



# TROPICAL UPDATE



11:00 AM EDT

Thursday, September 10, 2020

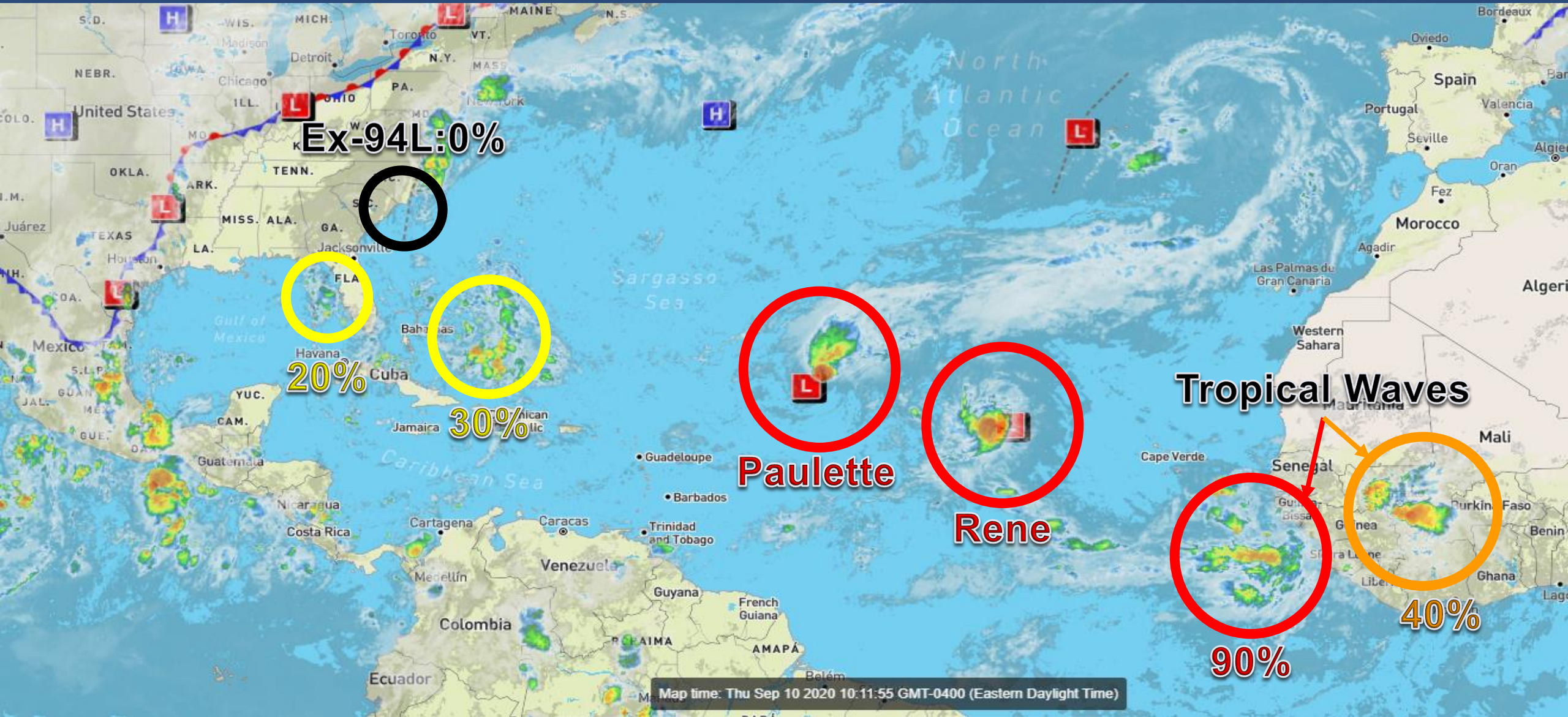
Tropical Storm Paulette, Tropical Storm Rene, Gulf of Mexico Low (20%), Bahamas Low (30%), Eastern Atlantic Wave (90%), Wave Over Africa (40%)

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).



# Atlantic Basin Satellite Image

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







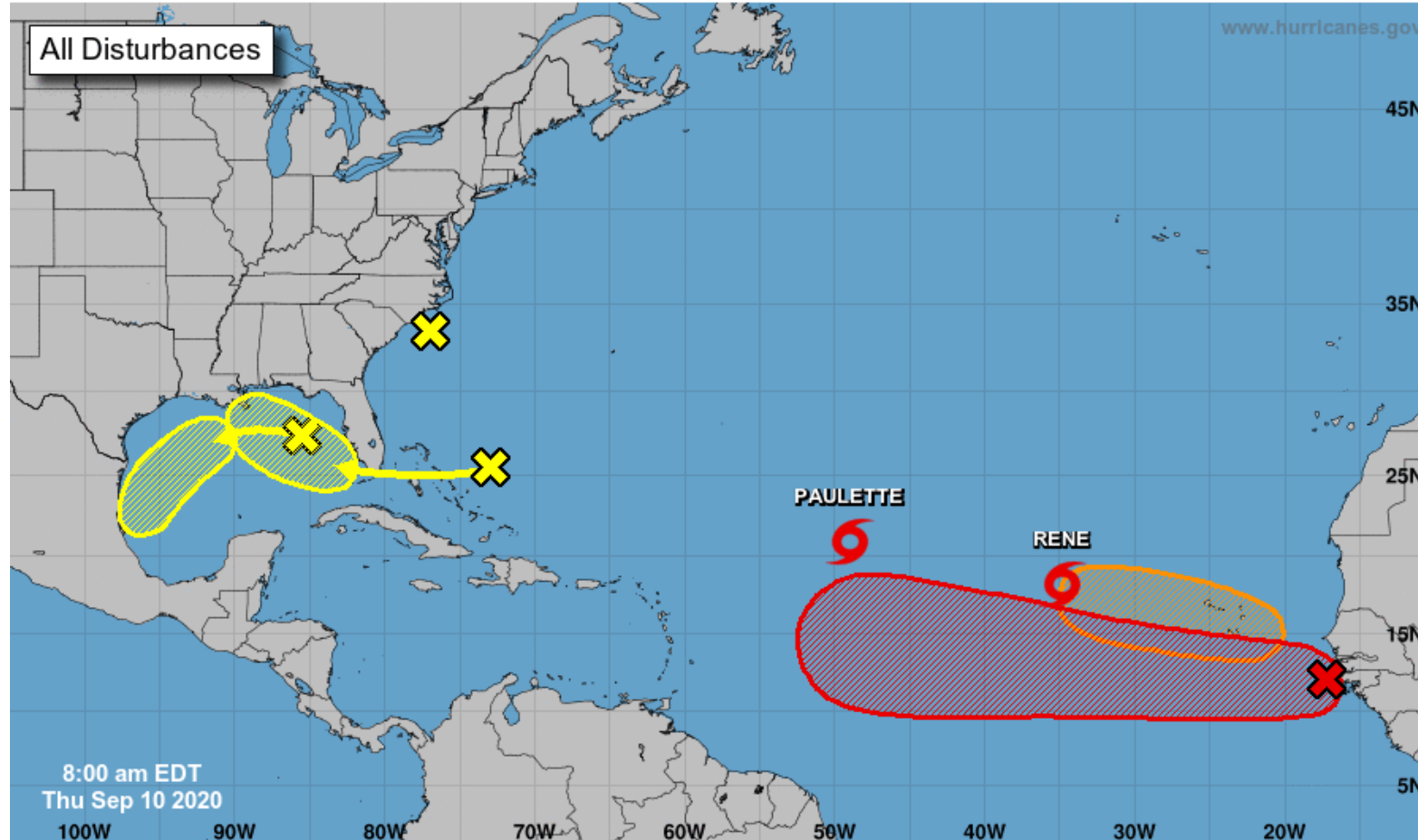
# Tropical Weather Outlook

Possible Areas of Development During the Next 5 Days ([LINK](#))



## Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



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



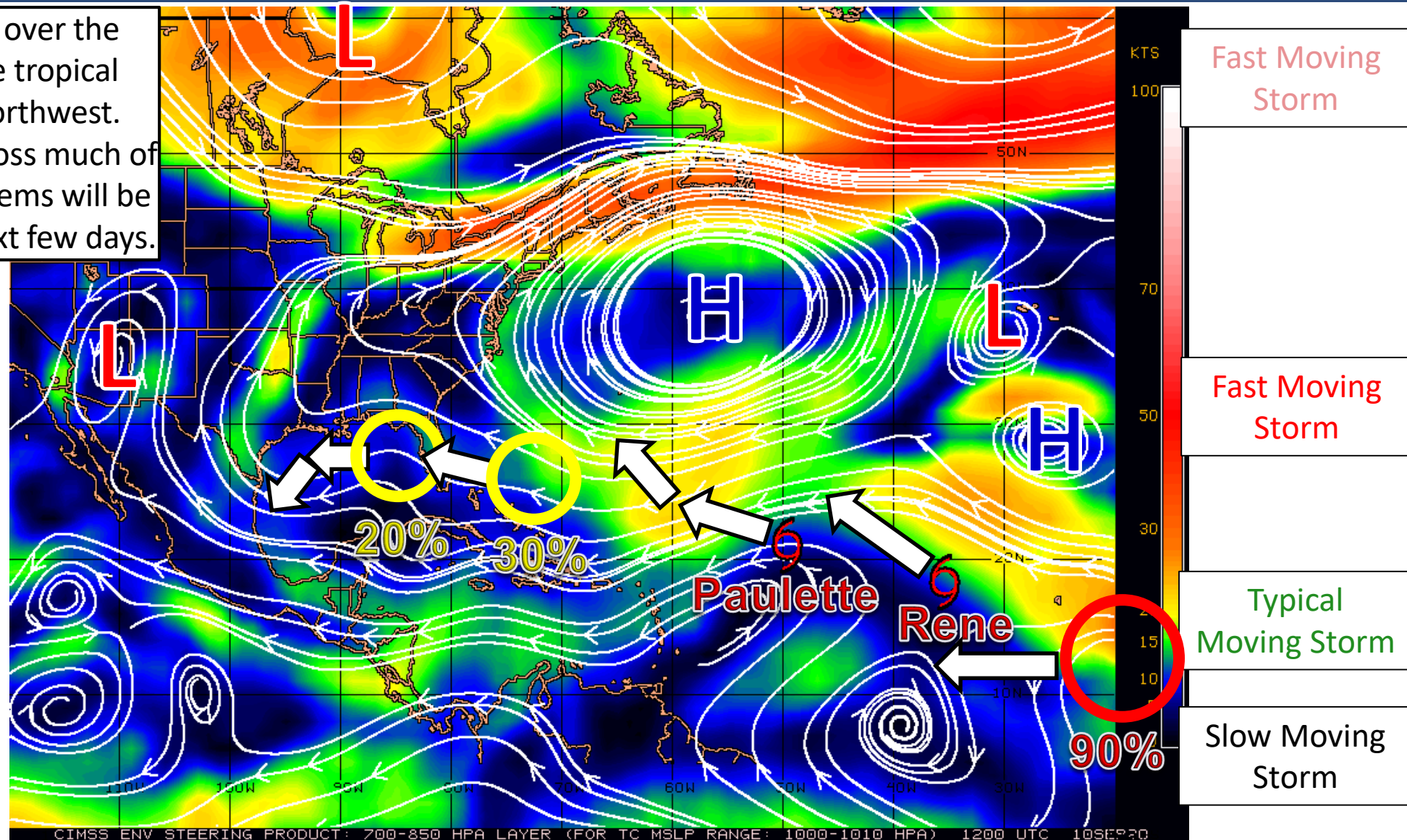
# Steering Currents

## 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.

Large high pressure systems over the central Atlantic will drive the tropical systems generally west to northwest.

Steering currents are weak across much of the Atlantic so all of these systems will be moving quite slowly for the next few days.





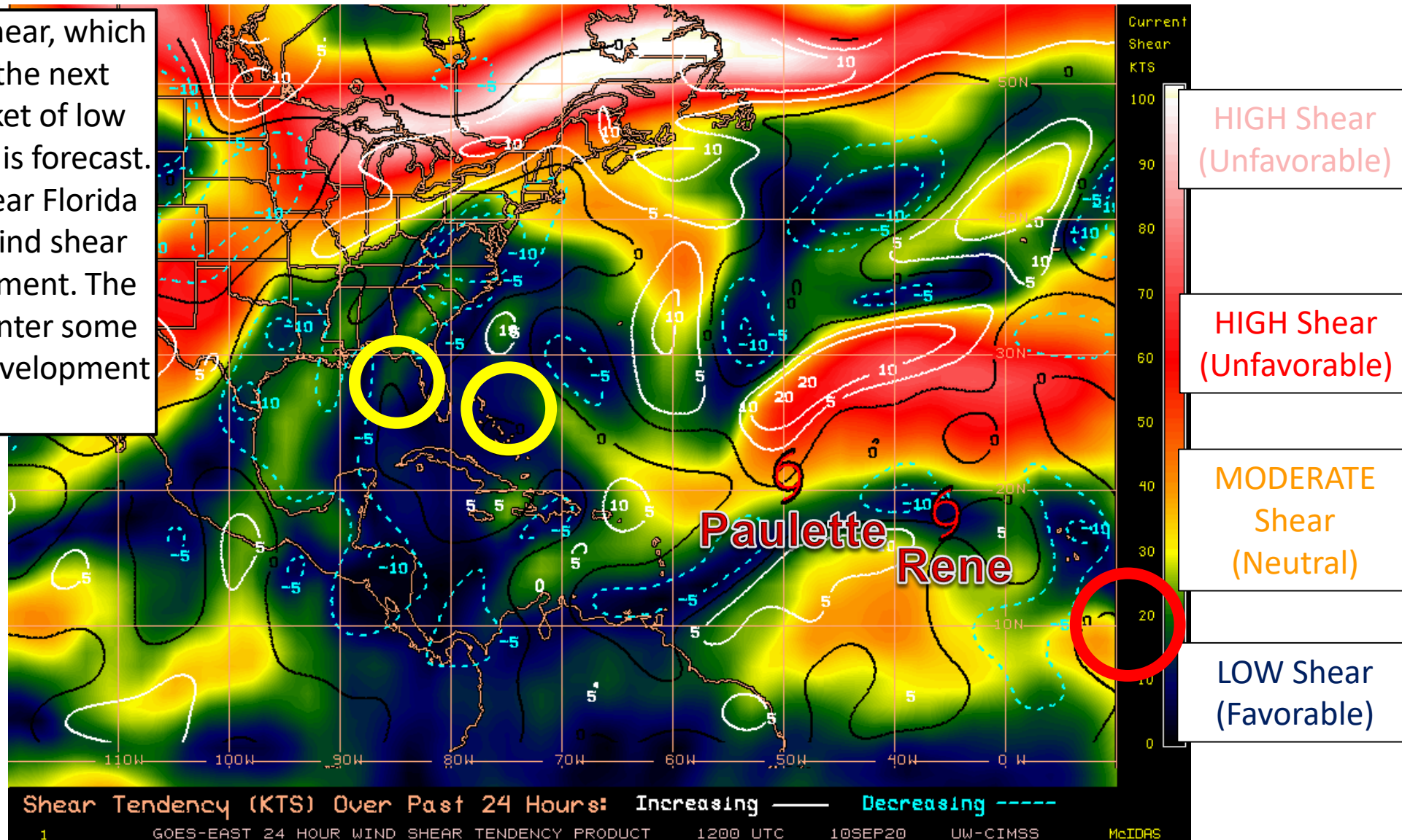


# Wind Shear

Is the environment favorable for the systems?

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).

Paulette is in an area of high shear, which will weaken the storm over the next couple days. Rene is in a pocket of low shear, and some strengthening is forecast. The two low pressure areas near Florida and the Bahamas have low wind shear and have a chance of development. The wave just off Africa will encounter some wind shear, which may slow development down.



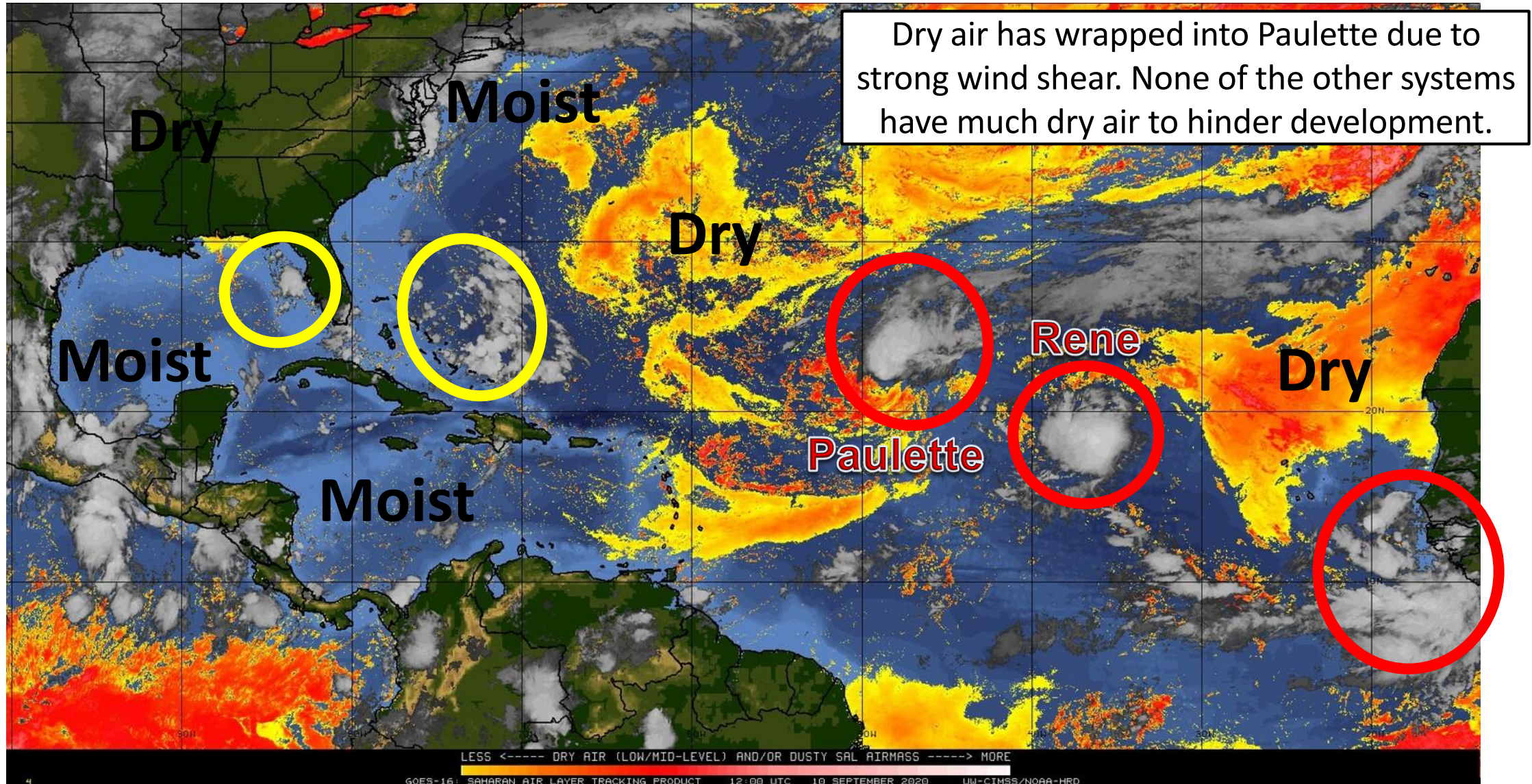




# Dry Air & Saharan Dust

Is the environment favorable for the systems?

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







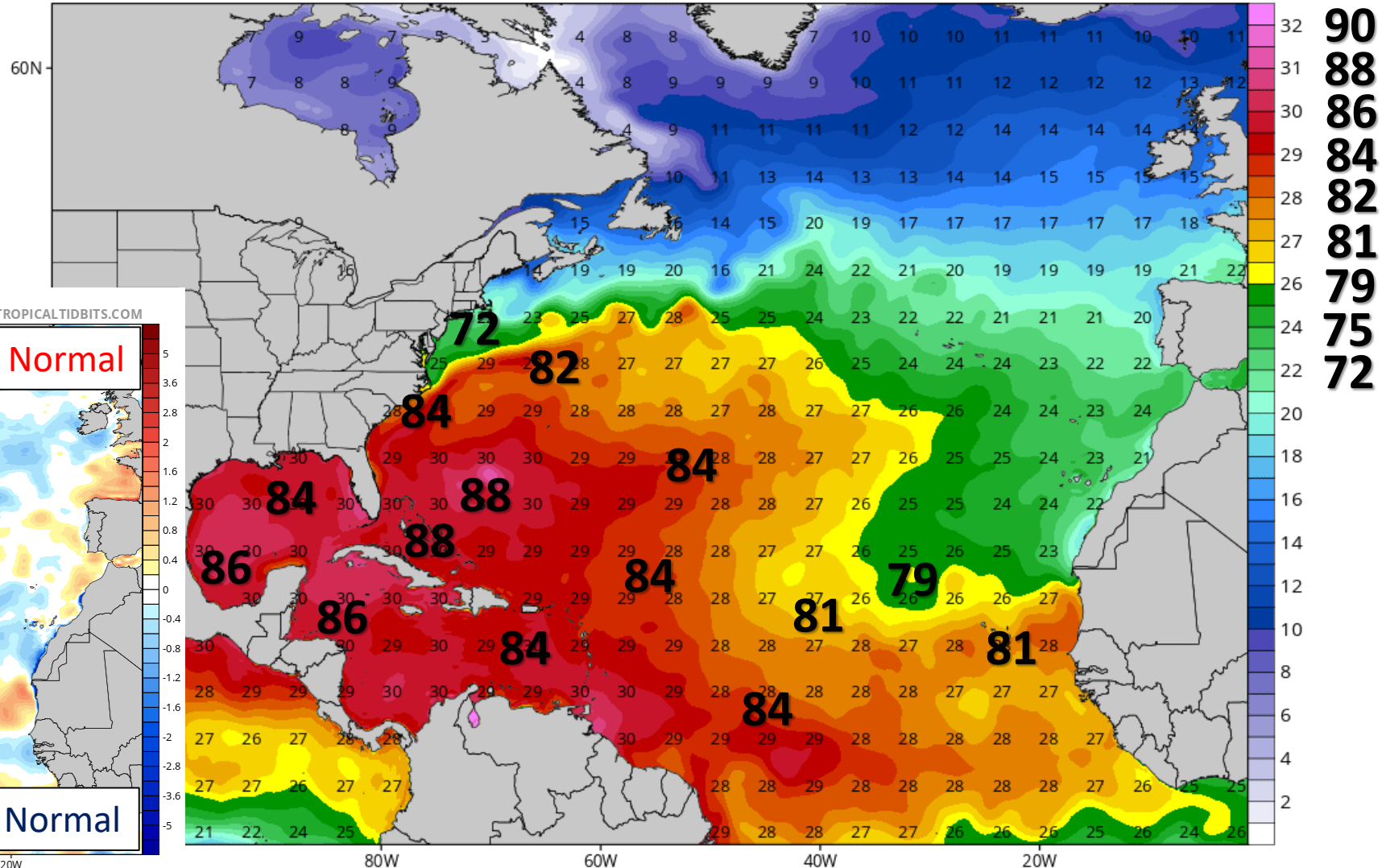
# Sea Surface Temperatures & Anomalies

Is the ocean favorable for the system?

Water temperatures are supportive for tropical development across the entire Atlantic basin and above normal for this time of year.

CDAS Sea Surface Temperature (°C)

Analysis Time: 00z Sep 10 2020



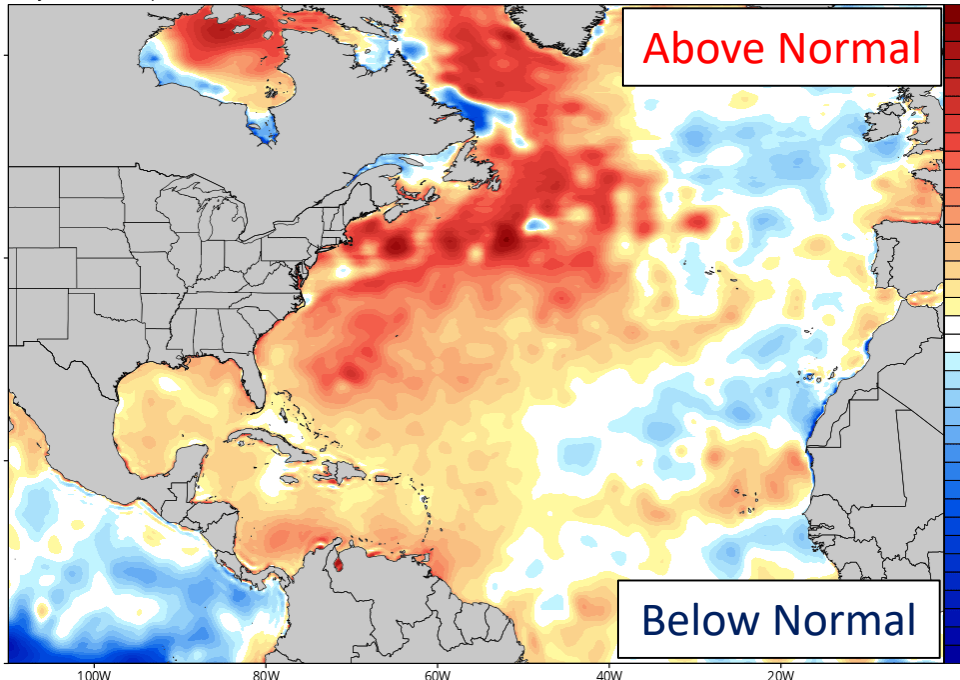
CDAS Sea Surface Temperature Anomaly (°C) (based on CFSR 1981-2010 Climatology)

Analysis Time: 00z Sep 10 2020

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Above Normal

Below Normal





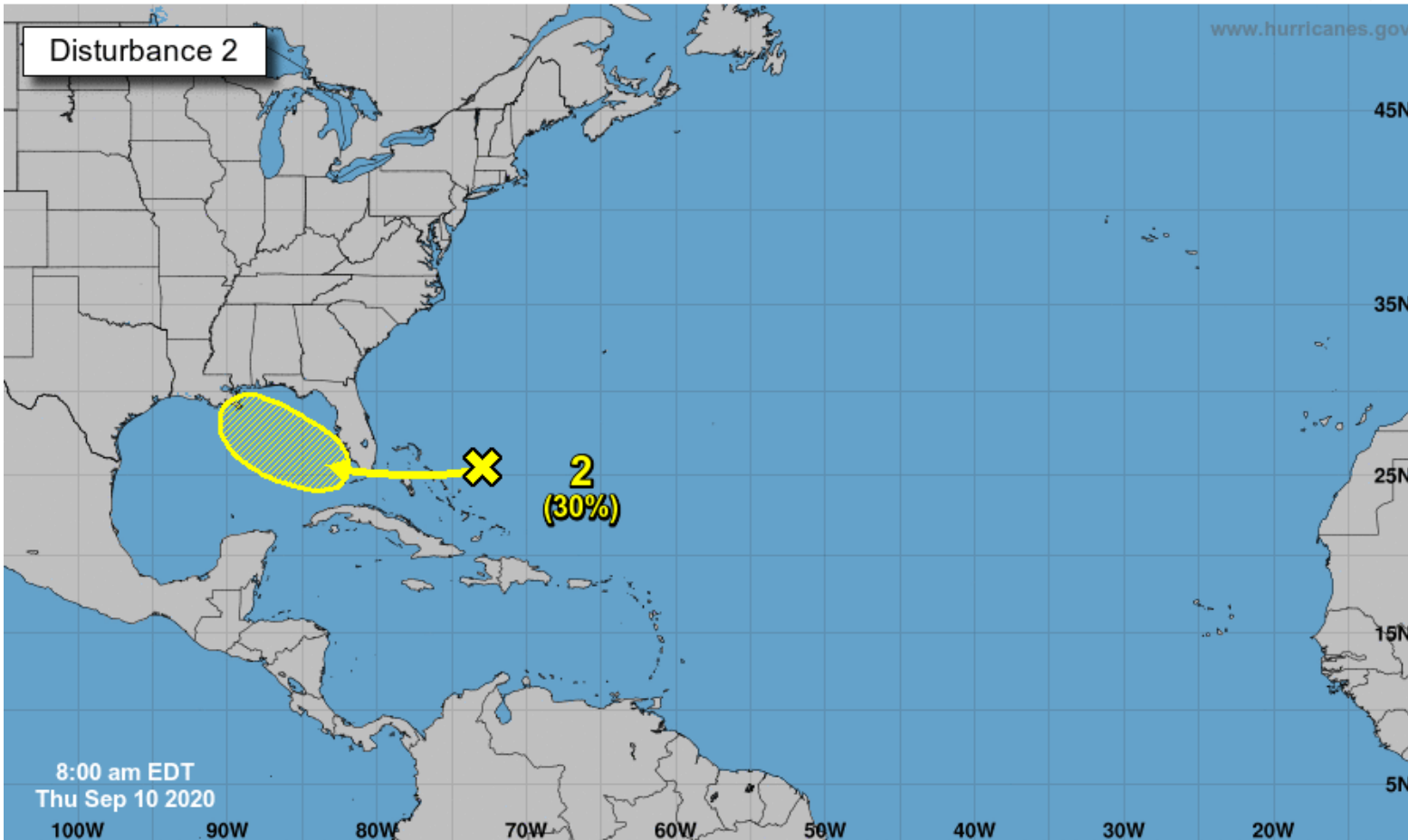
# Tropical Weather Outlook

Possible Area of Development During the Next 5 Days ([LINK](#))



## Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



A large area of disorganized showers and thunderstorms centered a couple hundred miles northeast of the Central Bahamas is associated with a surface trough of low pressure.

This system is forecast to move westward, crossing the Bahamas and Florida on Friday and moving into the eastern Gulf of Mexico over the weekend.

Upper-level winds are expected to become conducive for some development of this system while it moves slowly west-northwestward over the eastern Gulf of Mexico early next week.

**This system could bring heavy rainfall to much of the state over the next several days. Any other impacts, if any, are uncertain.**

**\*Formation chance through 48 hrs...low...near 0%**

**\*Formation chance through 5 days...low...30%**

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





# Tropical Weather Outlook

Possible Area of Development During the Next 5 Days ([LINK](#))



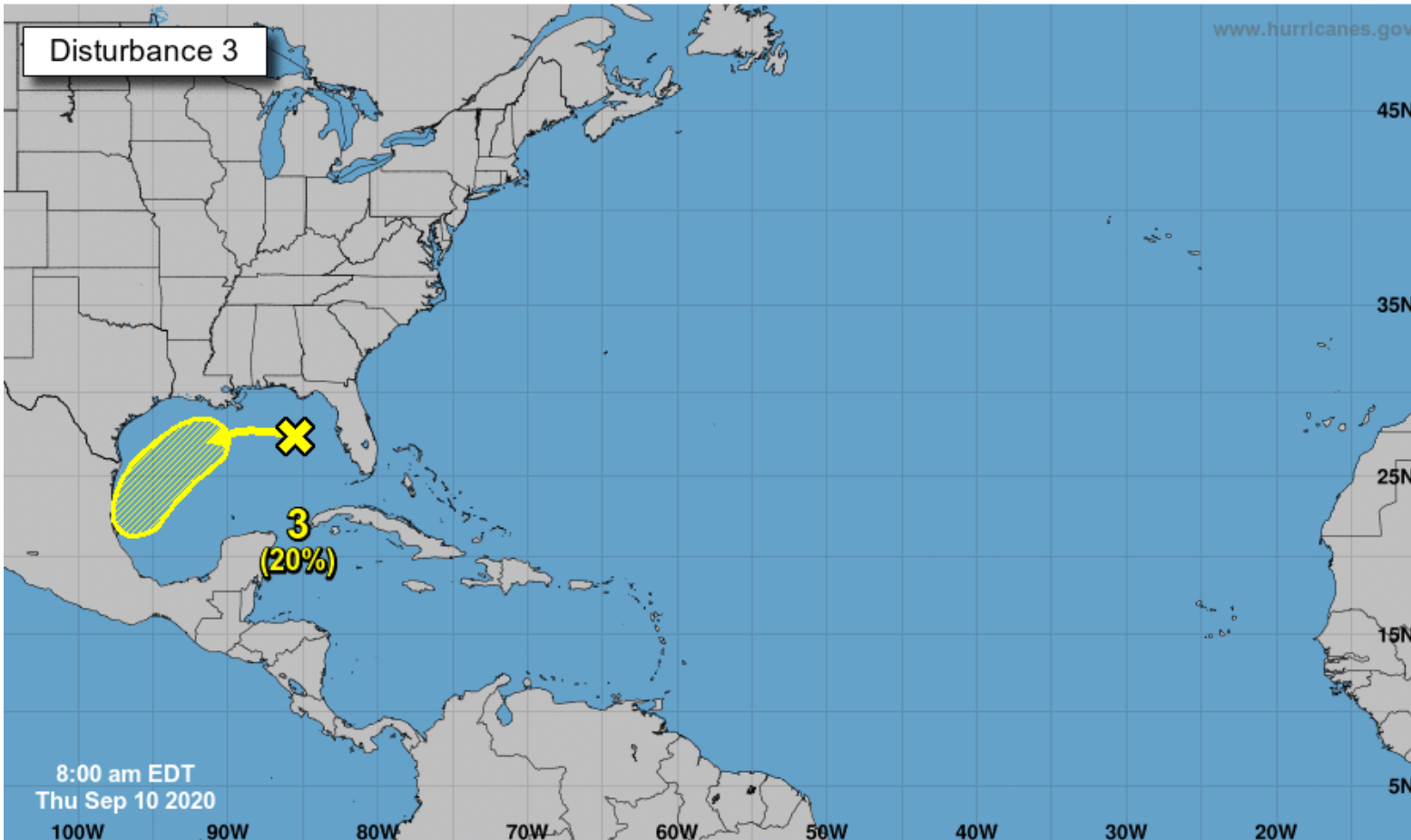
## Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



www.hurricanes.gov

Disturbance 3



Another trough of low pressure has developed over the northeastern Gulf of Mexico and is producing a few disorganized showers and thunderstorms.

Some slow development of this system is possible while this system moves westward and then southwestward over the northern and western Gulf of Mexico through early next week.

**This system could bring higher rain chances to the Panhandle, especially near the coast, over the next couple days before it moves away.**

**\*Formation chance through 48 hrs...low...10%**

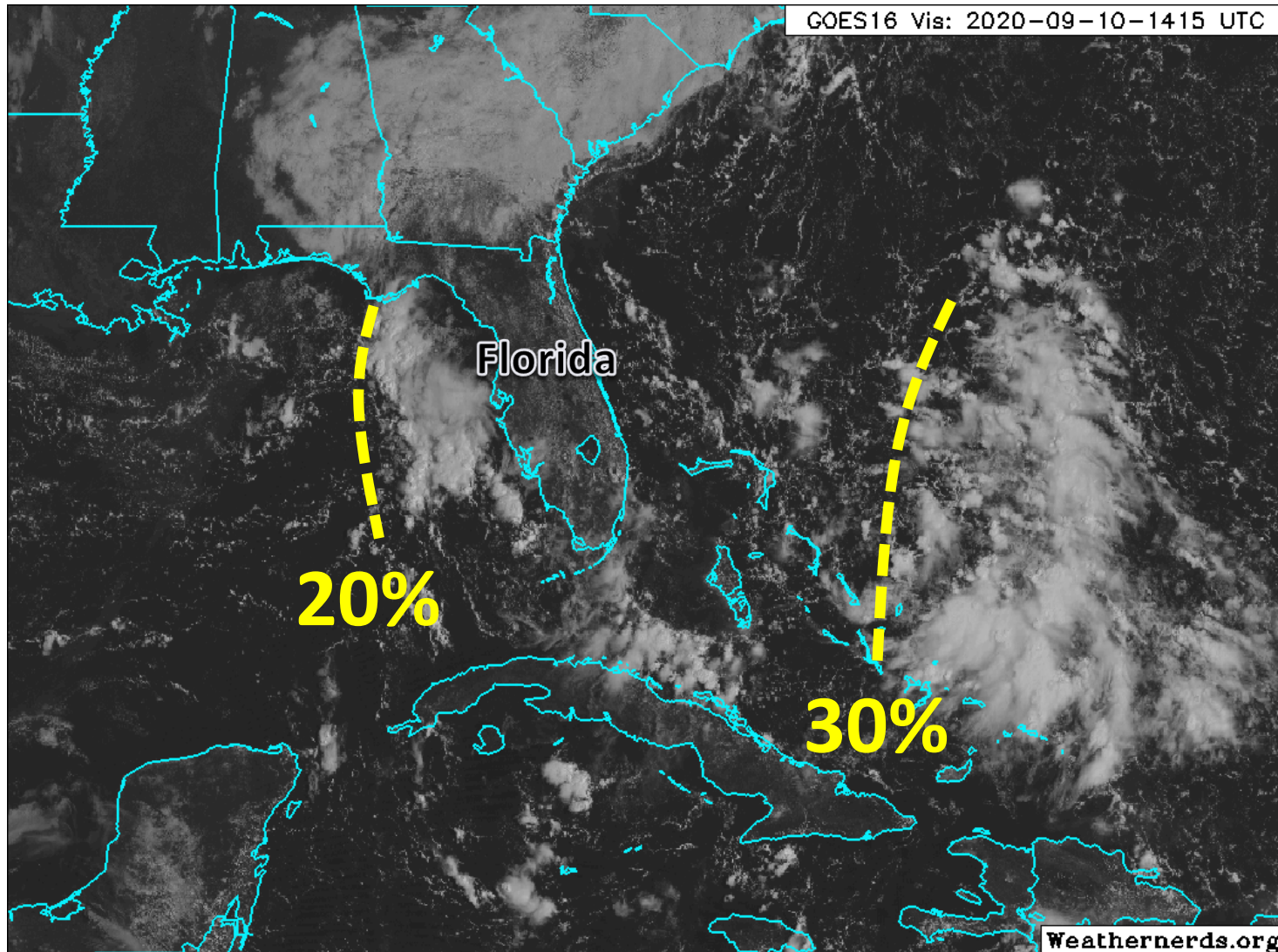
**\*Formation chance through 5 days...low...20%**

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

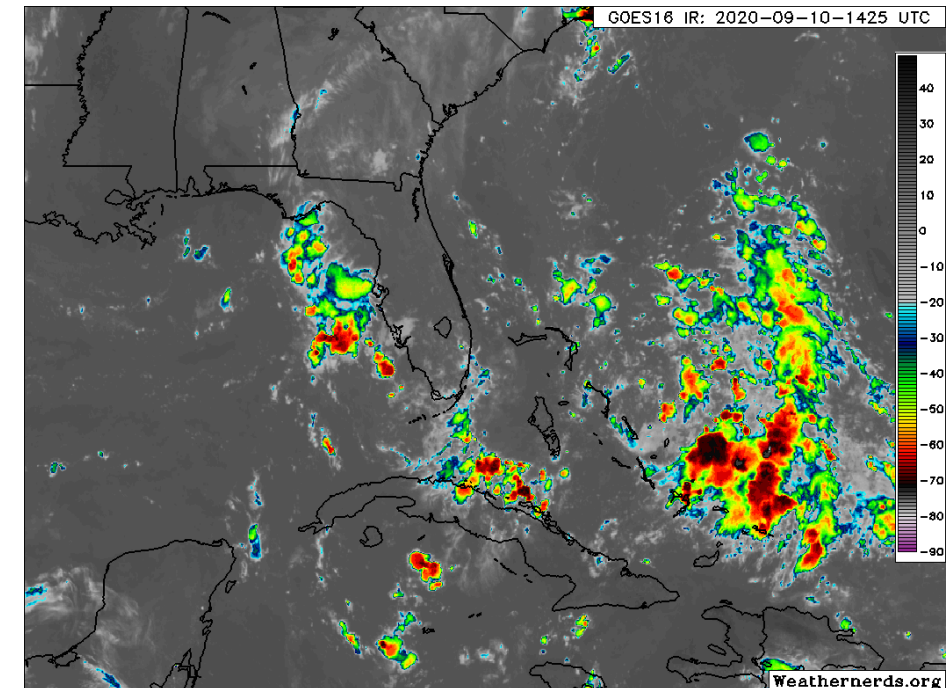


# Satellite Imagery

## Western Atlantic – Gulf of Mexico & Southwestern Atlantic



The two troughs of low pressure will generally move westward over the next couple days. Both are rather disorganized right now, but conditions appear favorable for some gradual organization and tropical development.

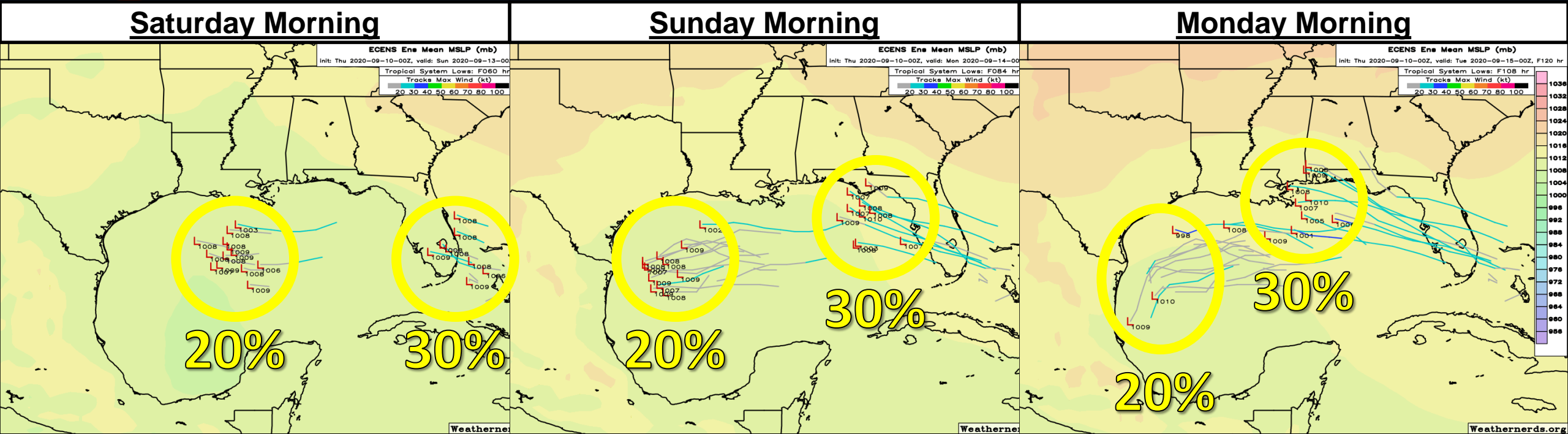






# Model Forecasts

## Ensemble Models – Gulf of Mexico Systems



Models generally take the disturbance currently in the Gulf of Mexico westward over the weekend, then turning it southwestward over the western Gulf by late Sunday and Monday toward the Mexican coast or the Bay of Campeche.

The disturbance near the Bahamas will cross Florida on Saturday, then move west-northwestward toward the north central Gulf Coast early next week.

Models are not currently predicting either system to become strong, but they may produce heavy rain along the Gulf Coast and in Florida. However, there is uncertainty in the models as neither system has a well-defined center.



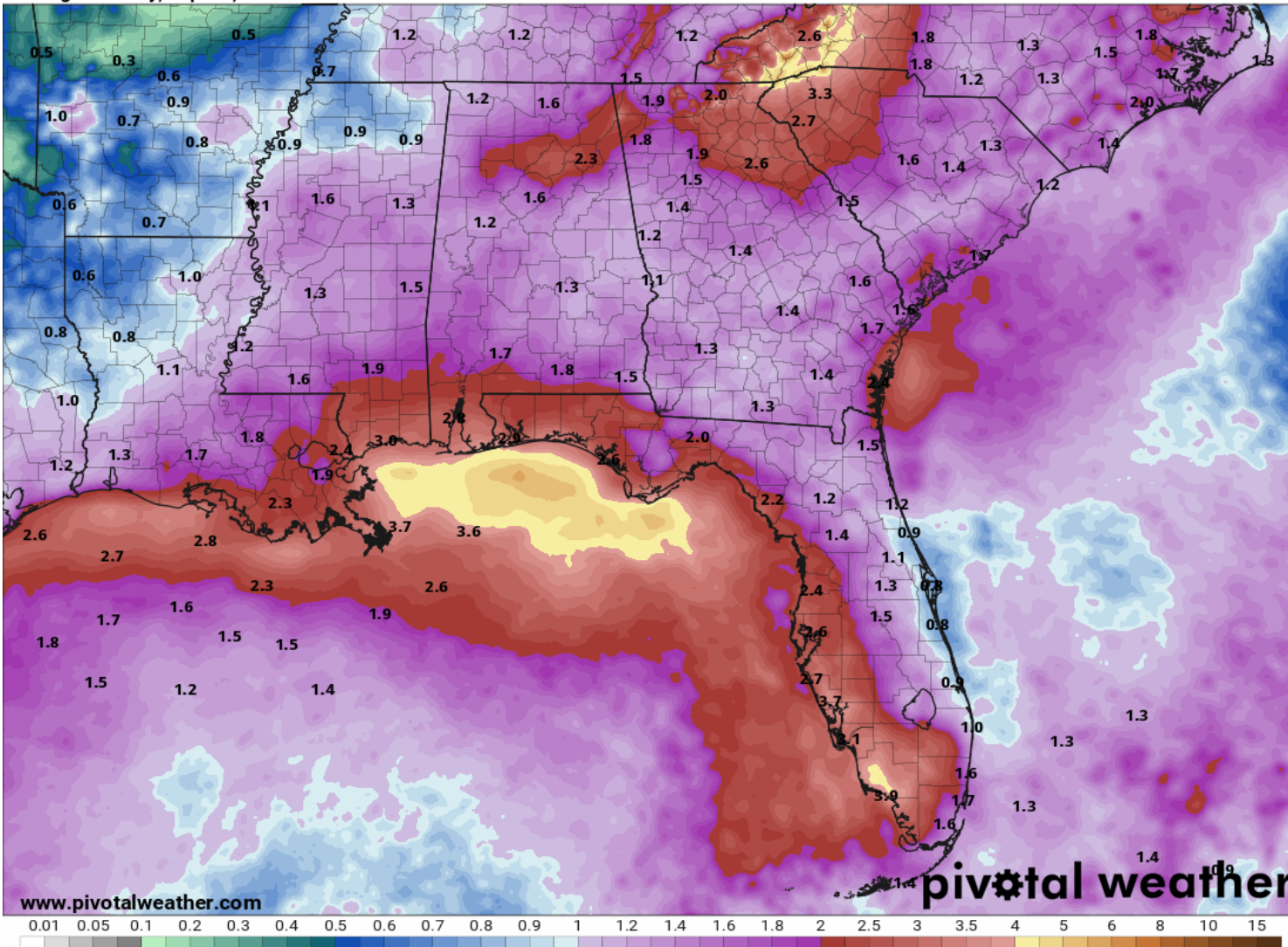
# Rainfall Totals Next 7 Days

Ending 8 AM ET Thursday 9/17 – Gulf of Mexico Systems

7-Day Precipitation (in)

Ending Thursday, Sep. 17, 2020 at 8 a.m. EDT

Init: Thu 2020-09-10 12z WPC



Rainfall totals of 2-4" are expected over the next 7 days along the West Coast and in the Panhandle with these two disturbances.

Localized totals of 6"+ are possible due to the abundant tropical moisture present.

Exact rainfall totals will change depending on the tracks of the two systems.

Many locations across the Peninsula have seen heavy rainfall over the last several days, and a localized flash flood threat will be possible each day.





# Flash Flood Outlook - Saturday

From the Weather Prediction Center ([LINK](#))



Because of the recent heavy rainfall, an isolated flash flood threat is possible along the West Coast each day, but especially on Saturday.

## Understanding WPC Excessive Rainfall Risk Categories

No Area/Label	MARGINAL (MRGL)	SLIGHT (SLGT)	MODERATE (MDT)	HIGH (HIGH)
Flash floods are generally not expected.	Isolated flash floods possible	Scattered flash floods possible	Numerous flash floods likely	Widespread flash floods expected
<a href="http://www.wpc.ncep.noaa.gov">@NWSWPC</a>	Localized and primarily affecting places that can experience rapid runoff with heavy rainfall.	Mainly localized. Most vulnerable are urban areas, roads, small streams and washes. Isolated significant flash floods possible.	Numerous flash flooding events with significant events possible. Many streams may flood, potentially affecting larger rivers.	Severe, widespread flash flooding. Areas that don't normally experience flash flooding, could. Lives and property in greater danger.
Flash flooding near me?	Flash Flooding	Flash Flooding	Flash Flooding	Flash Flooding
NO Flash Flooding				
 WEATHER PREDICTION CENTER				

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%**



# Current & Forecast River Flooding

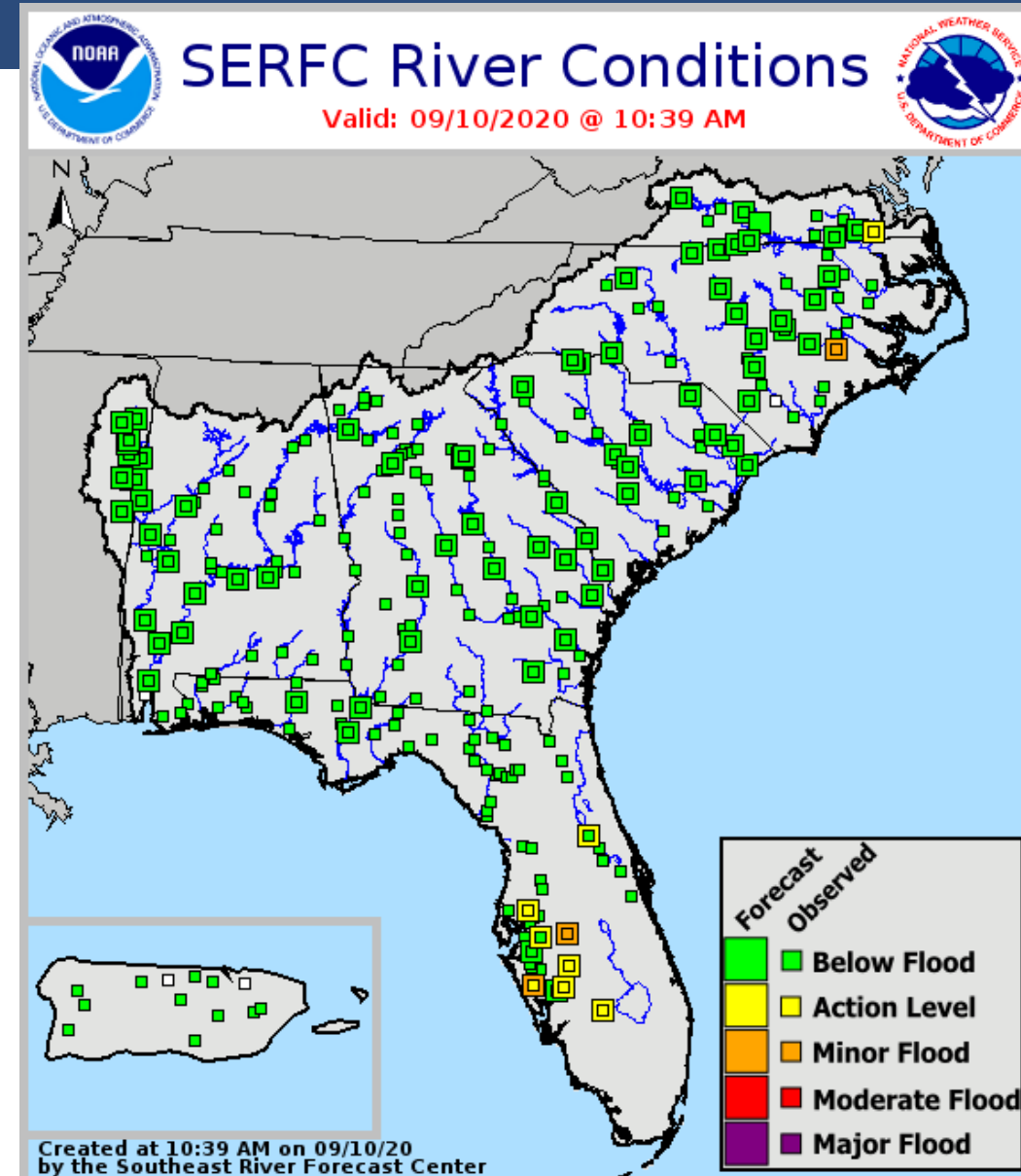
## Southeast River Forecast Center

### Rivers Currently in or Forecast to Reach Flood Stage:

- [Peace River at Bartow](#) - STEADY
- [Myakka River at Myakka River State Park](#) - RISING
- [Ocklawaha River at Rodman Dam](#) - RISING

With more heavy rainfall expected across the state, additional river rises may occur over the next several days.

More details on river levels available at the [Southeast River Forecast Center website](#).

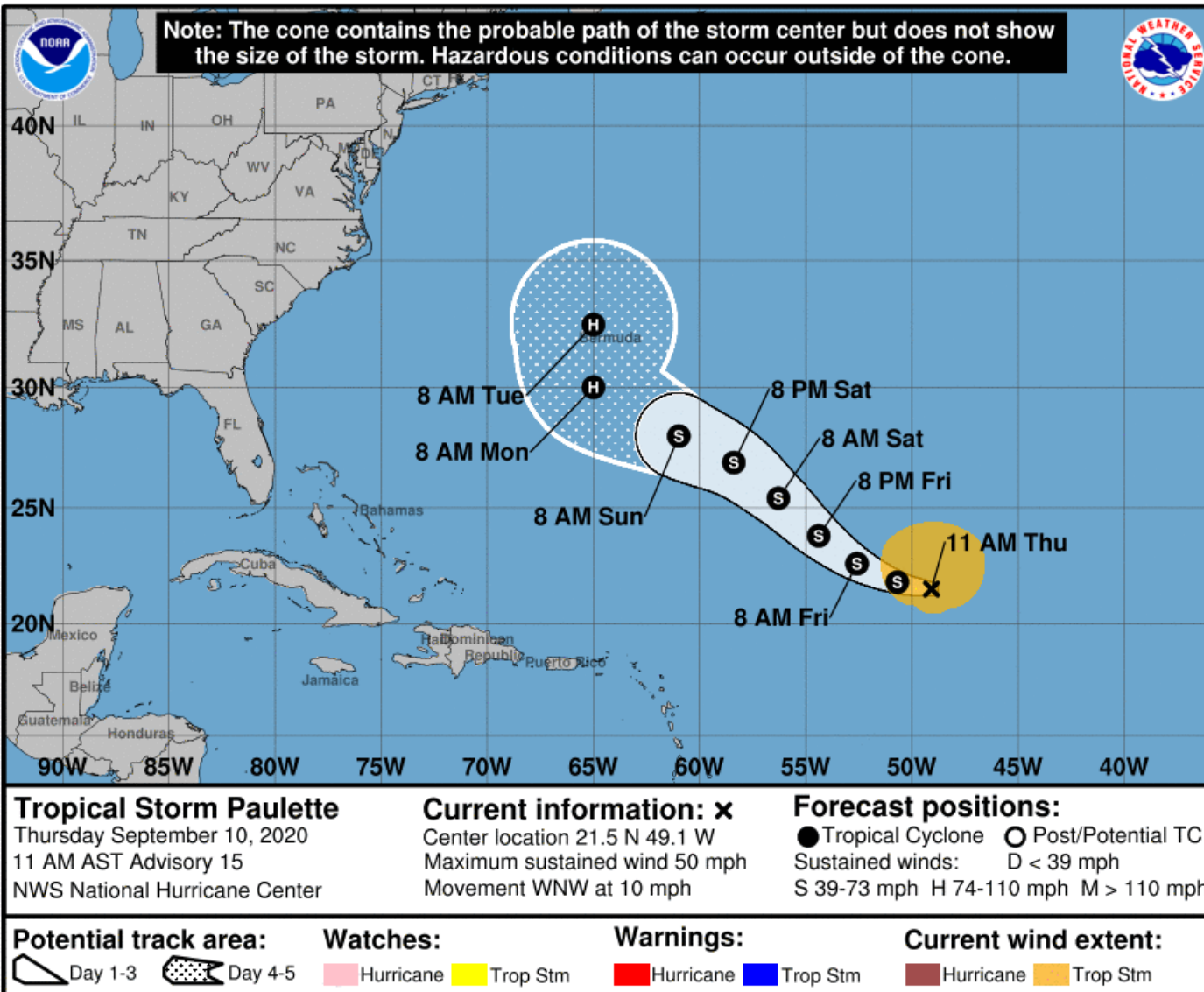






# Official Forecast Track

From the National Hurricane Center – Tropical Storm Paulette



- The center of Paulette is located about 1,220 miles southeast of Bermuda, or about 2,000 miles east-southeast of Miami.
- Maximum sustained winds are 50 mph, and Paulette is moving to the west-northwest at 10 mph.
- Some additional weakening is possible over the next day or so, but restrengthening is forecast by Saturday.
- Paulette could become a hurricane as it passes near or over Bermuda early next week.

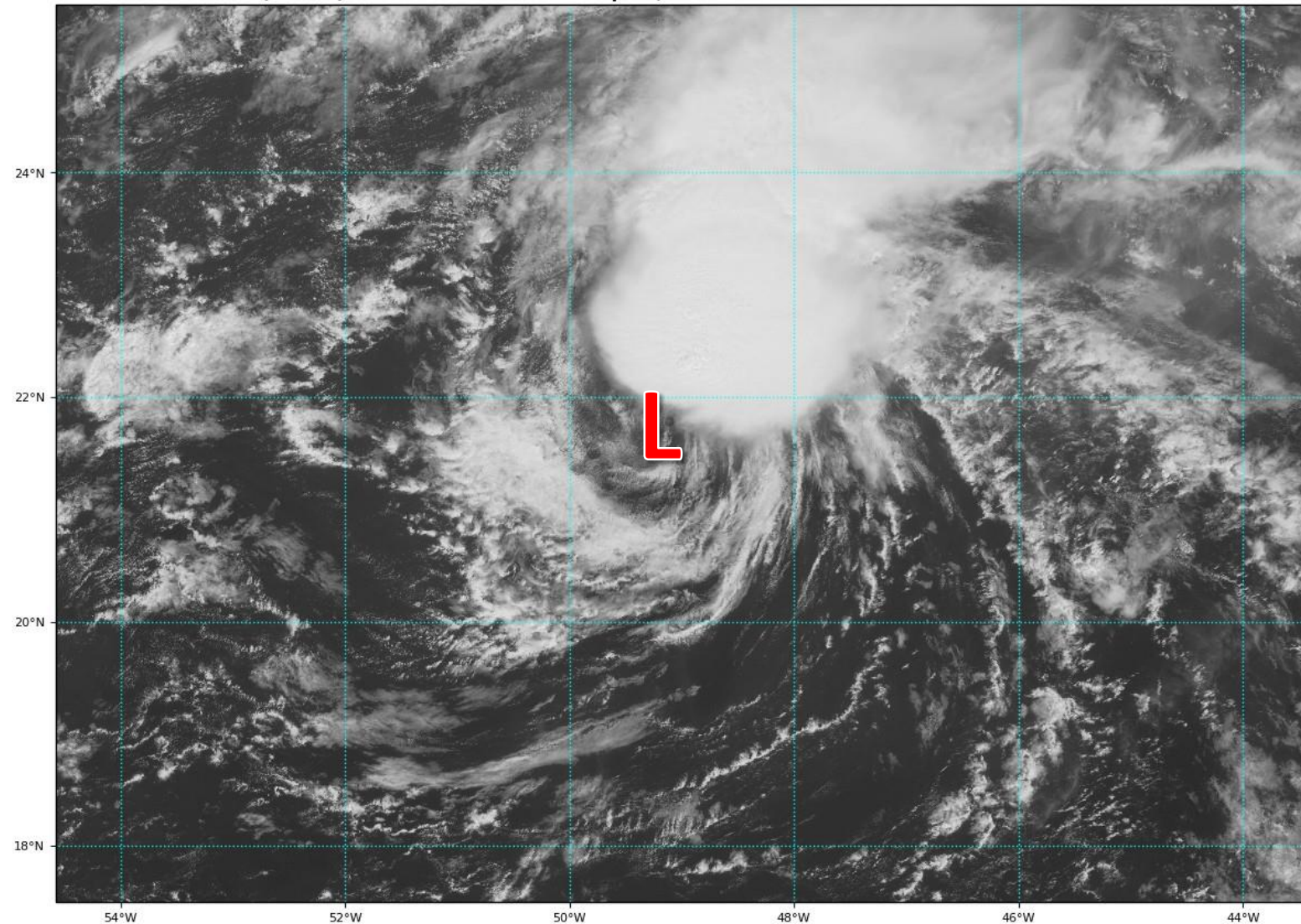


# Satellite Imagery

## Tropical Storm Paulette

GOES-16 Channel 2 (visible) Reflectance at 14:45Z Sep 10, 2020

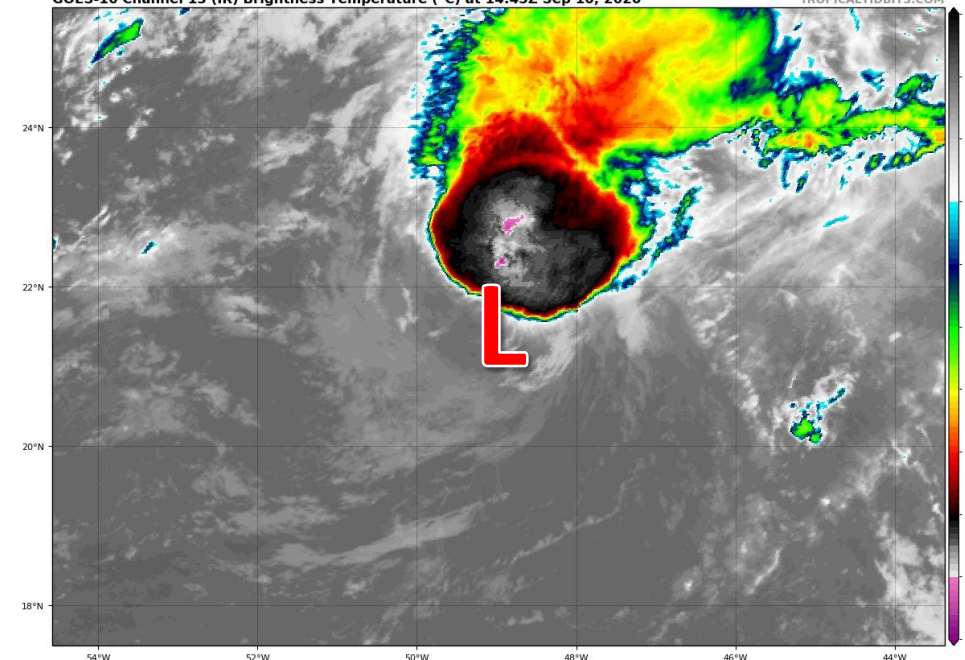
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Dry air and wind shear have taken their toll on Paulette. Much of the thunderstorms are on the northeastern side of the center. This has resulted in some weakening since yesterday, and Paulette will continue battling wind shear and dry air for a couple more days.

GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 14:45Z Sep 10, 2020

TROPICALTIDBITS.COM

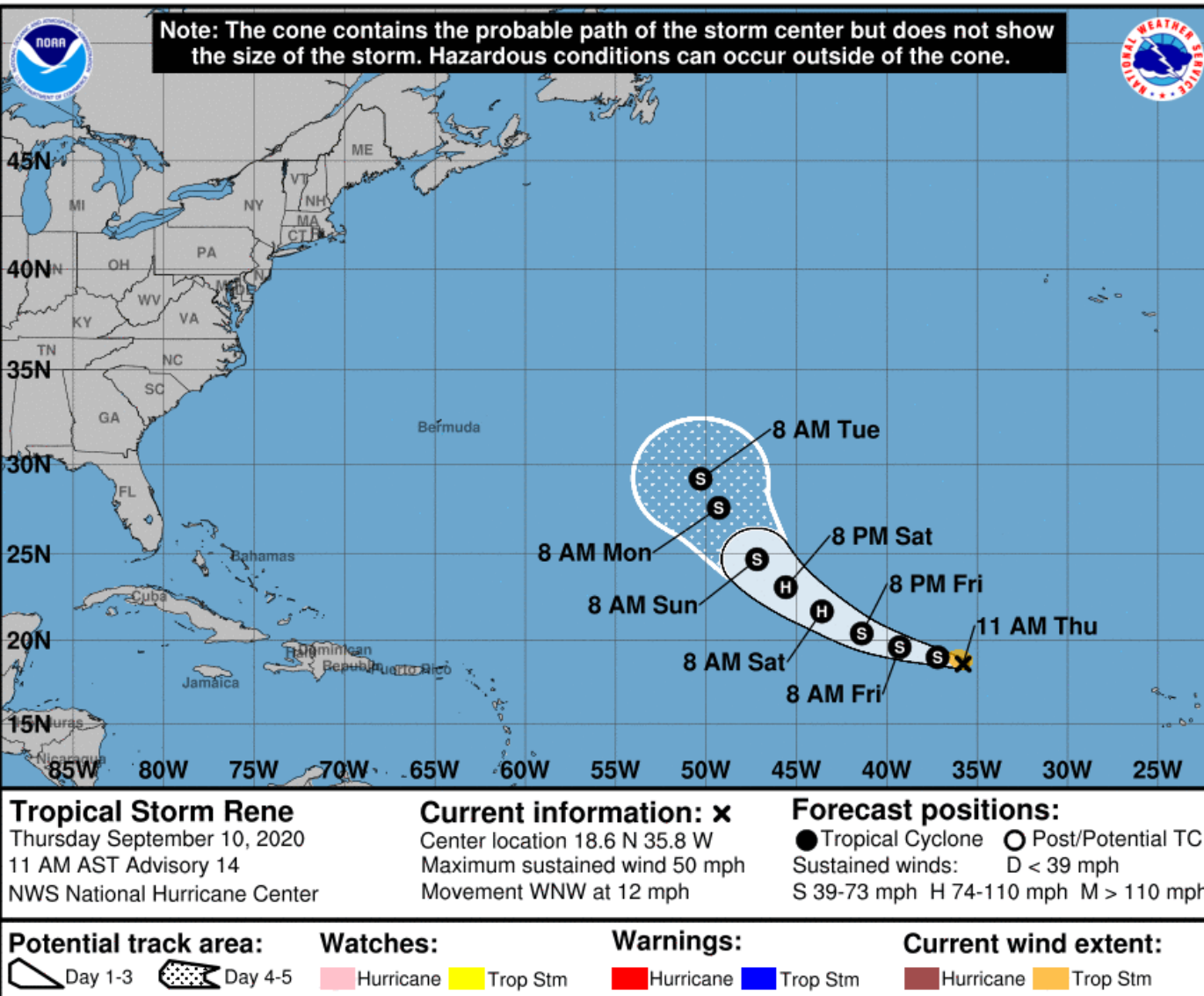






# Official Forecast Track

## From the National Hurricane Center – Tropical Storm Rene



- The center of Tropical Storm Rene is located 800 miles west-northwest of the Cabo Verde Islands, or about 2,900 miles east-southeast of Miami, FL.
- Maximum sustained winds have increased to 50 mph, and the system is moving to the west-northwest at 12 mph.
- Additional strengthening is forecast, and Rene is forecast to become a hurricane by Saturday.
- **This system is not a threat to Florida, or the U.S.**

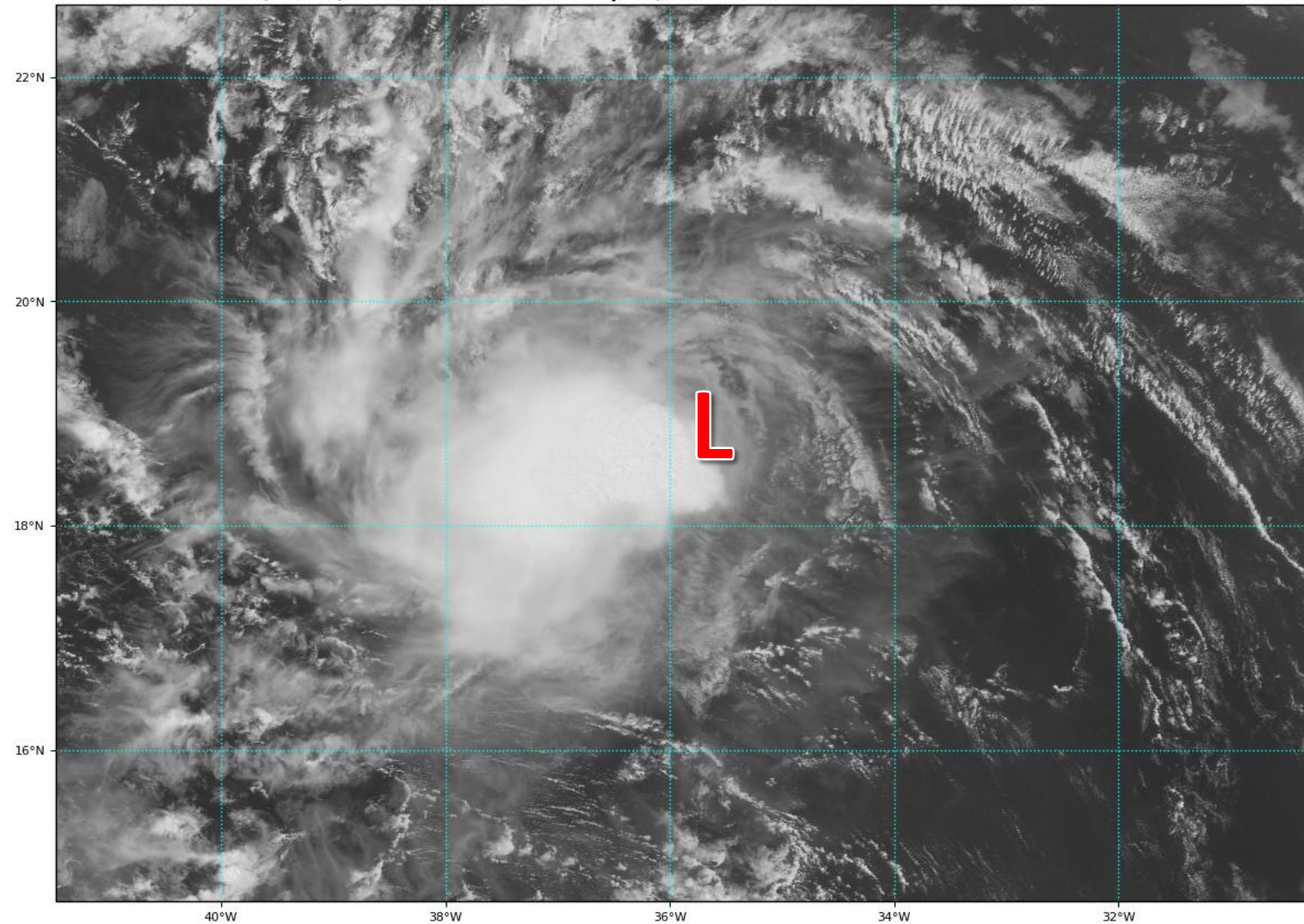


# Satellite Imagery

## Tropical Storm Rene

GOES-16 Channel 2 (visible) Reflectance at 14:55Z Sep 10, 2020

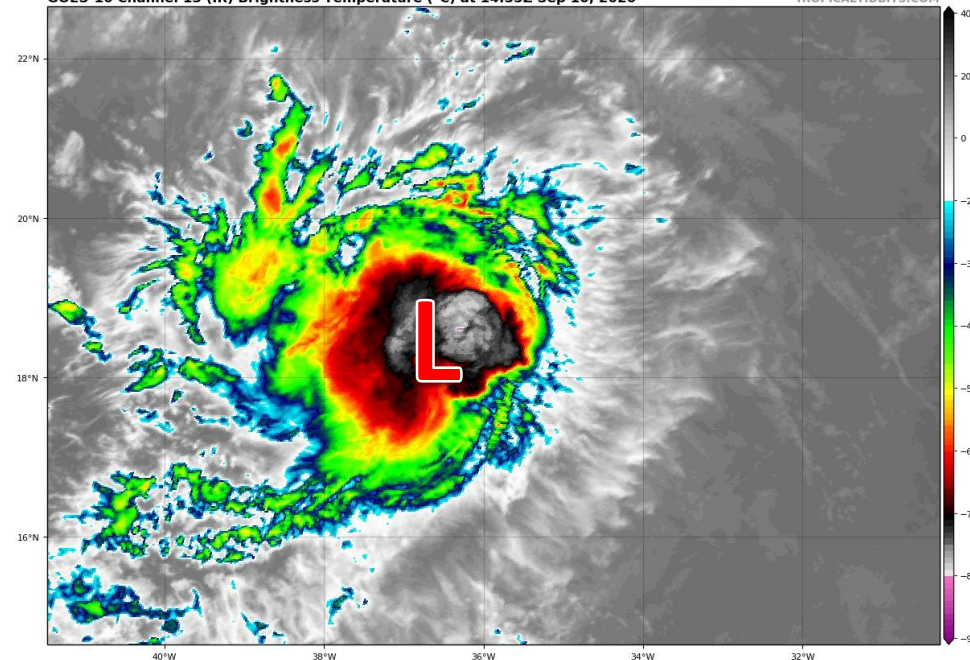
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Rene has become more organized over the last 24 hours, and Rene is forecast to continue intensifying as conditions remain favorable for further development.

GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 14:55Z Sep 10, 2020

TROPICALTIDBITS.COM







# Tropical Weather Outlook

Possible Area of Development During the Next 5 Days ([LINK](#))



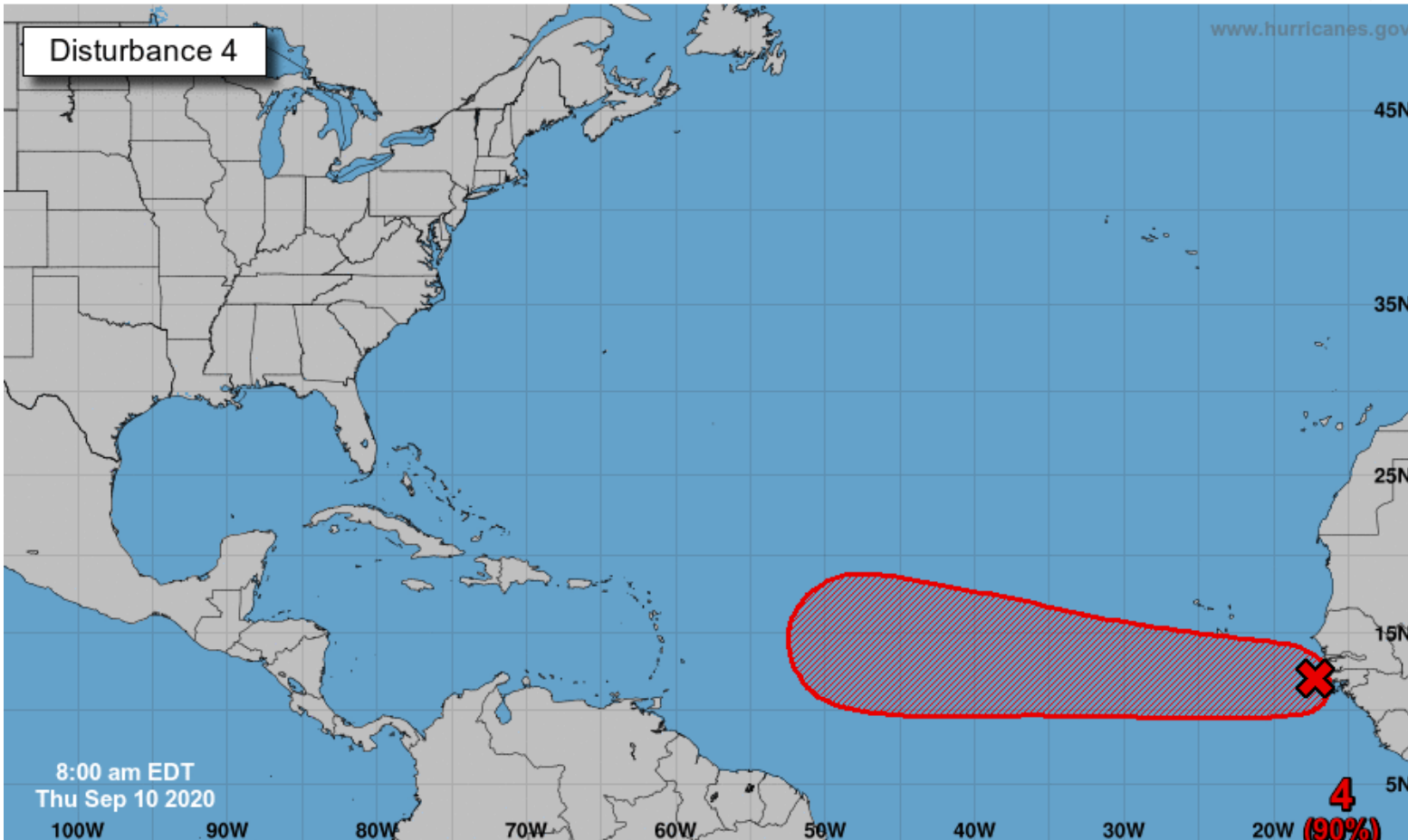
## Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



www.hurricanes.gov

Disturbance 4



A tropical wave is now moving off the west coast of Africa, producing a large area of showers and thunderstorms.

Gradual development of this system is forecast, and a tropical depression is expected to form by this weekend or early next week while the system moves generally westward across the eastern and central tropical Atlantic.

**This system will need to be monitored heading into next week.**

**\*Formation chance through 48 hrs...medium...60%**

**\*Formation chance through 5 days...high...90%**

Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants



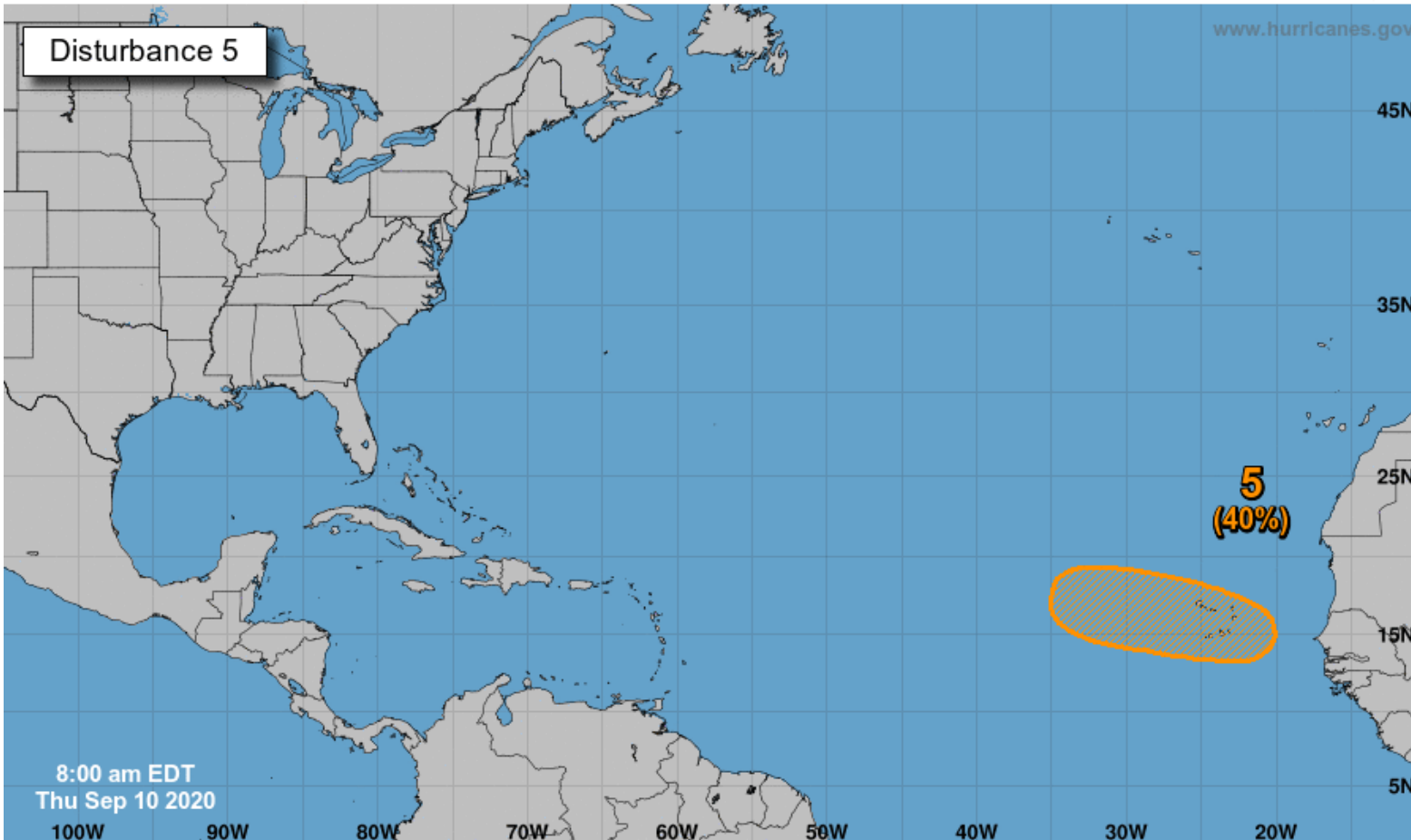
# Tropical Weather Outlook

Possible Area of Development During the Next 5 Days ([LINK](#))



## Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



Another tropical wave is forecast to emerge off the west coast of Africa this weekend.

Environmental conditions are expected to be conducive for development, and a tropical depression could form over the far eastern tropical Atlantic Ocean early next week while the system moves slowly westward.

**This system does not need to be monitored at this time. It is at least a week away from reach the longitude of the Lesser Antilles, if it makes it that far west.**

**\*Formation chance through 48 hrs...low...near 0%**

**\*Formation chance through 5 days...medium...40%**

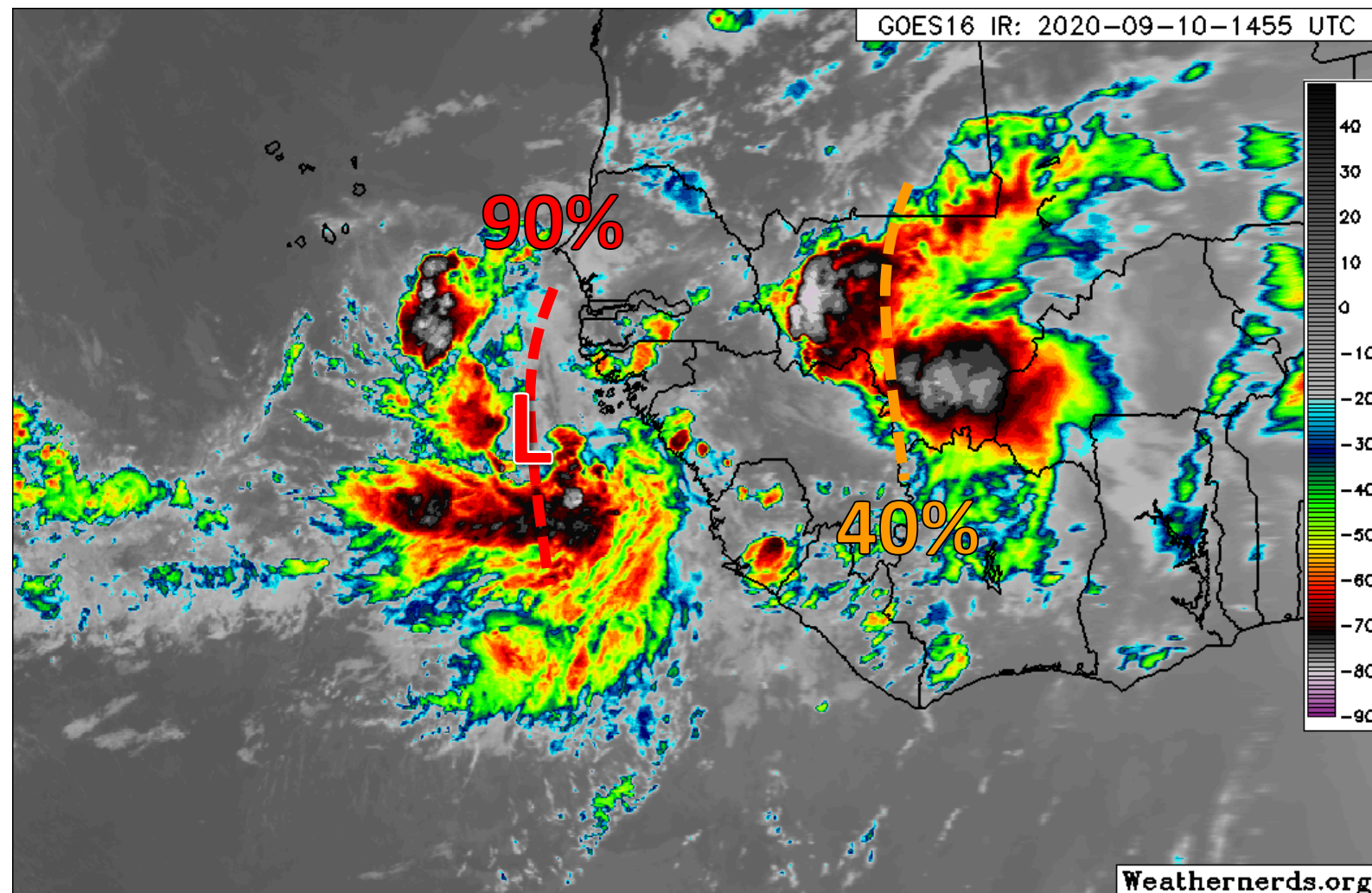
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%  
Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane  
 Post-Tropical Cyclone or Remnants





# Satellite Imagery

## Eastern Atlantic & Western Africa



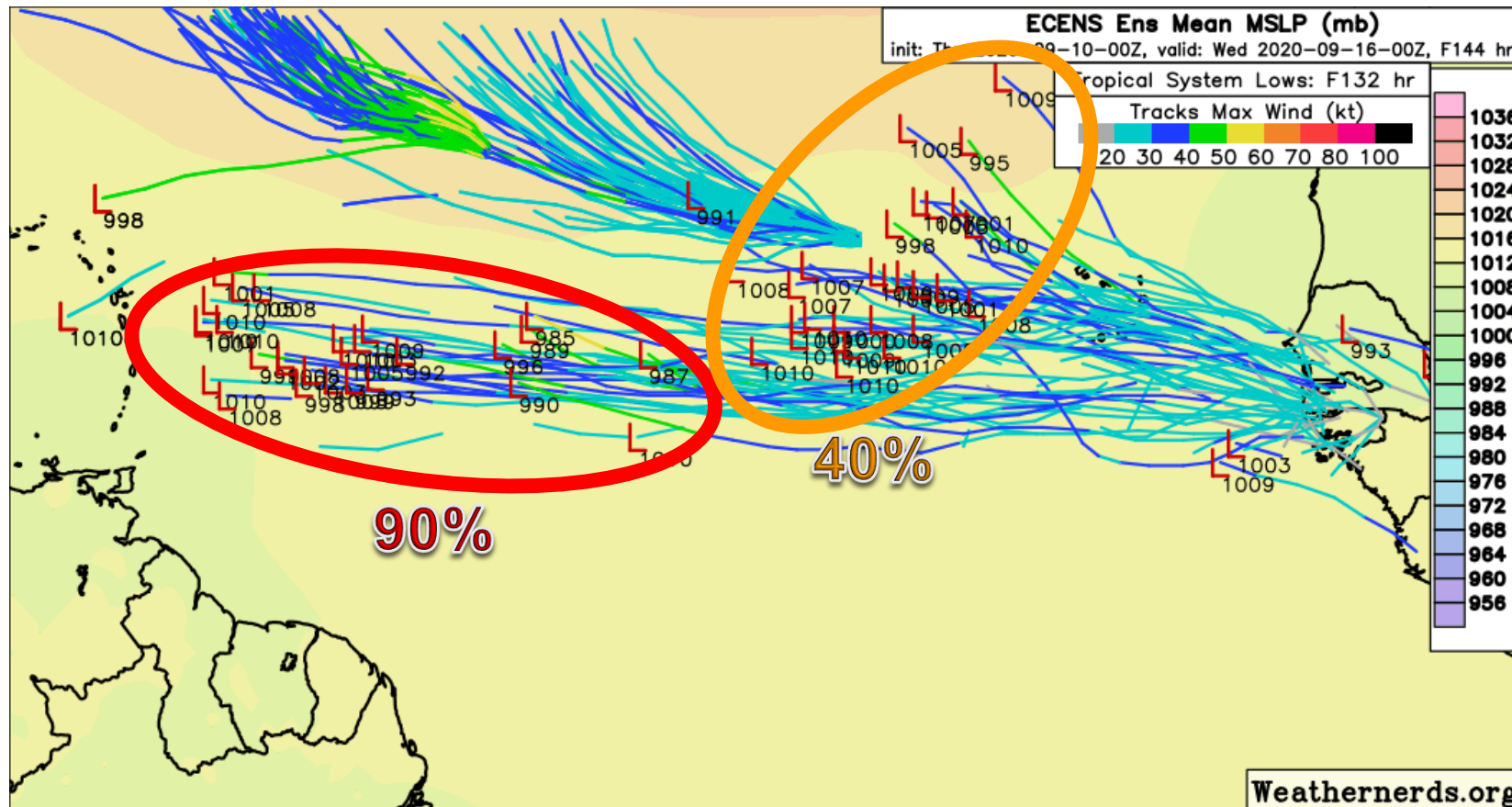
The two tropical waves near or over Africa have a good potential for development over the next several days as they move westward or west-northwestward over the Atlantic.

The westernmost wave (90%) will need to be monitored as we head into next week.



# Model Forecasts

Ensemble Models – Next Week – Tuesday Morning (Sept. 15)



The westernmost tropical wave (90%) will move toward the Caribbean during the next several days. It may reach the Lesser Antilles in about 5-7 days.

The easternmost tropical wave (40%) will move off Africa this weekend, but may move more west-northwestward or northwestward (similar to Paulette or Rene), but these waves will continue to be monitored. They are still several days from reaching the Caribbean.





# Overall Summary

## **Gulf of Mexico Low**

- A trough of low pressure over the northeastern Gulf of Mexico will move westward over the northern Gulf of Mexico during the next couple days before turning southwestward early next week over the western Gulf.
- This system has a 10% (low) chance of formation during the next 48 hours and a 20% (low) chance of formation during the next 5 days.
- This system could bring locally heavy rainfall to the Gulf Coast over the next few days.

## **Bahamas Low**

- A trough of low pressure east of the Bahamas will move across Florida and into the Gulf of Mexico this weekend.
- The system will continue moving west-northwestward over the eastern and northern Gulf of Mexico early next week.
- Conditions appear favorable for some development in the Gulf of Mexico.
- This system has a 0% (low) chance of formation during the next 48 hours, but a 30% (low) chance during the next 5 days.
- This system could bring locally heavy rainfall to Florida and the northern Gulf Coast during the next few days.

## **Carolinas Low (former Invest 94L)**

- An area of low pressure has dissipated near the Carolina coast, and it now has a 0% chance of formation.

## **Tropical Storm Paulette**

- The center of Paulette is about 1,220 miles southeast of Bermuda or about 2,200 miles east-southeast of Miami.
- Maximum sustained winds are near 60 mph, and Paulette is moving west-northwest at 10 mph.
- Gradual weakening is forecast during the next day or so, but restrengthening is forecast over the weekend.
- Paulette is forecast to become a hurricane early next week as it moves near or over Bermuda.



# Overall Summary

## **Tropical Storm Rene**

- The center of Rene is located about 800 miles west-northwest of the Cabo Verde Islands, or about 2,900 miles east-southeast of Miami.
- Maximum sustained winds are at 50 mph, and Rene is moving west-northwest at 12 mph.
- Rene is likely to strengthen over the next couple days, and it could become a hurricane over the weekend. Weakening is forecast after the weekend.

## **Eastern Atlantic Tropical Wave**

- A tropical wave has moved off the coast of Africa and is well-organized.
- Conditions are favorable for gradual development over the next few days, and a tropical depression is expected to form this weekend or early next week.
- This system has a 60% (medium) chance of formation over the next 48 hours, but a 90% (high) chance over the next 5 days.

## **Wave over Africa**

- A tropical wave over Africa will move into the Atlantic this weekend where conditions are favorable for development.
- This system has a 0% (low) chance of formation over the next 48 hours, but a 40% (medium) chance over the next 5 days.





# Florida Outlook

## Florida Outlook:

- The two systems in the Gulf of Mexico and near the Bahamas may produce locally heavy rainfall over the next several days.
- 2-4" of rainfall is expected along the West Coast and in the Panhandle over the next 7 days with 1-2" elsewhere. Localized totals of 6"+ are possible.
- Localized flash flooding and minor river flooding will continue through early next week.
- Any other impacts from these disturbance are uncertain, but these systems should be monitored over the next several days.
- Direct impacts from any other systems in the tropics are not expected over the next several days.
- The tropical wave in the eastern Atlantic will need to be monitored next week.
- Paulette could generate swells that reach the Atlantic beaches, possibly elevating the rip current risk next week.

The next briefing packet will be issued this afternoon. For the latest information on the tropics, please visit the National Hurricane Center website at [www.hurricanes.gov](http://www.hurricanes.gov).



# TROPICAL UPDATE



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State Meteorological Support Unit

Florida Division of Emergency Management

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