



Tropical Update



11:00 AM EDT

Friday, August 18, 2023

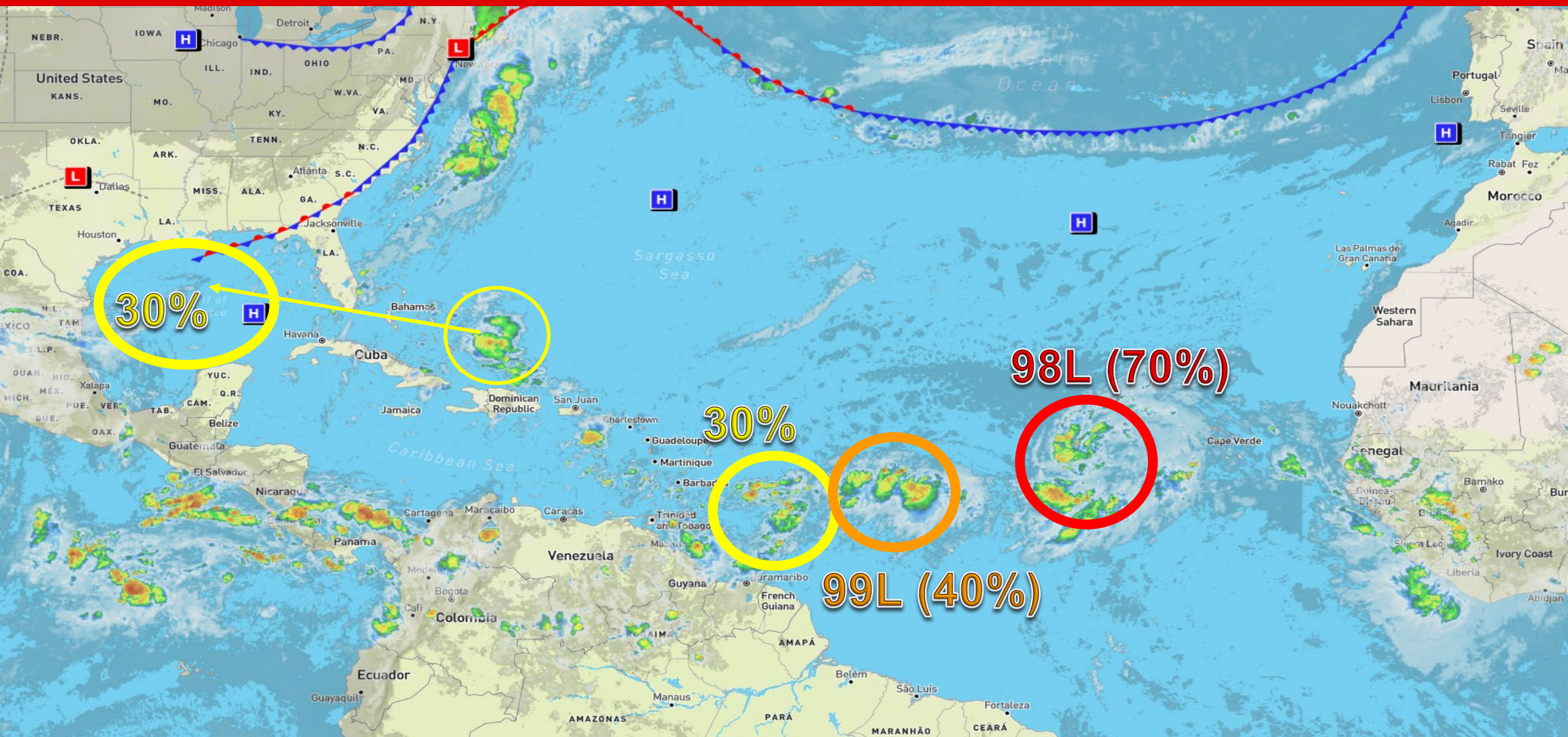
**Invest 98L (70%), Invest 99L (40%),
Lesser Antilles Tropical Wave (30%), &
Southwest Atlantic Wave (30%)**

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

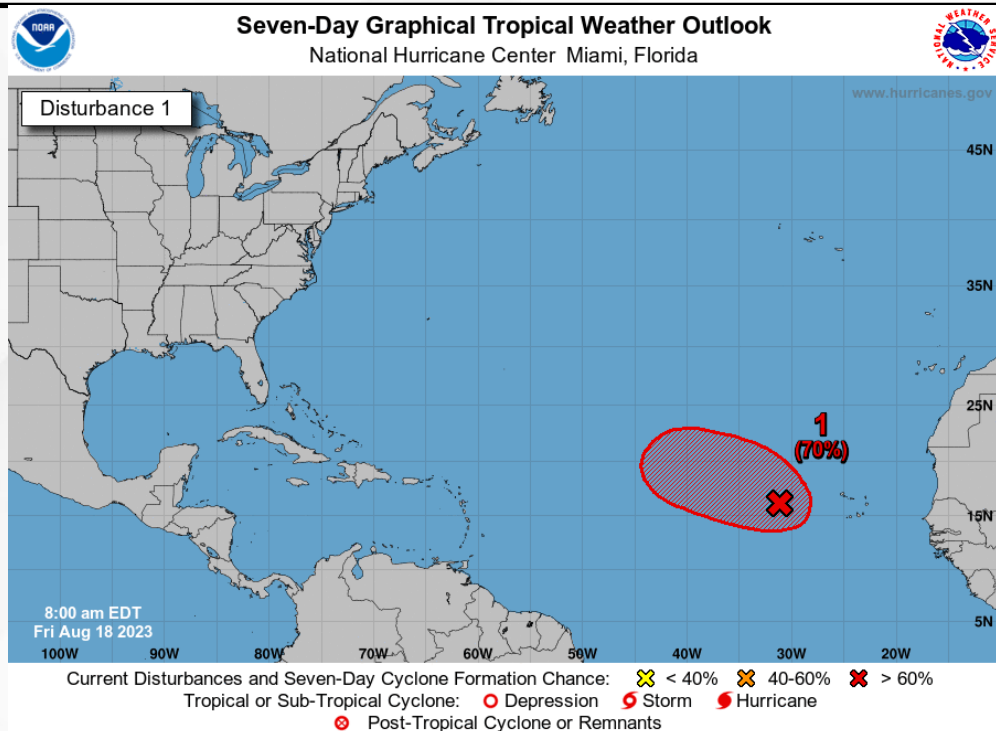
Chance of development: None Low Medium High





Tropical Weather Outlook

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

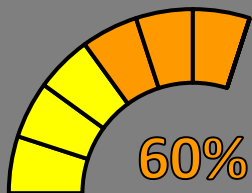


Showers and thunderstorms continue to show some signs of organization in association with a broad area of low pressure, located a few hundred miles west of the Cabo Verde Islands. Environmental conditions appear generally favorable for additional development of this system, and a tropical depression is likely to form over the weekend while it moves toward the west-northwest or northwest at about 10 mph across the eastern tropical Atlantic. By early next week, upper-level winds over the system are forecast to increase, and further development is not expected.

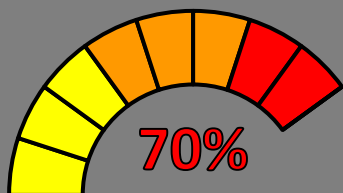
Invest 98L poses no threat to Florida.

* Formation chance through 48 hours...**medium...60%.**

* Formation chance through 7 days...**high...70%.**



48 Hour Formation

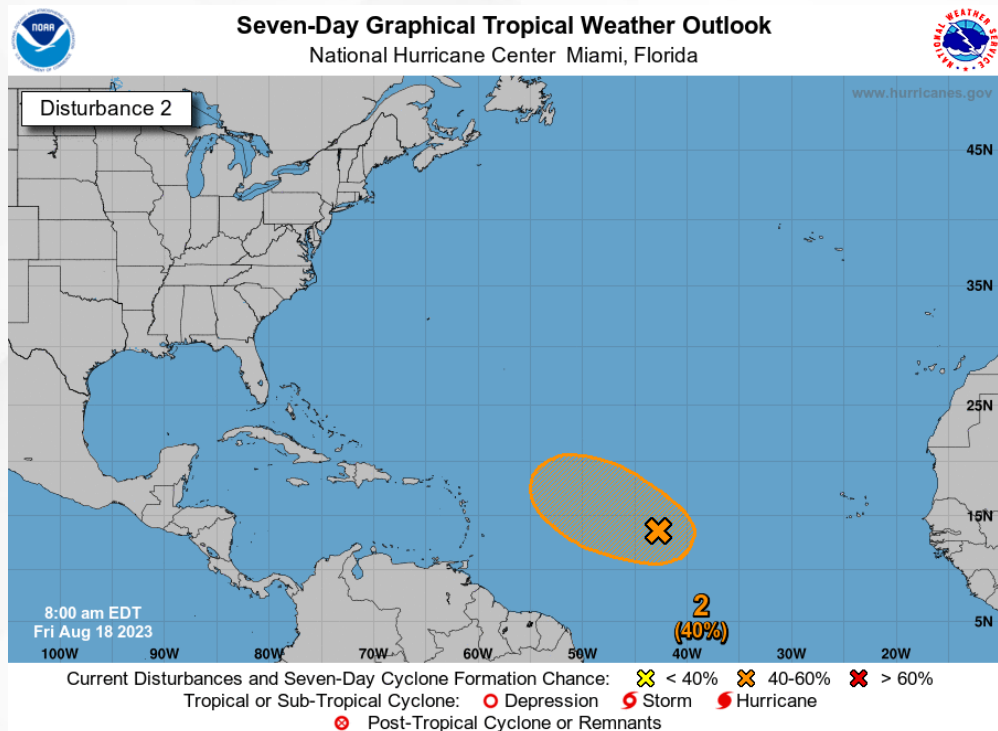


7 Day Formation



Tropical Weather Outlook

Disturbance 2 – Invest 99L ([LINK](#))

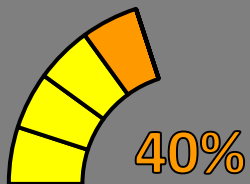


An elongated area of low pressure, located roughly halfway between the Cabo Verde Islands and the Lesser Antilles, is producing some disorganized showers and thunderstorms. Environmental conditions are only marginally conducive for further development of this system, but a tropical depression could still form during the next couple of days while it moves west-northwestward at 10 to 15 mph across the central tropical Atlantic. Thereafter, upper-level winds are forecast to become unfavorable for any further development.

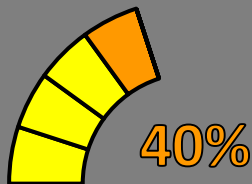
Invest 99L poses no threat to Florida.

* Formation chance through 48 hours...**medium...40%.**

* Formation chance through 7 days...**medium...40%.**



48 Hour Formation

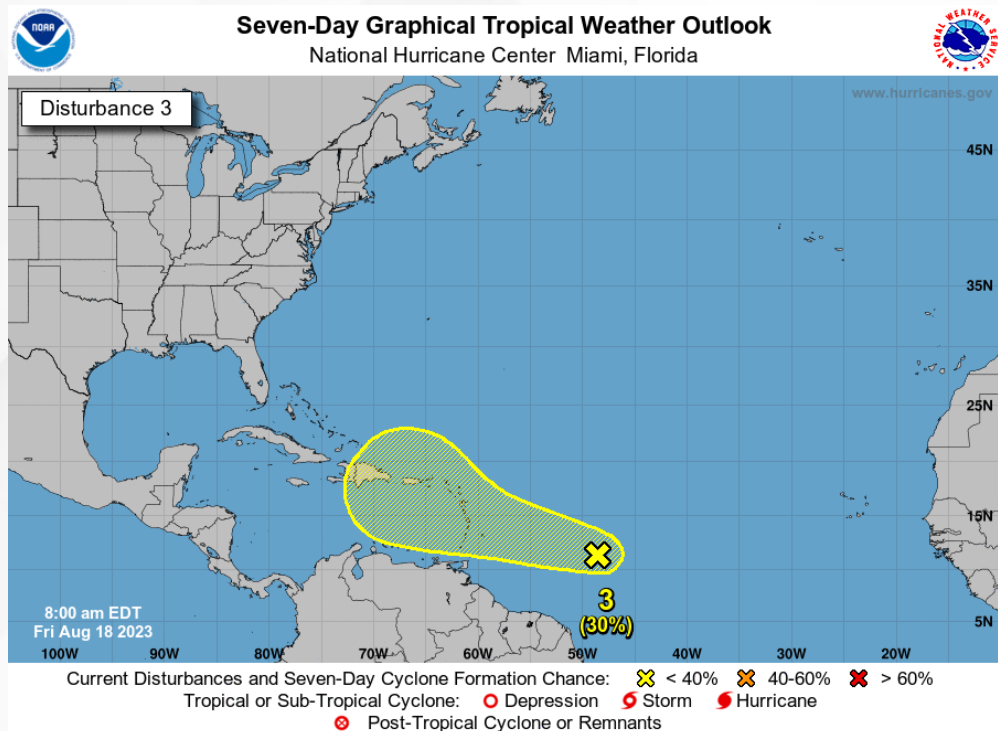


5 Day Formation



Tropical Weather Outlook

Disturbance 3 – Lesser Antilles Tropical Wave ([LINK](#))



Another area of low pressure could form in a day or so from an elongated upper-level disturbance located several hundred miles to the east-southeast of the Lesser Antilles. Some slow development of this system is possible over the weekend and into early next week as it moves generally west-northwestward at 10 to 15 mph across the Lesser Antilles and into the northeastern Caribbean Sea.

This system poses no direct threat to Florida over the next 5-7 days, at least.

* Formation chance through 48 hours...**low...10%**.

* Formation chance through 7 days...**low...30%**.

10%

48 Hour Formation

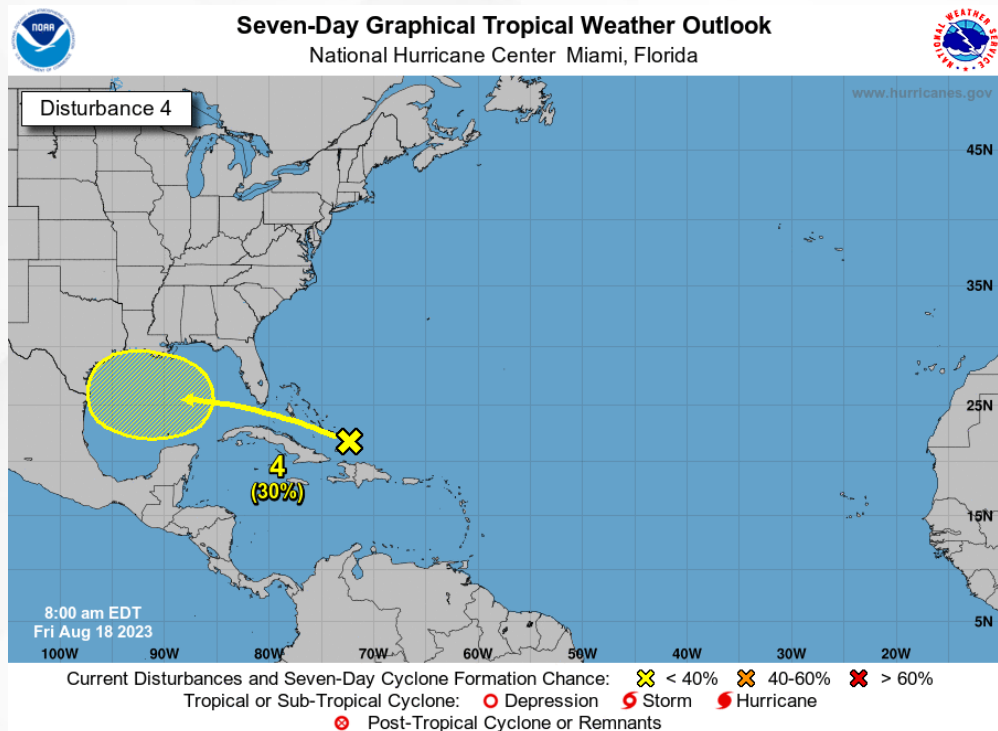
30%

5 Day Formation



Tropical Weather Outlook

Disturbance 4 – Southwest Atlantic Wave ([LINK](#))



Near 0%

48 Hour Formation



30%

5 Day Formation

An area of disturbed weather, located just north of Hispaniola, is forecast to move into the Gulf of Mexico by early next week, where a broad area of low pressure could form. Some slow development of this system is possible thereafter as it moves westward and approaches the western Gulf of Mexico coastline by the middle of next week.

This system will bring an increased risk for heavy rainfall and flooding over the Florida Peninsula (mainly along and south of the I-4 corridor) this weekend. Widespread rainfall totals of 1-3" can be expected, with locally higher amounts of 4-7" possible.

* Formation chance through 48 hours...**low...near 0%.**

* Formation chance through 7 days...**low...30%.**

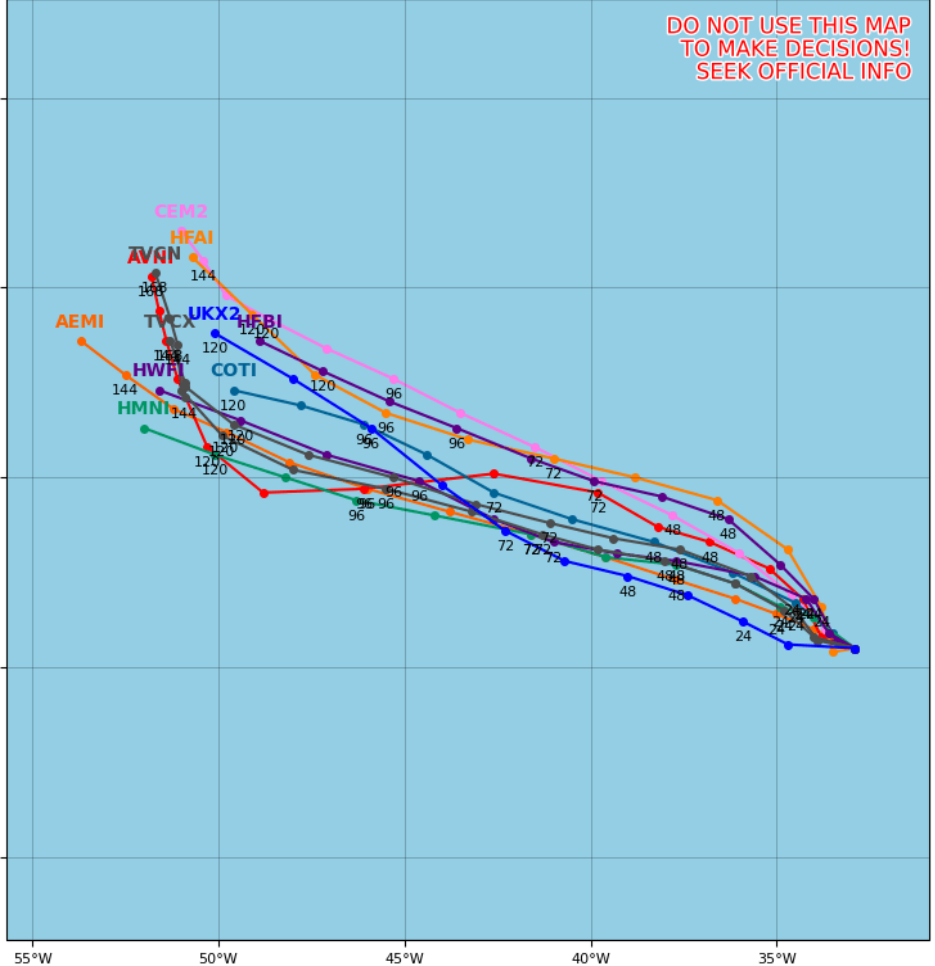


Model Forecasts – Next 5 Days

Invest 98L

Invest 98L Model Track Guidance

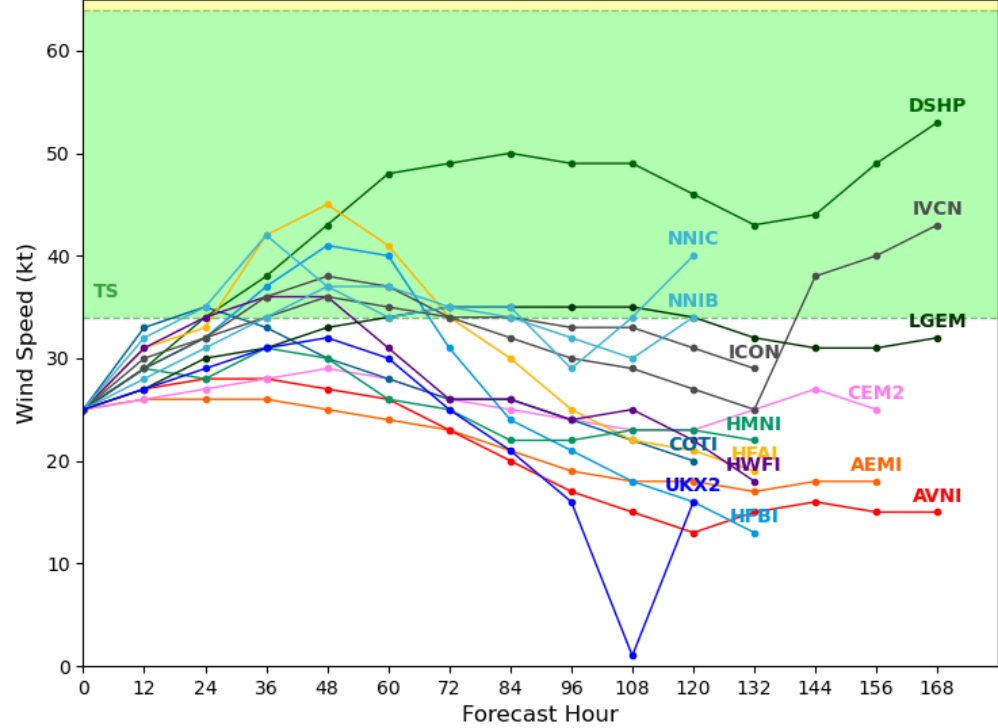
Initialized at 12z Aug 18 2023
Levi Cowan - tropicaltidbits.com



Computer models are in good agreement that Invest 98L will maintain a west-northwestward to northwestward motion during the next 5-7 days over the open Atlantic. While there is no organized center of circulation, guidance is in decent agreement that Invest 98L could become a tropical depression or weak tropical storm over the next 24-72 hours before encountering unfavorable upper-level winds. The system looks to lose intensity during the next 3-5 days.

Invest 98L Model Intensity Guidance

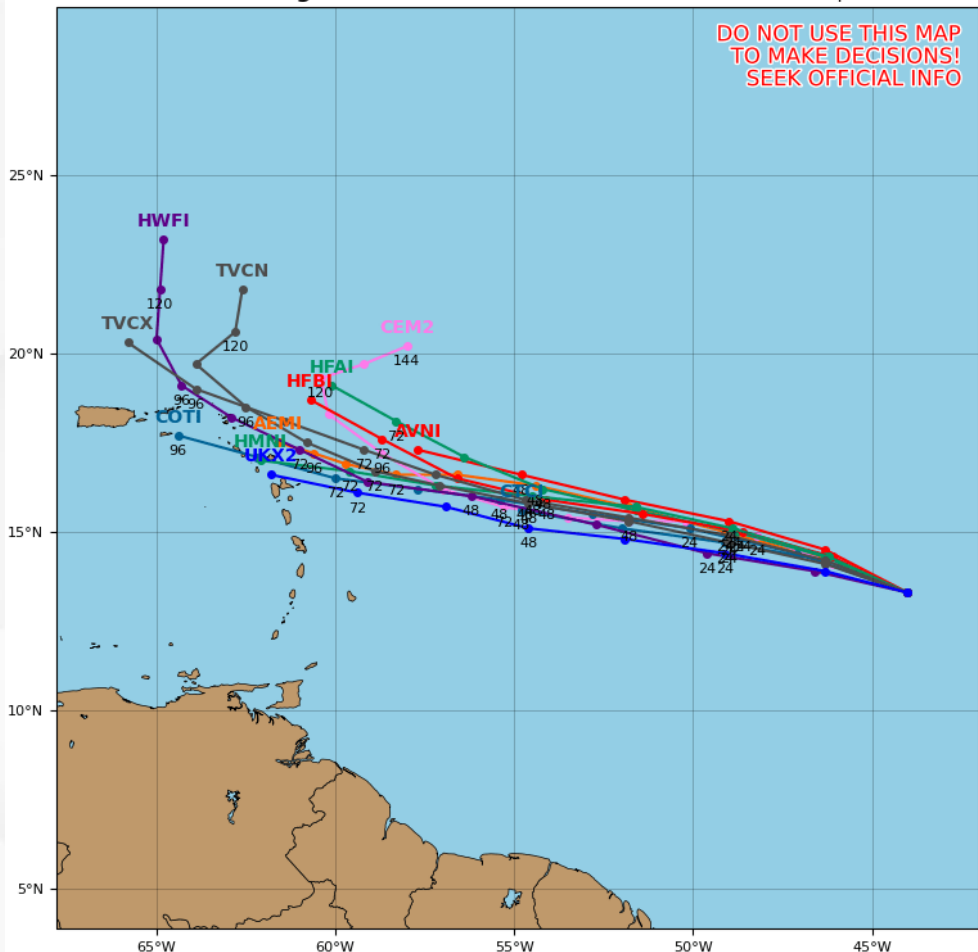
Initialized at 12z Aug 18 2023
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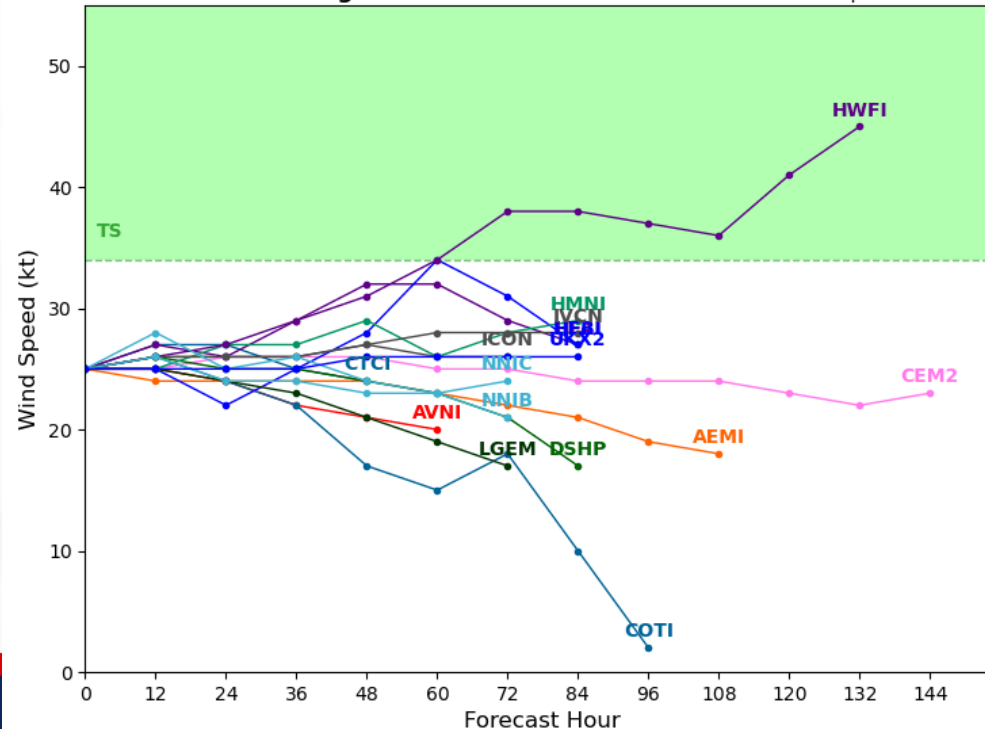


Computer model guidance is in decent agreement that Invest 99L will progress west-northwestward over the next 3-5 days, with a slight northward pull by the end of the forecast period. There is a general consensus that Invest 99L may briefly have the opportunity to become a tropical depression over the next couple of days; however, the introduction of strong upper-level winds early next week will further inhibit any organization or strengthening.

Invest 99L Model Intensity Guidance

Initialized at 12z Aug 18 2023

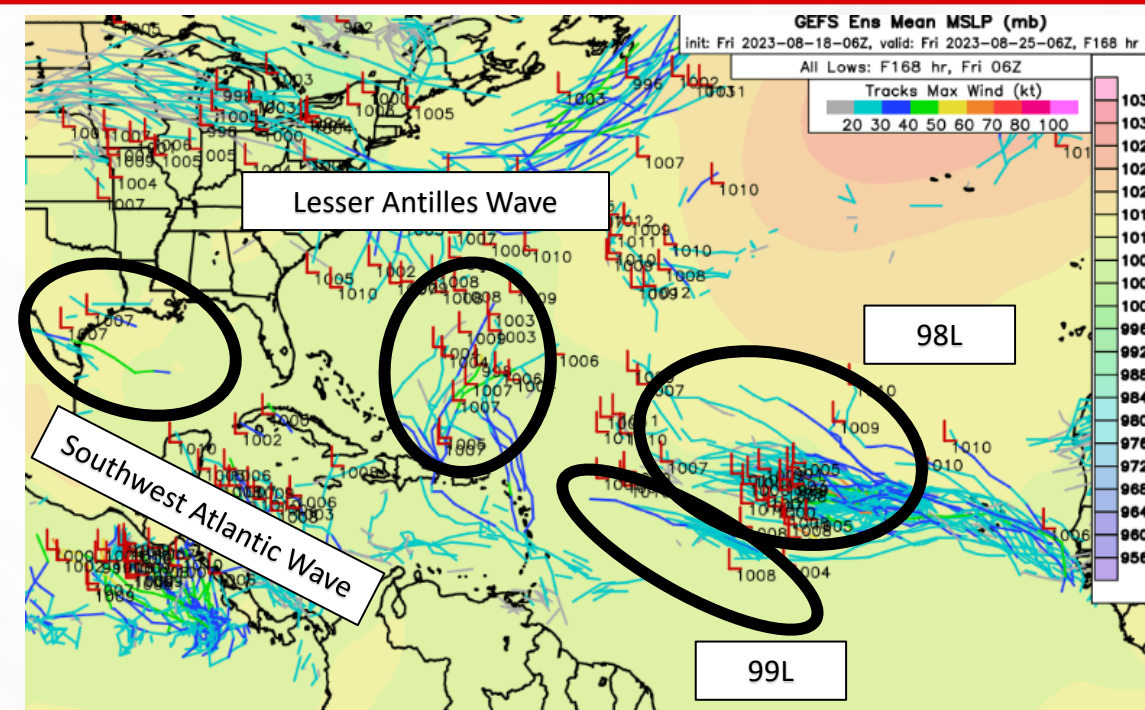
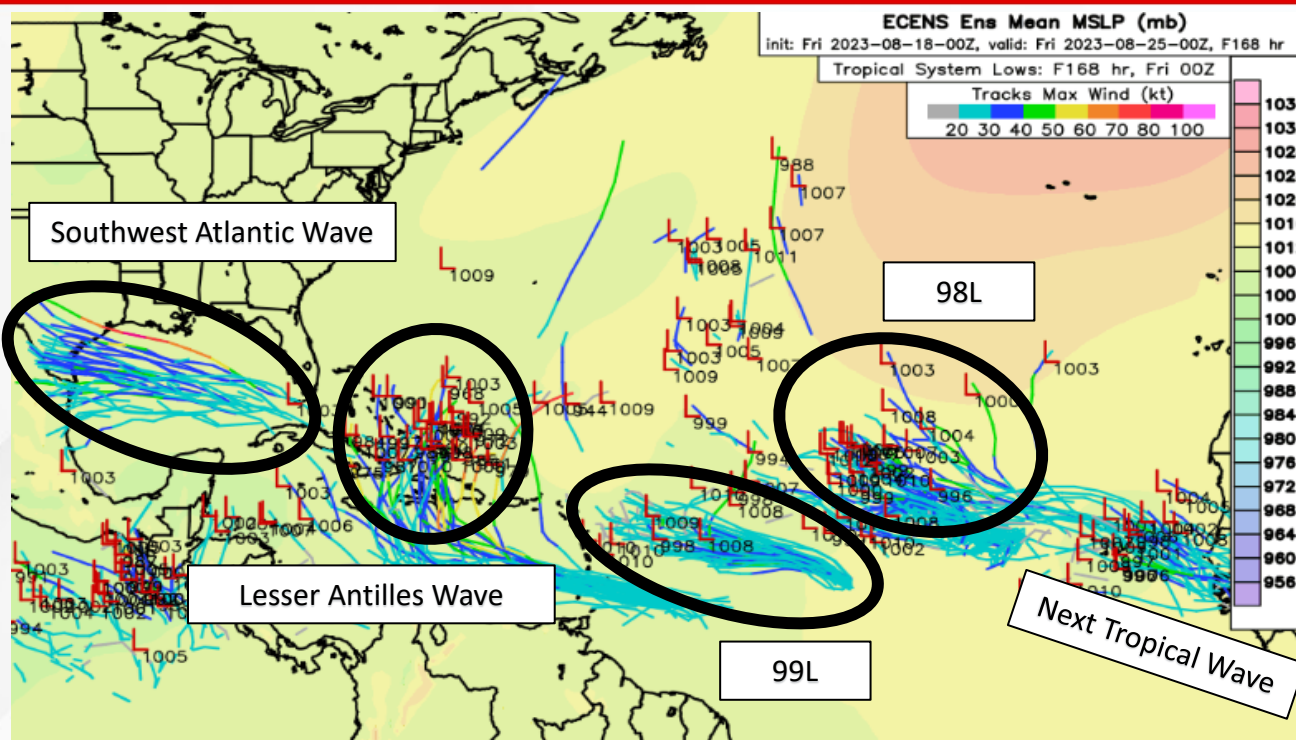
Levi Cowan - tropicaltidbits.com





Model Forecasts – Next 7 Days

Atlantic Basin



Computer model guidance this morning is generally in good agreement that Invests 98L and 99L will move west-northwestward to northwestward around the area of high pressure, prior to encountering less favorable atmospheric conditions (strong upper-level winds) over the next 5-7 days.

Both computer models suggest the Lesser Antilles Tropical Wave may continue to organize over the next 5-7 days as it gradually moves westward to west-northwestward toward the Caribbean. Upon entering the Caribbean, the steering flow on the southwestern periphery of the dominant high pressure area and the presence of an upper-level disturbance off the Mid-Atlantic Coast will pull the system northwestward and northward, generally east of the Bahamas.

Computer models are in good agreement that the Southwest Atlantic Tropical Wave will move over the Florida Keys and Peninsula during the next 24-48 hours, reaching the Gulf of Mexico early next week. The system will then continue to advance westward, reaching the Texas coastline by early to middle of next week.



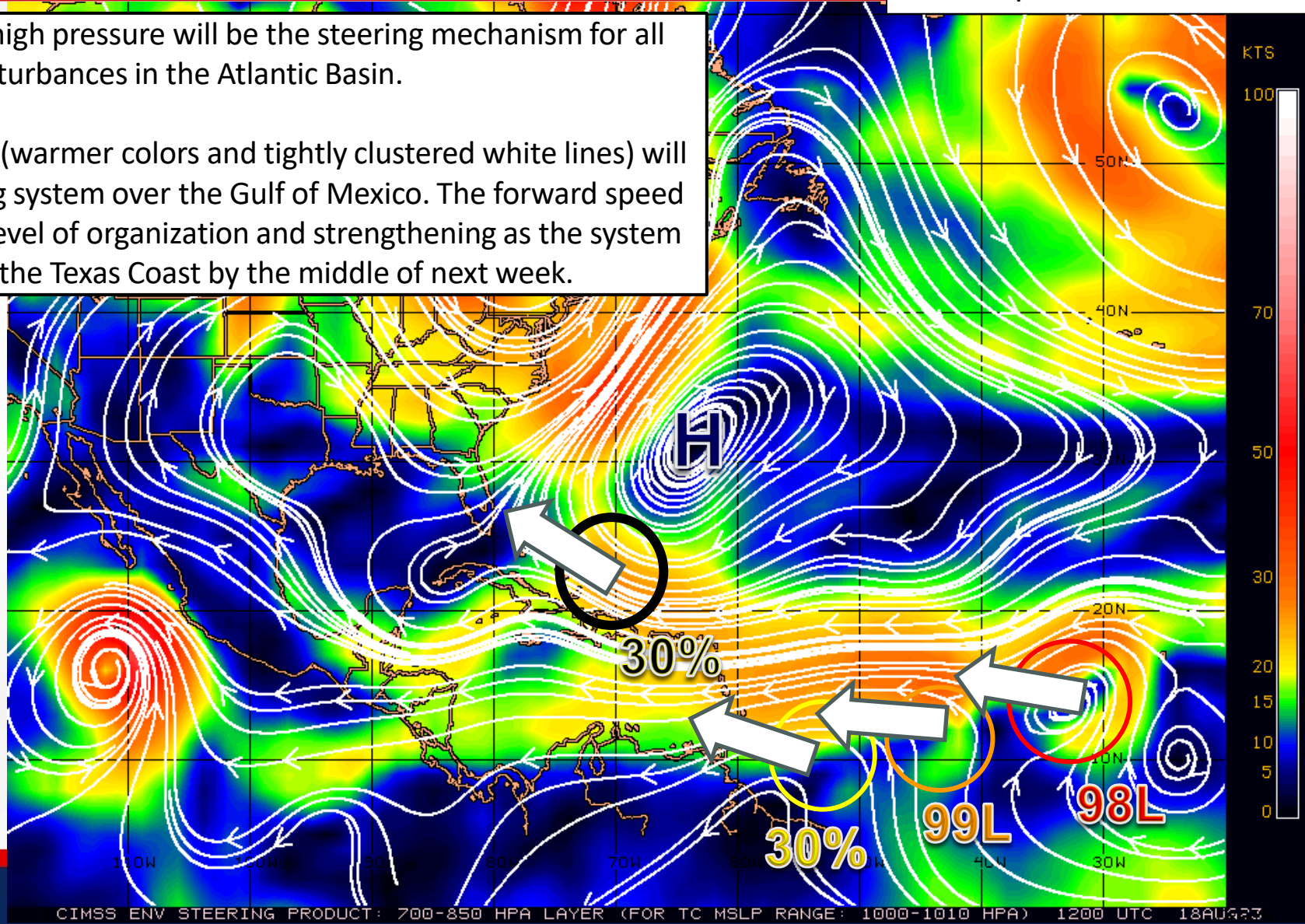
Steering Currents

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.

The dominant area of high pressure will be the steering mechanism for all disturbances in the Atlantic Basin.

The strong steering flow (warmer colors and tightly clustered white lines) will promote a faster-moving system over the Gulf of Mexico. The forward speed may hinder the overall level of organization and strengthening as the system moves onshore the Texas Coast by the middle of next week.



Fast Moving Storm

Fast Moving Storm

Typical Moving Storm

Slow Moving Storm



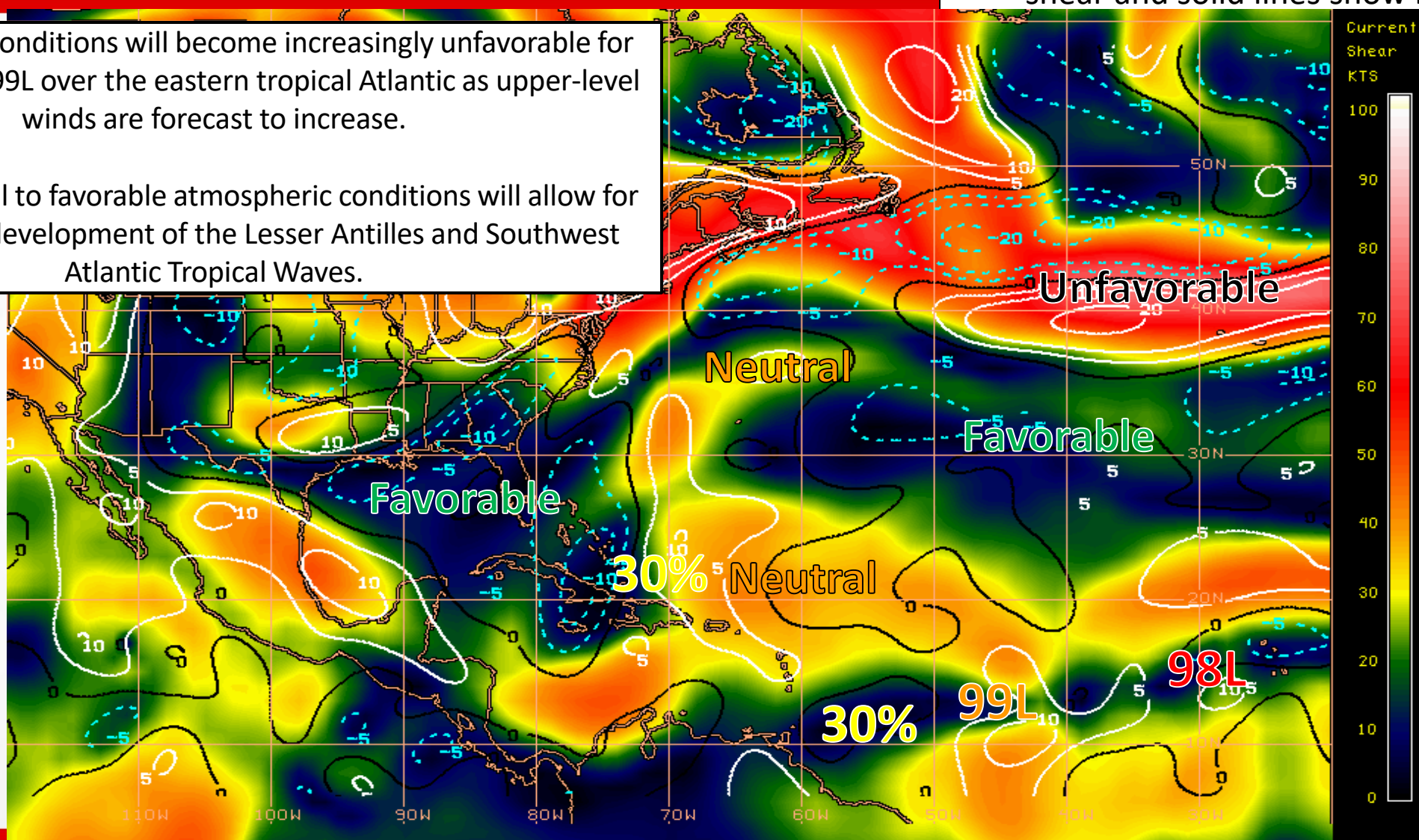
Wind Shear

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).

Environmental conditions will become increasingly unfavorable for Invests 98L and 99L over the eastern tropical Atlantic as upper-level winds are forecast to increase.

Generally neutral to favorable atmospheric conditions will allow for some gradual development of the Lesser Antilles and Southwest Atlantic Tropical Waves.



HIGH Shear
(Unfavorable)

HIGH Shear
(Unfavorable)

MODERATE
Shear
(Neutral)

LOW Shear
(Favorable)

Shear Tendency (KTS) Over Past 24 Hours: Increasing ——— Decreasing - - - -



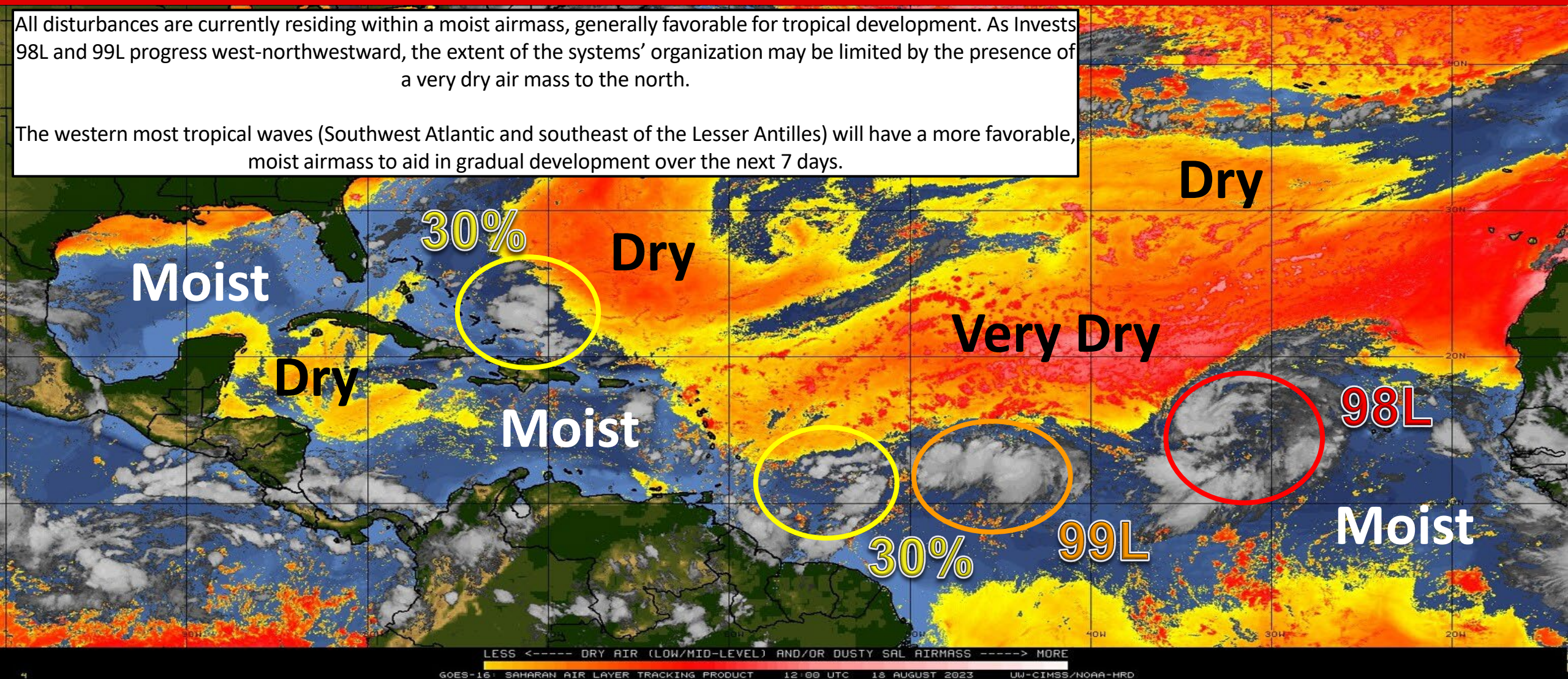
Dry Air & Saharan Dust

Is the environment favorable for the system?

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

All disturbances are currently residing within a moist airmass, generally favorable for tropical development. As Invests 98L and 99L progress west-northwestward, the extent of the systems' organization may be limited by the presence of a very dry air mass to the north.

The western most tropical waves (Southwest Atlantic and southeast of the Lesser Antilles) will have a more favorable, moist airmass to aid in gradual development over the next 7 days.

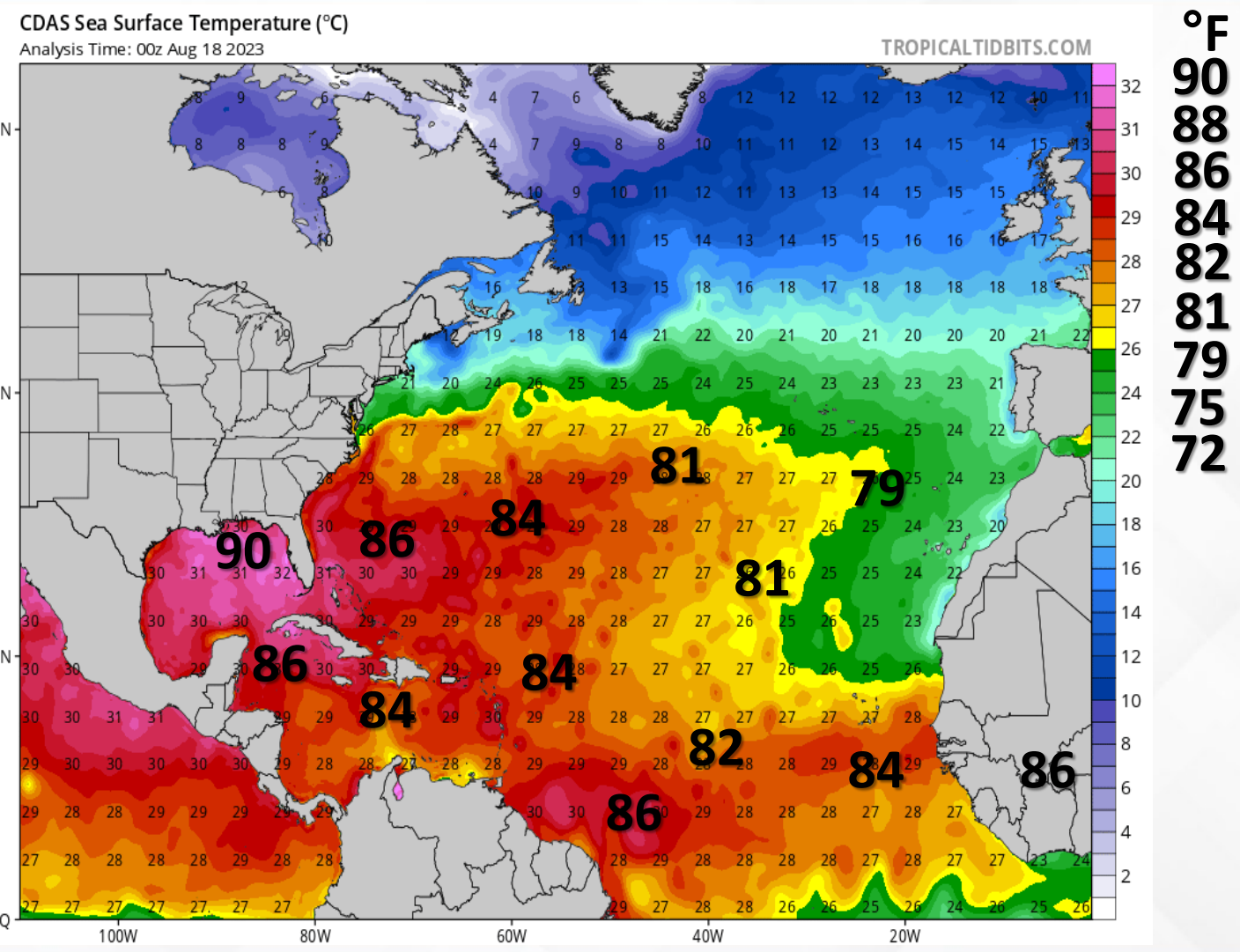
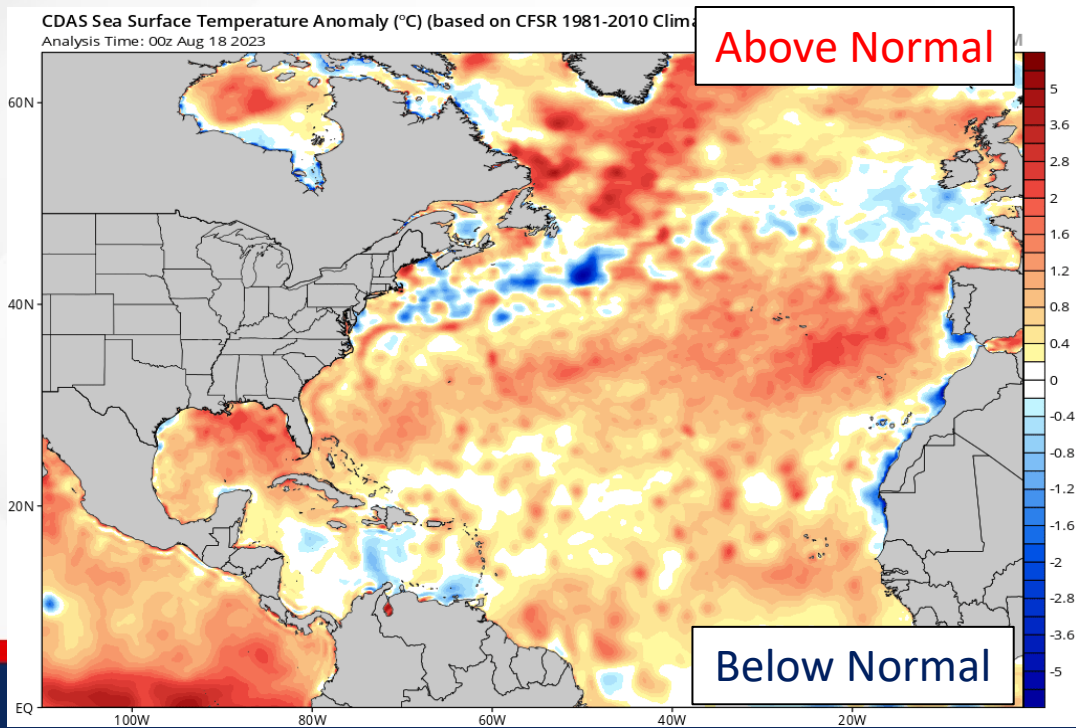




Sea Surface Temperatures & Anomalies

Is the ocean favorable for the system?

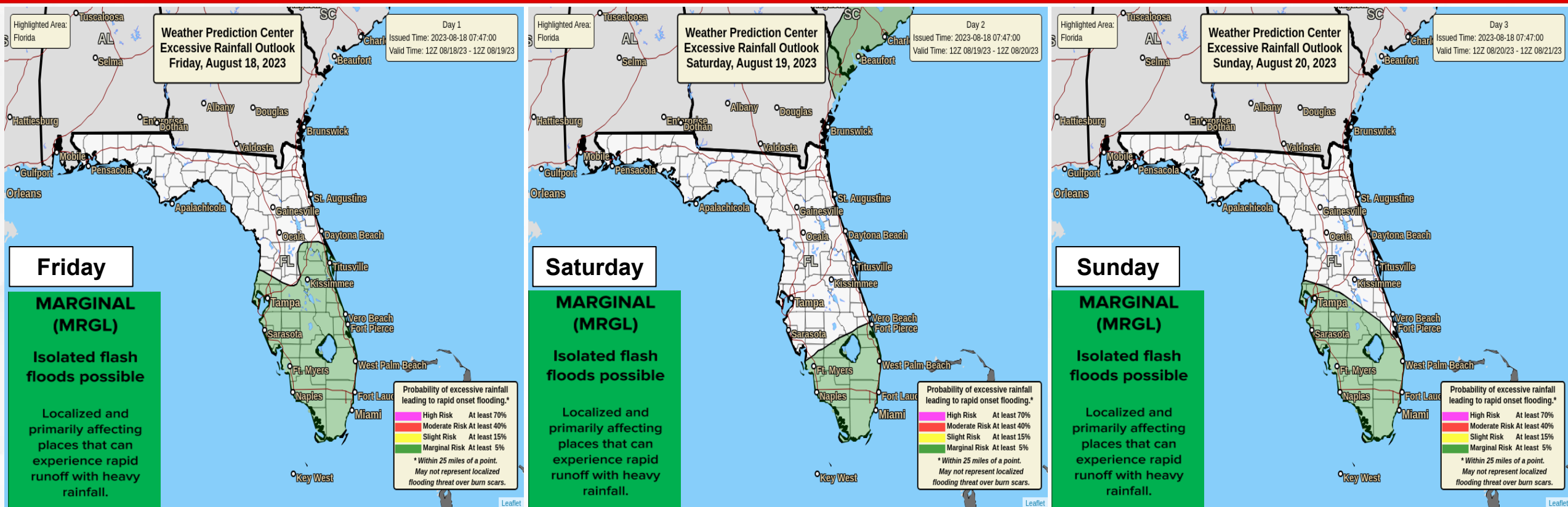
Temperatures across the Atlantic Basin are very supportive of tropical cyclone development. Waters across the tropical Atlantic are running 0.5-1.5 degrees above normal, with temperatures in the Gulf of Mexico have reached 1-2 degrees above normal for this time of year.





Flash Flood Outlook – Next 3 Days

From the Weather Prediction Center

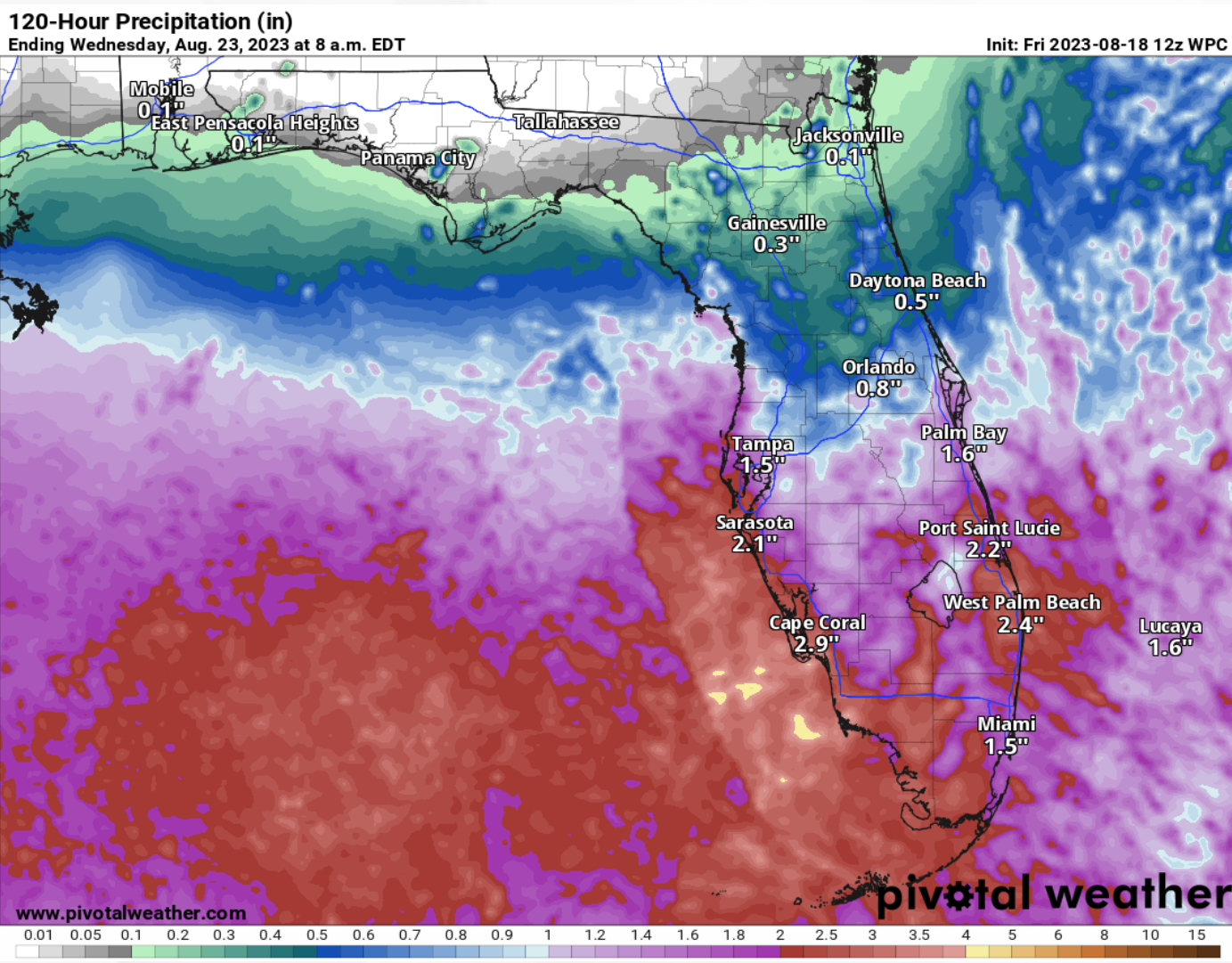


There is a **Marginal Risk for Flash Flooding (level 1 of 4)** across the portions of the Florida Peninsula through the weekend as abundant tropical moisture will allow for any shower or thunderstorm to produce very heavy rainfall rates. The threat for **localized flooding** will be elevated over low-lying and poor drainage areas, and especially through the Peninsula's urbanized corridors. Given the recent wet pattern, a few Peninsula locations are already sensitive to heavy rainfall and additional rainfall totals will be occurring over already saturated ground leading to a quicker onset of ponding water and flooding.



5-Day Forecast Rainfall

From the National Weather Service & Weather Prediction Center



Increased moisture will continue over the Florida Peninsula through the weekend as a tropical wave advances through the Florida Keys and southern Florida Peninsula. The very moist airmass will allow for any shower and thunderstorm activity to produce heavy rainfall rates (2-3"/hour) across areas along and south of the I-4 corridor. **Widespread 1-3" of rainfall can be expected, with locally higher amounts of 4-7" possible.** Locally higher rainfall totals will be more likely over locations that experience multiple rounds of heavy shower and thunderstorm activity.



Summary

Invest 98L:

- Showers and thunderstorms continue to show some signs of organization in association with a broad area of low pressure, located a few hundred miles west of the Cabo Verde Islands.
- Environmental conditions appear generally favorable for additional development of this system, and a tropical depression is likely to form over the weekend while it moves toward the west-northwest or northwest at about 10 mph across the eastern tropical Atlantic. By early next week, upper-level winds over the system are forecast to increase, and further development is not expected.
- The National Hurricane Center is outlooking a **medium (60%) chance of development** over the next 48 hours, and a **high (70%) chance of development** over the next 7 days. *Invest 98L poses no threat to Florida.*

Invest 99L:

- An elongated area of low pressure, located roughly halfway between the Cabo Verde Islands and the Lesser Antilles, is producing some disorganized showers and thunderstorms.
- Environmental conditions are only marginally conducive for further development of this system, but a tropical depression could still form during the next couple of days while it moves west-northwestward at 10 to 15 mph across the central tropical Atlantic.
- Thereafter, upper-level winds are forecast to become unfavorable for any further development. The National Hurricane Center is outlooking a **medium (40%) chance of development** over the next 48 hours and 7 days.
- *Invest 99L poses no threat to Florida.*

Lesser Antilles Tropical Wave:

- Another area of low pressure could form in a day or so from an elongated upper-level disturbance located several hundred miles to the east-southeast of the Lesser Antilles.
- Some slow development of this system is possible over the weekend and into early next week as it moves generally west-northwestward at 10 to 15 mph across the Lesser Antilles and into the northeastern Caribbean Sea.
- There is a **low (10%) chance of development** over the next 48 hours, and a **low (30%) chance of development** over the next 7 days. *This system poses no direct threat to Florida over the next 5-7 days, at least.*

Southwest Atlantic Tropical Wave:

- An area of disturbed weather, located just north of Hispaniola, is forecast to move into the Gulf of Mexico by early next week, where a broad area of low pressure could form.
- Some slow development of this system is possible thereafter as it moves westward and approaches the western Gulf of Mexico coastline by the middle of next week.
- There is a **low (near 0%) chance of development** over the next 48 hours, and a **low (30%) chance of development** over the next 7 days.
- *This system will bring an increased risk for heavy rainfall and flooding to the Florida Peninsula (mainly along and south of the I-4 corridor) through the weekend.*

Florida Outlook:

- Abundant tropical moisture will continue to move over the Florida Peninsula this weekend, yielding scattered to numerous showers and thunderstorms each day.
- Any shower or thunderstorm that develops will be capable of producing very heavy rainfall rates, and a Marginal Risk for Flash Flooding (level 1 of 4) is maintained over the Peninsula for the next 3 days.
- Widespread rainfall totals of 1-3" can be expected, with locally higher amounts of 4-7" possible – especially for locations that experience multiple rounds of tropical rain and thunderstorm activity.
- Localized flooding will be possible over low-lying and poor drainage areas, as well as along the Peninsula's urban corridors.
- As the tropical wave advances over the Florida Peninsula Saturday and Sunday, breezy onshore winds will develop (15-25 mph) with locally higher wind gusts possible within thunderstorms.
- The next name on this list is Emily.

The next briefing package will be issued on Saturday. 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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