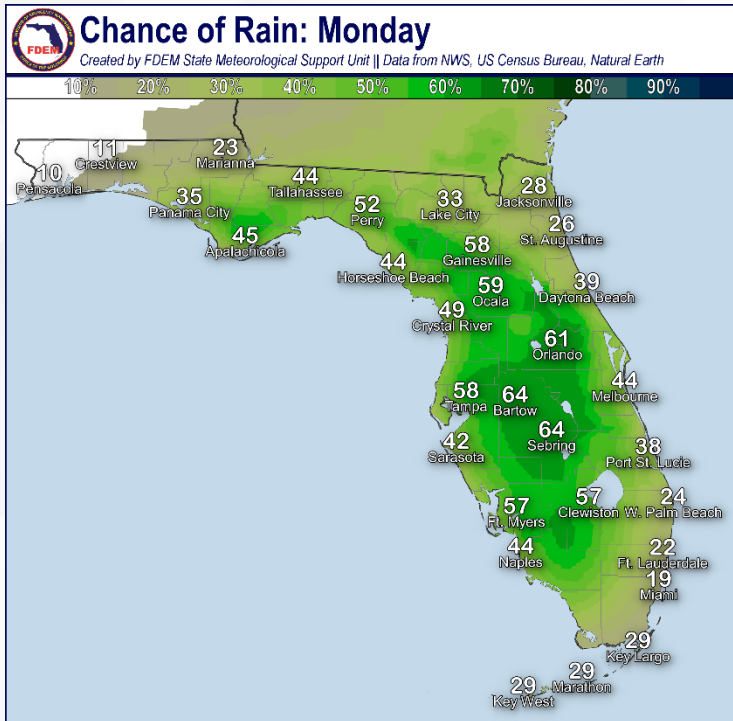
## Rain Chances, High Temperature & Feels-Like Temperature





# Recovery Weather - Monday

## Rain Chances, High Temperature & Feels-Like Temperature

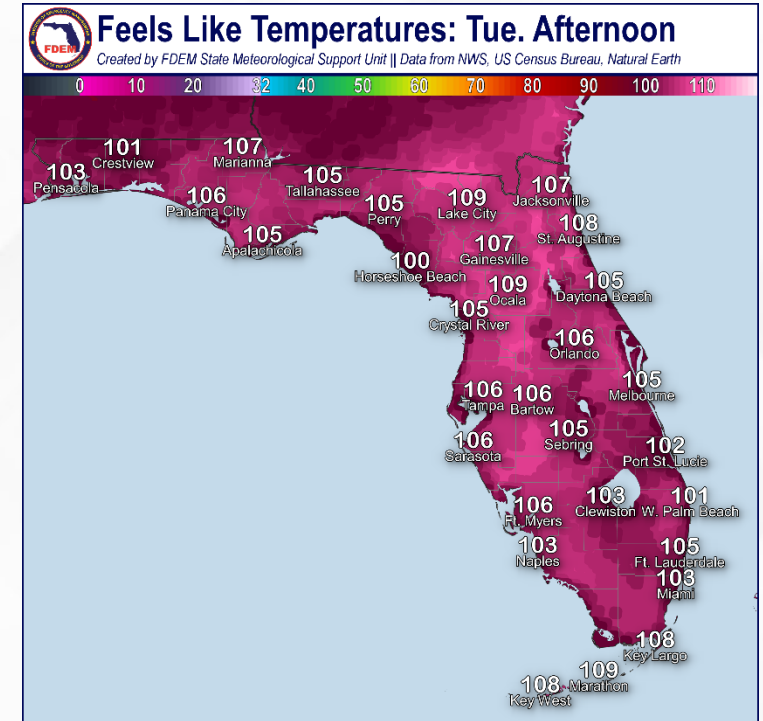
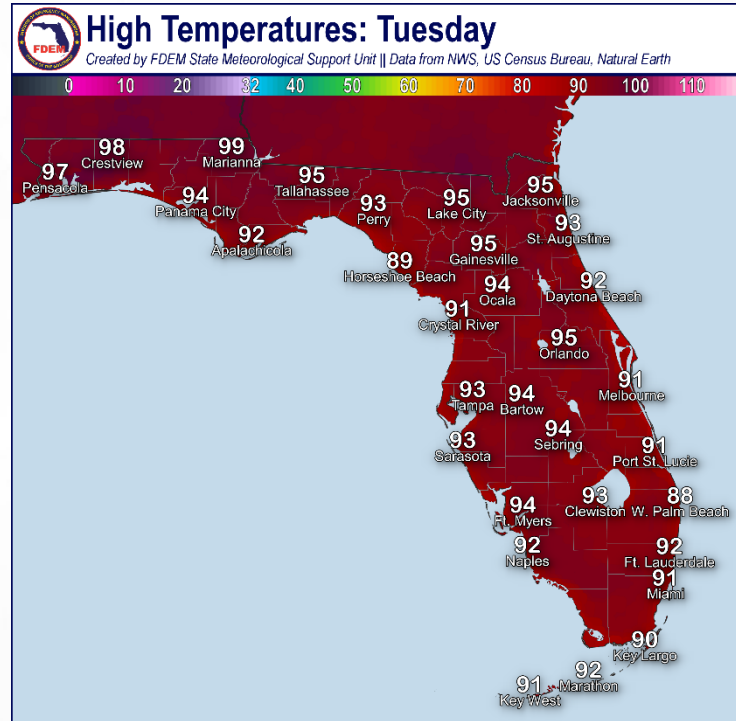
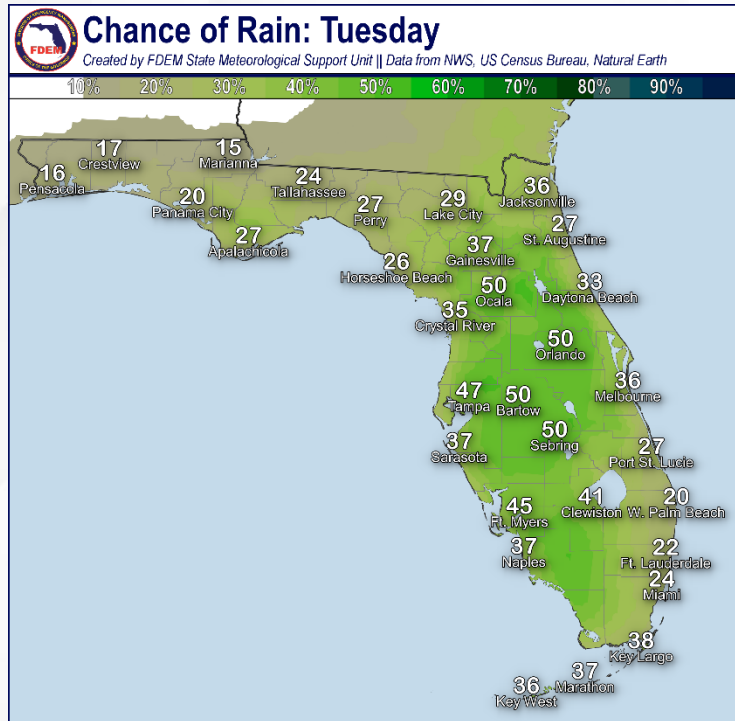






# Recovery Weather - Tuesday

## Rain Chances, High Temperature & Feels-Like Temperature

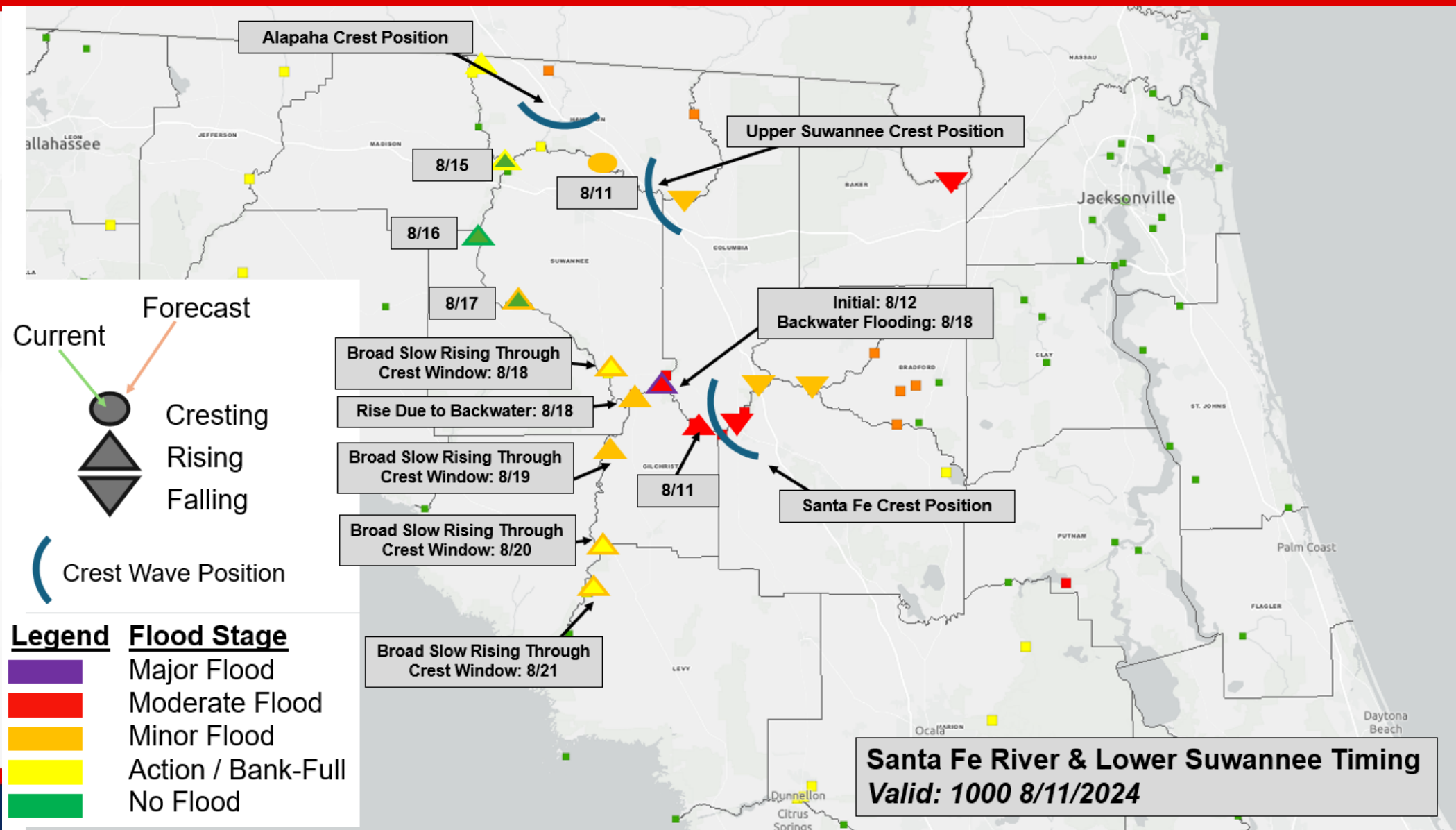




# River Crest Timing

Sante Fe and Lower Suwannee

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# River Flood Warnings

From the National Weather Service

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River Gauge	County(ies) Affected	Current Level	Crest Level	Record Level	Status	Crest Date	Warning Expires Date
<a href="#">Alafia River at Lithia Pinecrest Road at Lithia</a>	Hillsborough	Minor: 15.20 ft	Major: 20.17 ft	28.50 ft	Falling	7-Aug	1100 EDT 12-Aug
<a href="#">Cypress Creek at SR-54 Worthington Gardens</a>	Pasco	Minor: 9.10 ft	Minor: 9.45 ft	13.80 ft	Falling	8-Aug	Until Further Notice
<a href="#">Horse Creek near Arcadia at SR 72</a>	DeSoto	Minor: 12.60 ft	Minor: 14.08 ft	21.20 ft	Falling	6-Aug	1700 EDT 12-Aug
<a href="#">Little Manatee River at Mimauma at US 301</a>	Hillsborough	Minor: 12.20 ft	Major: 19.47 ft	20.10 ft	Falling	6-Aug	1700 EDT 11-Aug
<a href="#">Myakka River at Myakka River State Park</a>	Sarasota	Moderate: 9.90 ft	Moderate: 10.22 ft	12.80 ft	Falling	9-Aug	Until Further Notice
<a href="#">Santa Fe River at Fort White</a>	Gilchrist, Columbia	Moderate: 28.41 ft	Major: 29.00 ft	35.40 ft	Rising	11-Aug	Until Further Notice
<a href="#">Santa Fe River at Three Rivers Estates</a>	Gilchrist, Suwannee, Columbia	Moderate: 21.67 ft	Major: 25.70 ft	33.40 ft	Rising	18-Aug	Until Further Notice
<a href="#">Santa Fe River at Worthington Springs</a>	Alachua, Union	Minor: 61.70 ft	Moderate: 65.28 ft	71.20 ft	Falling	7-Aug	Until Further Notice
<a href="#">Santa Fe River near High Springs</a>	Alachua, Columbia	Moderate: 40.70 ft	Moderate: 41.19 ft	48.50 ft	Falling	9-Aug	2000 EDT 16-Aug
<a href="#">Santa Fe River near Hildreth</a>	Suwannee, Gilchrist	Minor: 20.66 ft	Minor: 24.80 ft	33.40 ft	Rising	18-Aug	Until Further Notice
<a href="#">Santa Fe River near O'Leno State Park</a>	Alachua, Columbia	Minor: 50.60 ft	Moderate: 52.21 ft	57.10 ft	Falling	8-Aug	Until Further Notice
<a href="#">St. Mary's near Macclenny</a>	Baker, Nassau	Moderate: 17.30 ft	Major: 19.71 ft	24.40 ft	Falling	7-Aug	Until Further Notice
<a href="#">Steinhatchee River near Cross City</a>	Dixie, Taylor	Minor: 20.03 ft	Minor: 20.77 ft	N/A	Falling	N/A	Until Further Notice
<a href="#">Suwannee River at White Springs</a>	Hamilton, Suwannee, Columbia	Minor: 77.20 ft	Minor: 78.69 ft	87.70 ft	Falling	10-Aug	1400 EDT 15-Aug
<a href="#">Suwannee River near Suwannee Springs</a>	Suwannee, Hamilton	Minor: 63.54 ft	Moderate: 64.30 ft	78.20 ft	Rising	11-Aug	Until Further Notice
<a href="#">Suwannee River at Ellaville</a>	Hamilton, Madison, Suwannee	Below: 47.66 ft	Action: 50.20 ft	67.40 ft	Rising	15-Aug	No River Flood Warning Issued
<a href="#">Suwannee River at Dowling Park</a>	Lafayette, Madison, Suwannee	Below: 39.86 ft	Action: 43.20 ft	60.80 ft	Rising	16-Aug	No River Flood Warning Issued
<a href="#">Suwannee River at Luraville</a>	Lafayette, Suwannee	Below: 32.90 ft	Minor: 35.4 ft	52.80 ft	Rising	17-Aug	Until Further Notice

For more details on the hydrographs as well as impact statements, click the links for each river gauge.



# River Flood Warnings

From the National Weather Service

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River Guage	County(ies) Affected	Current Level	Crest Level	Record Level	Status	Crest Date	Warning Expires Date
<a href="#">Suwannee River at Branford</a>	Lafayette, Suwannee	Action: 24.08 ft	Minor: 27.30 ft	38.10 ft	Rising	18-Aug	Until Further Notice
<a href="#">Suwannee River at Rock Bluff (Bell)</a>	Dixie, Gilchrist, Lafayette	Minor: 17.07 ft	Minor: 20.80 ft	N/A	Rising	19-Aug	Until Further Notice
<a href="#">Suwannee River at Wilcox</a>	Dixie, Gilchrist, Levy	Action: 8.71 ft	Minor: 12.80 ft	21.10 ft	Rising	20-Aug	Until Further Notice

For more details on the hydrographs as well as impact statements, click the links for each river gauge.





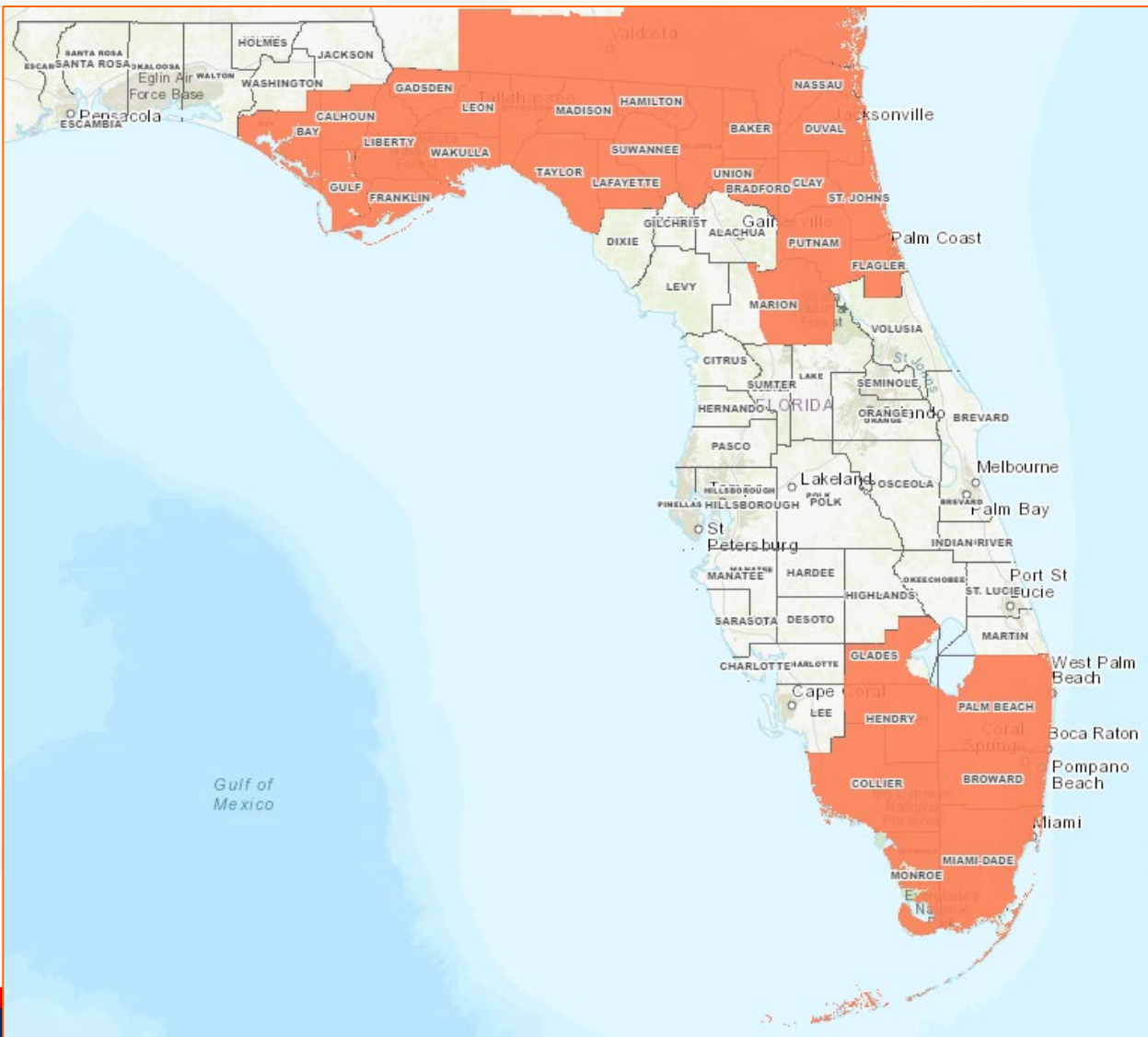
Sarasota County: Flooding is ongoing downstream of the Myakka River, with local streams continuing to rise due to excess rainfall runoff from recent heavy totals. While the peak water levels have moved through the region toward tidal portions closer to Port Charlotte, continue to monitor low-lying and flood prone locations for flooding.

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# Hot & Humid Conditions

From the National Weather Service (NWS)



**Dangerously hot and humid conditions** can be expected to develop statewide as high temperatures will reach well into the 90s with **heat index values in the triple digits (104-112-degrees)**.

**Heat Advisories** have been issued across the Panhandle, Big Bend, Northern and Eastern Peninsula, South Florida, and the Keys and will go into effect later this morning.

It should be noted that several of these counties within the Heat Advisories are ones that were impacted by Debby, which could make clean-up/response activities more difficult for those without power or AC.

Please remember to practice heat safety when outdoors including, taking breaks from direct sunlight when you can, wear loose fitting clothing and drink plenty of water.





# Summary

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## Invest 98L:

- Showers and thunderstorms continue to show signs of organization in association with a broad area of low pressure, located about 1,000 miles east of the Lesser Antilles.
- Environmental conditions appear conducive for gradual development of this system, and a tropical depression is likely to form within the next couple of days while the system approaches and then moves near or over the Leeward Islands.
- Watches and Warnings could be required for portions of the Leeward Islands as soon as later today.
- Invest 98L could approach portions of the Greater Antilles by the middle of the week.
- The National Hurricane Center (NHC) is outlooking a **high (70%) chance of development** over the next 48 hours, and a **high (90%) chance of development** over the next 7 days.
- *Invest 98L poses no direct threat to Florida over the next 7 days, at least; trends within the computer forecast models will be closely monitored as the system approaches the Leeward Islands within the next 48 hours.*
- The next name on the list is Ernesto (er-NES-toh).

## Florida Outlook:

- **River Flood Warnings** remain in effect for numerous North and West Florida Rivers as they have reached or are forecast to reach moderate to major flood stage; several others waterways are forecast to reach or remain in minor flood stage.
  - Additional River Flood Warnings may be possible over the next several days as water filters through the basins into the rivers and waterways and further downstream; and updates to existing riverine flooding forecasts can be expected.
  - Portions of the slower-response Santa Fe and Suwannee Rivers will likely remain above flood stage for several weeks, with several gauges not forecast to fall below food stage for the remainder of the month or early September, at least.
- **Dangerous heat and humidity** can be expected statewide today, with **heat index values** rising to **104 to 112-degrees** during the peak heating hours of the day.
  - **Heat Advisories** have been issued across the Panhandle, Big Bend, Northern and Eastern Peninsula, South Florida, and the Keys and will go into effect later this morning, then continue throughout the afternoon and early evening hours.
  - *When outdoors and helping with response efforts, please make sure to practice heat safety. Be sure to take breaks from direct sunlight, wear loose fitting clothing and drink plenty of water.*
- Grounds and soils are very saturated following heavy rainfall before and after landfall, and any additional rainfall may **exacerbate the potential for additional flooding**; Any heavy downpours over urban and low-lying/poor drainage areas could bring **localized instances of flash flooding**.
- Locally strong to severe thunderstorms producing frequent lightning, gusty winds (40-50 mph), and heavy downpours cannot be ruled out during peak heating hours of the day.

The next briefing packet will be issued Monday. For the latest information, please visit the [National Hurricane Center website](#).



# Tropical Update

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**State Meteorological Support Unit**

**Florida Division of Emergency Management**

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