



TROPICAL UPDATE



11:00 AM EDT

Friday, September 11, 2020

Tropical Storm Paulette, Tropical Storm Rene, Gulf of Mexico Low (20%), Invest 96L in the Bahamas (60%), Invest 95L in the Eastern Atlantic (90%), Wave Near Africa (40%)

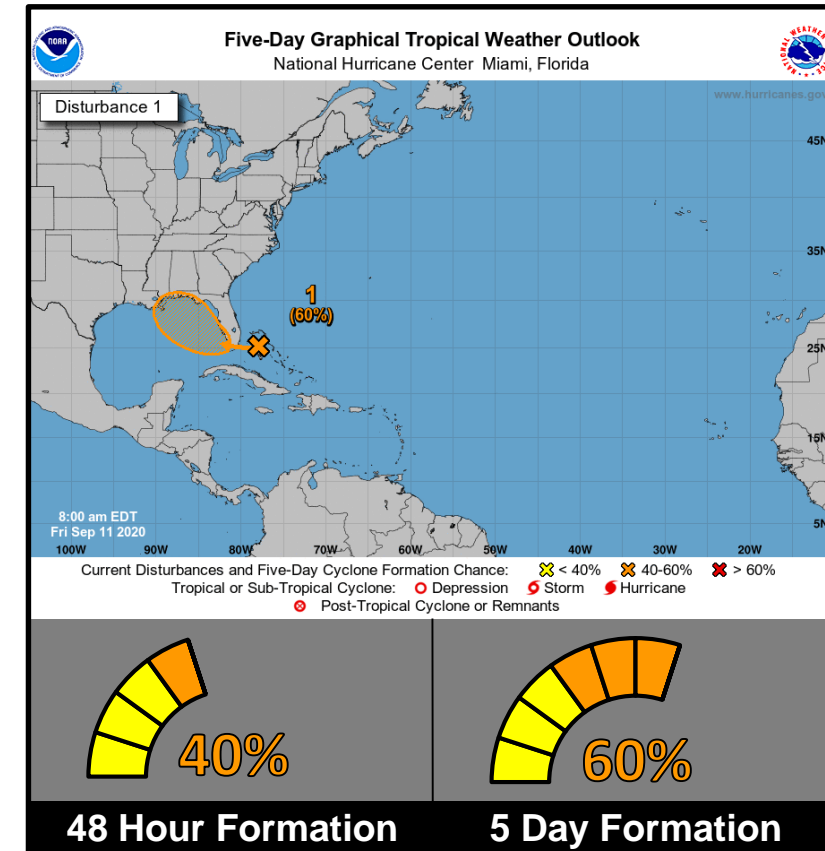
This update is intended for government and emergency response officials, and is provided for informational and situational awareness purposes only. Forecast conditions are subject to change based on a variety of environmental factors. For additional information, or for any life safety concerns with an 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.



Invest 96L

8 AM ET Friday: Florida Threats & Changes Since Last Packet

	MINIMAL	Low	MODERATE	HIGH	EXTREME
 WINDS					
 STORM SURGE					
 FLASH FLOODING					
 TORNADOES					
	Low		MODERATE		HIGH
 RIP CURRENTS					



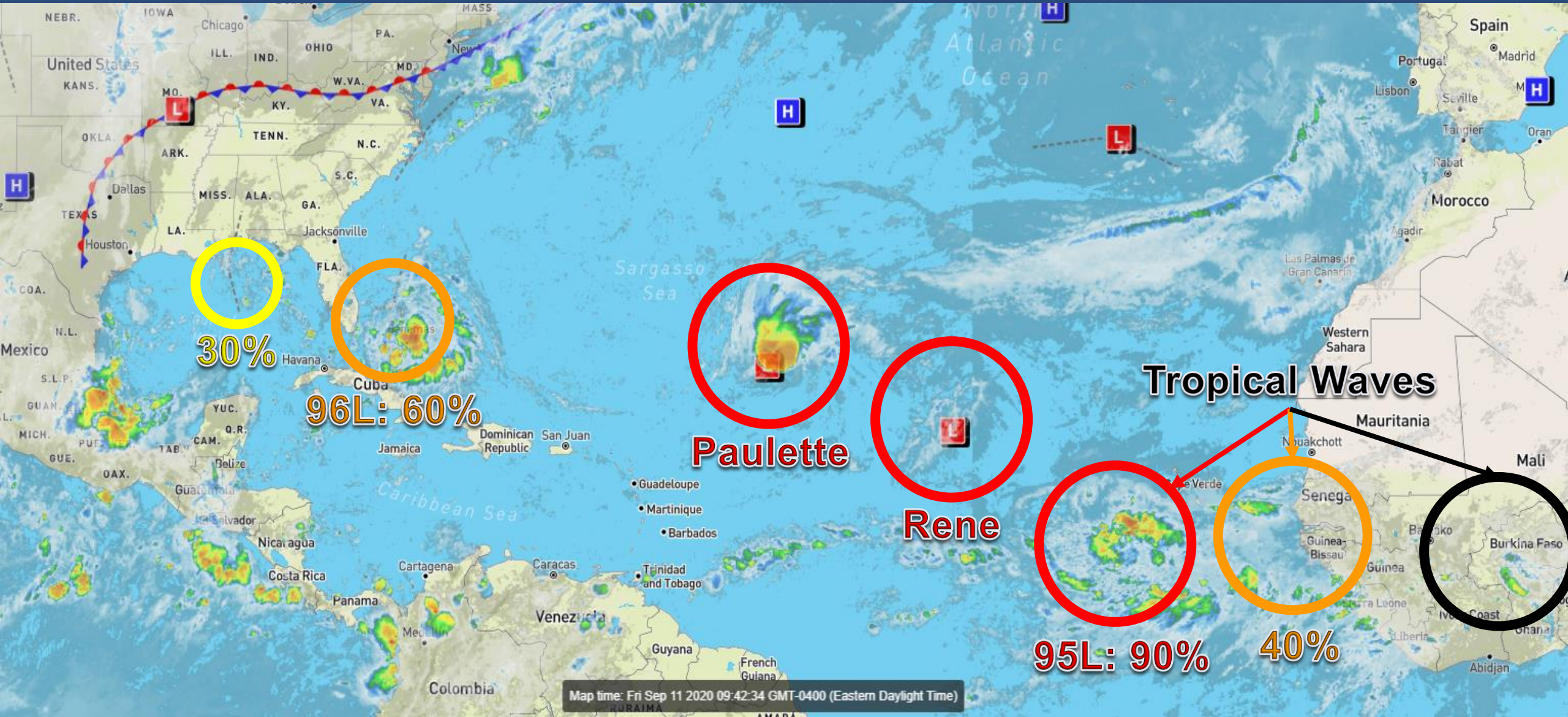
Overview/Recent Changes:

Invest 96L, located near the Bahamas, will move across the Peninsula today and into the eastern Gulf of Mexico on Saturday. Development is likely, and 96L could become a tropical depression over the weekend or early next week as it moves west-northwestward over the eastern and northern Gulf. Regardless, heavy rainfall and dangerous rip currents are expected along the Gulf Coast into early next week.



Atlantic Basin Satellite Image

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





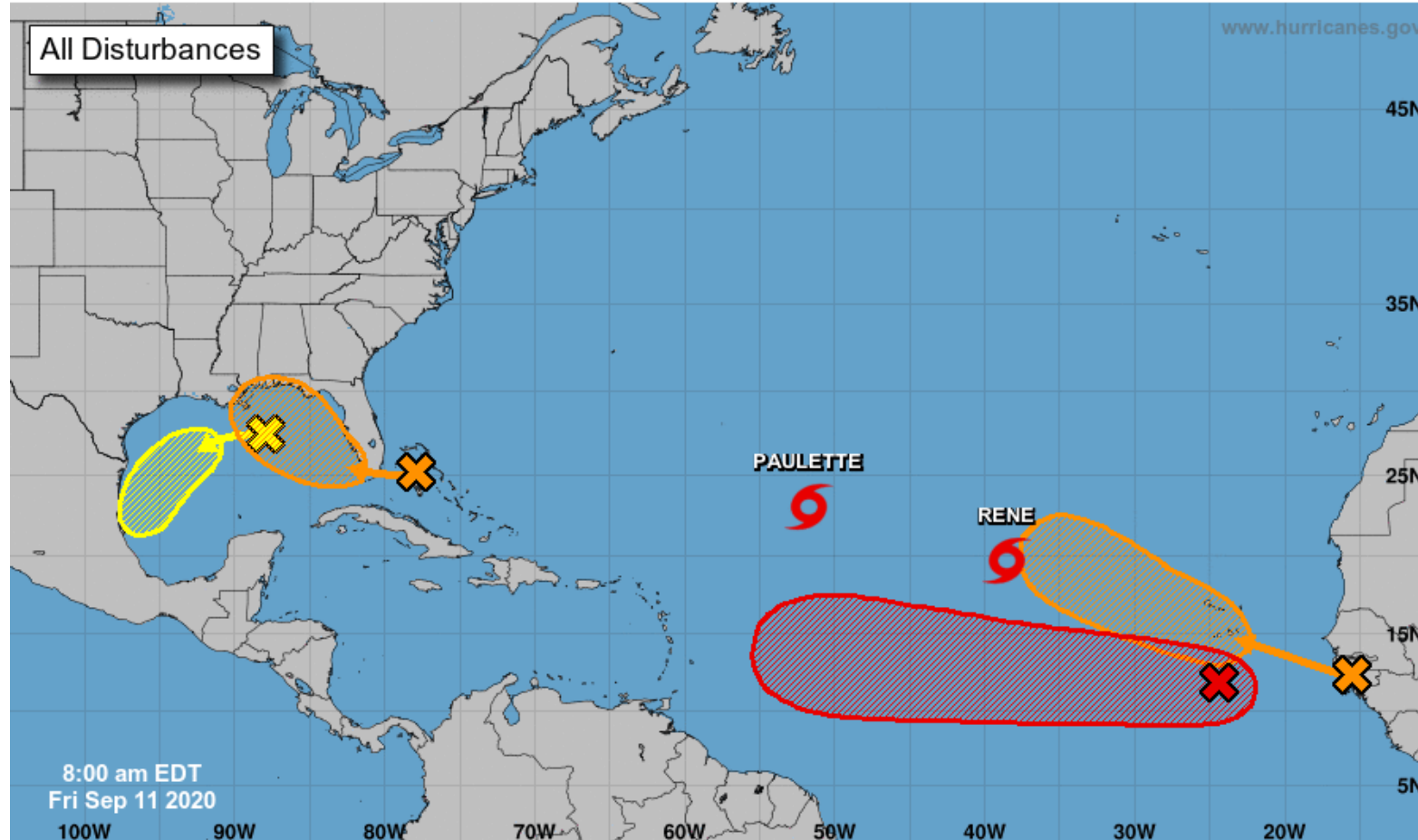
Tropical Weather Outlook

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



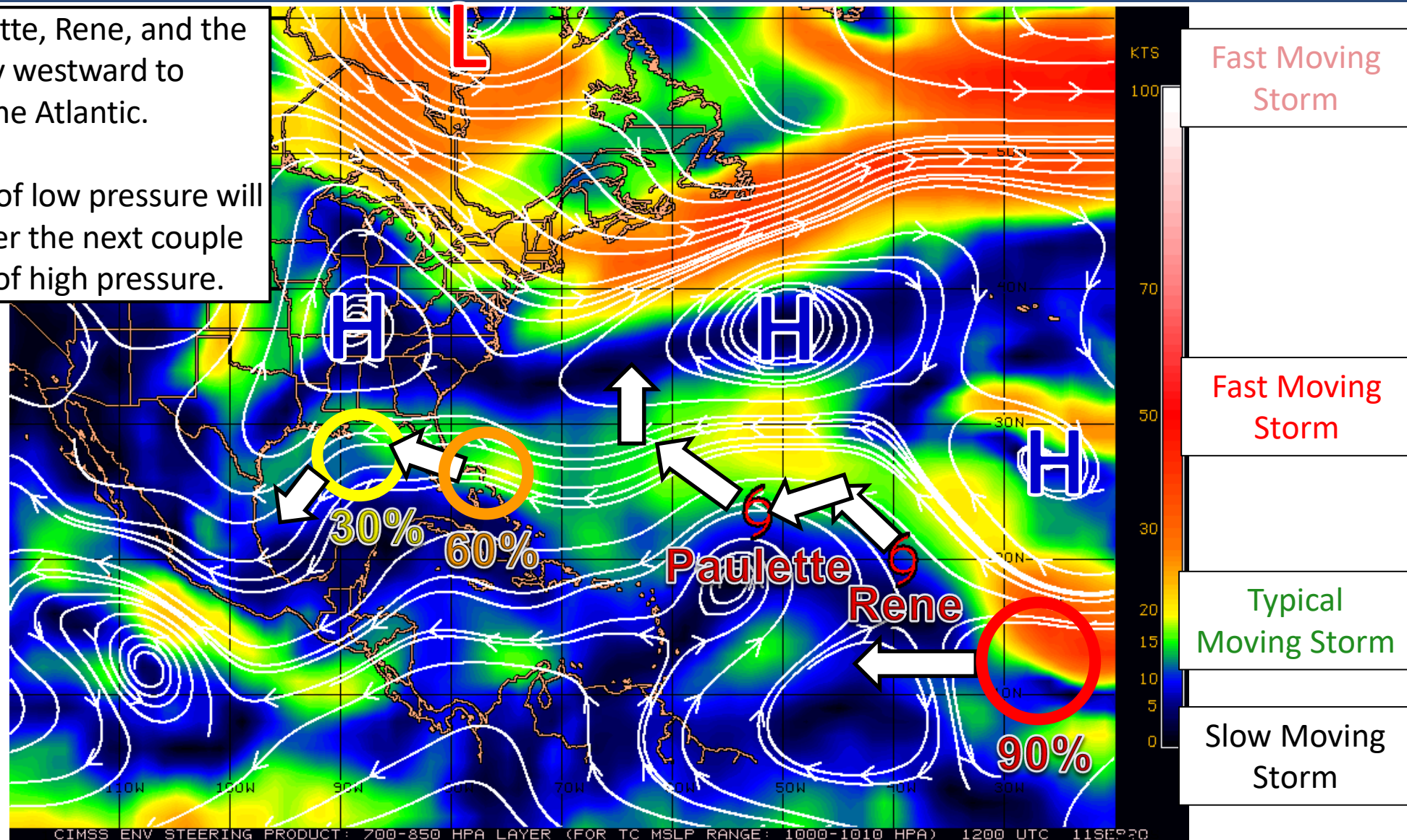
Steering Currents

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.

High pressure will steer Paulette, Rene, and the next two waves generally westward to northwestward over the Atlantic.

Near Florida, the two troughs of low pressure will generally move westward over the next couple days on the southern edge of high pressure.





Wind Shear

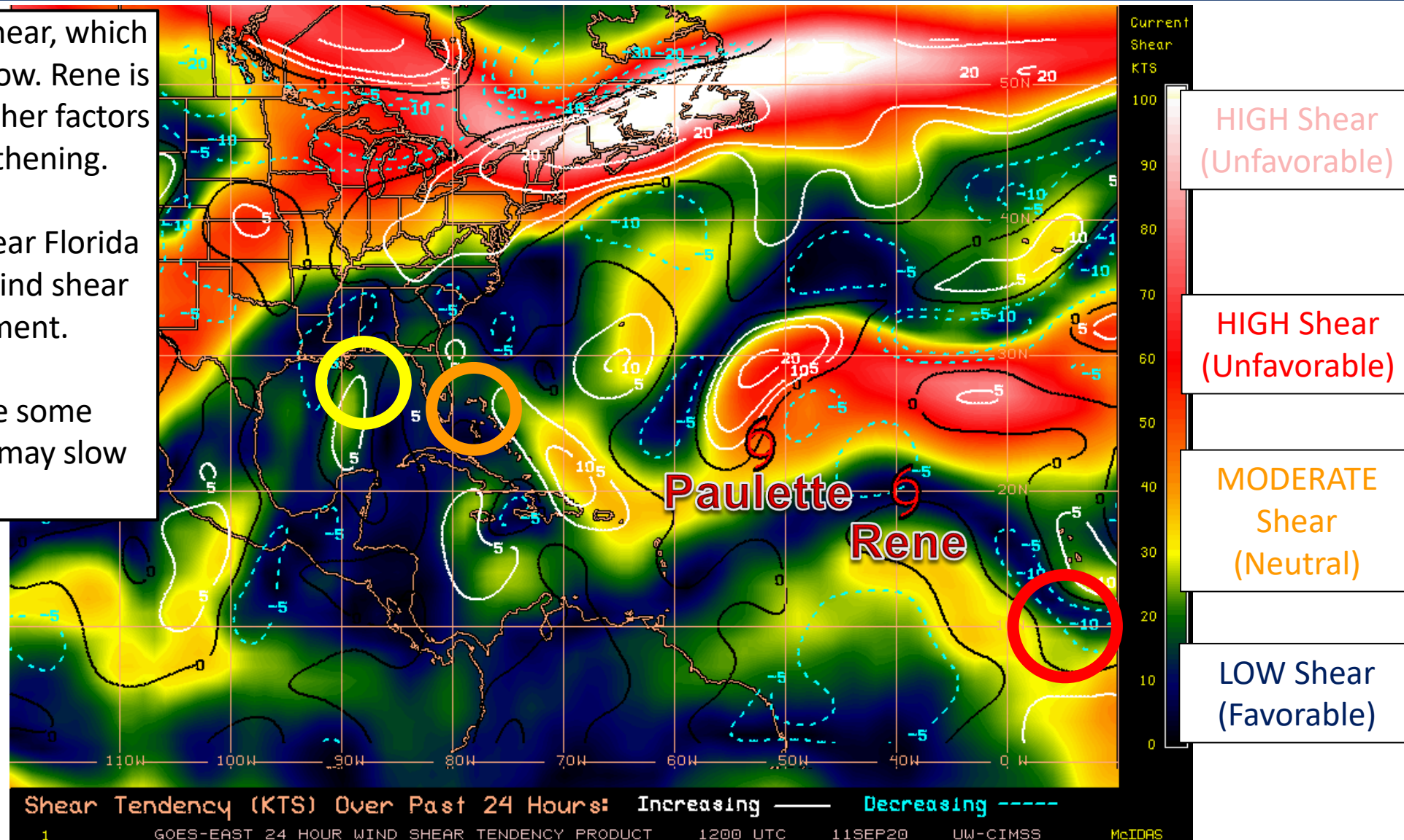
Is the environment favorable for the systems?

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 hinder strengthening for now. Rene is in a pocket of low shear, but other factors are not favorable for strengthening.

The two low pressure areas near Florida and the Bahamas have low wind shear which supports development.

The waves near Africa have some moderate wind shear, which may slow down development.

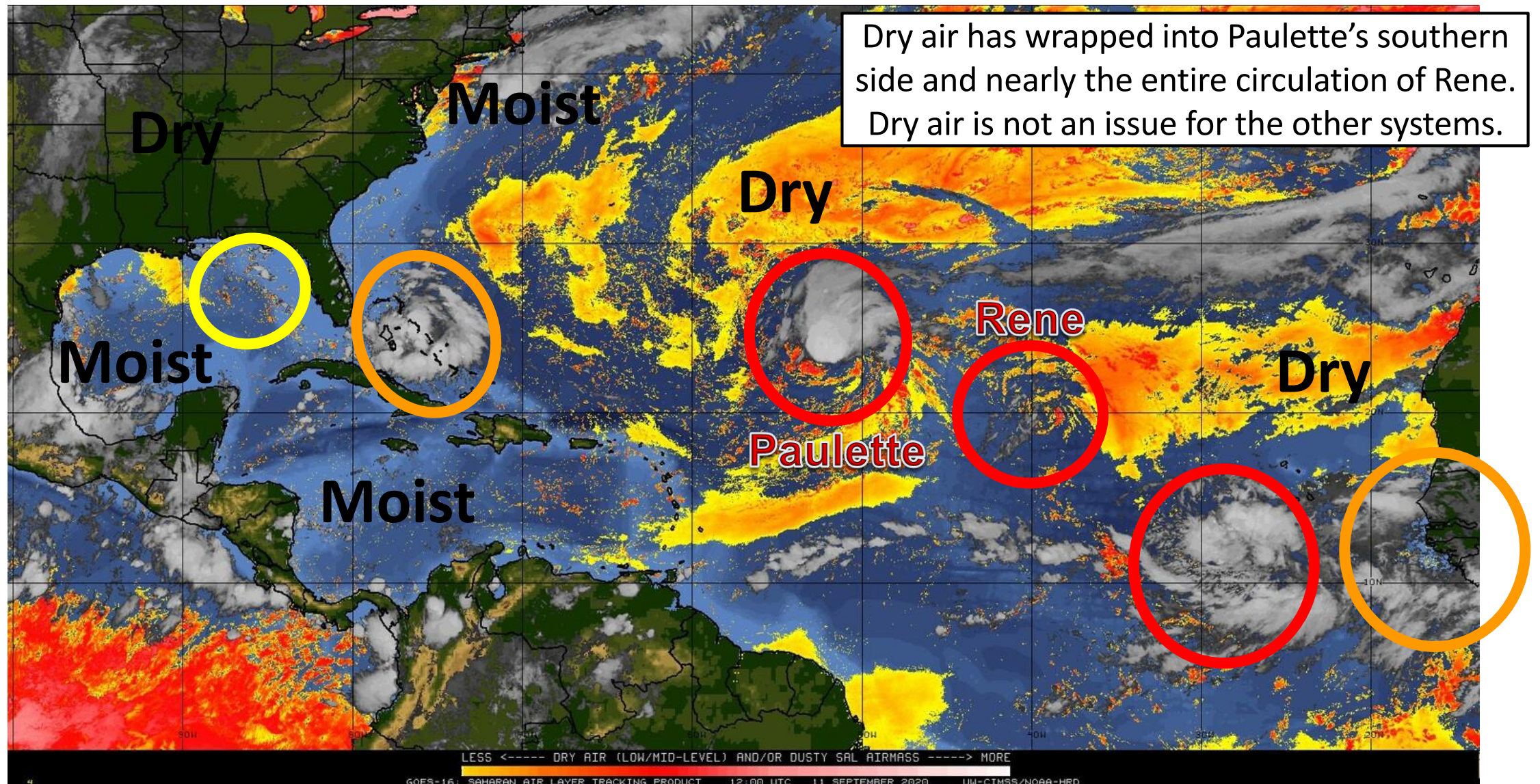




Dry Air & Saharan Dust

Is the environment favorable for the systems?

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





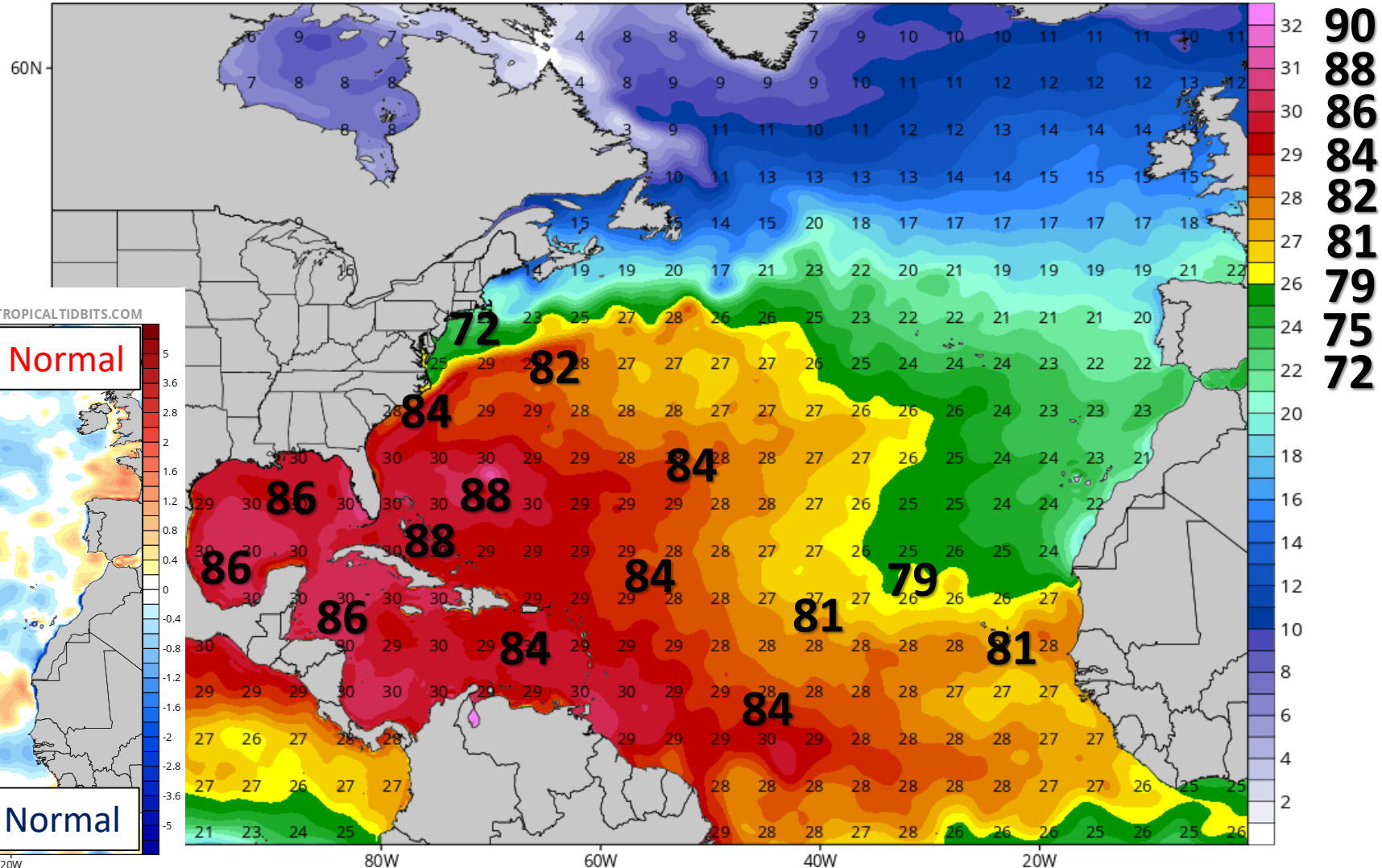
Sea Surface Temperatures & Anomalies

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: 06z Sep 11 2020



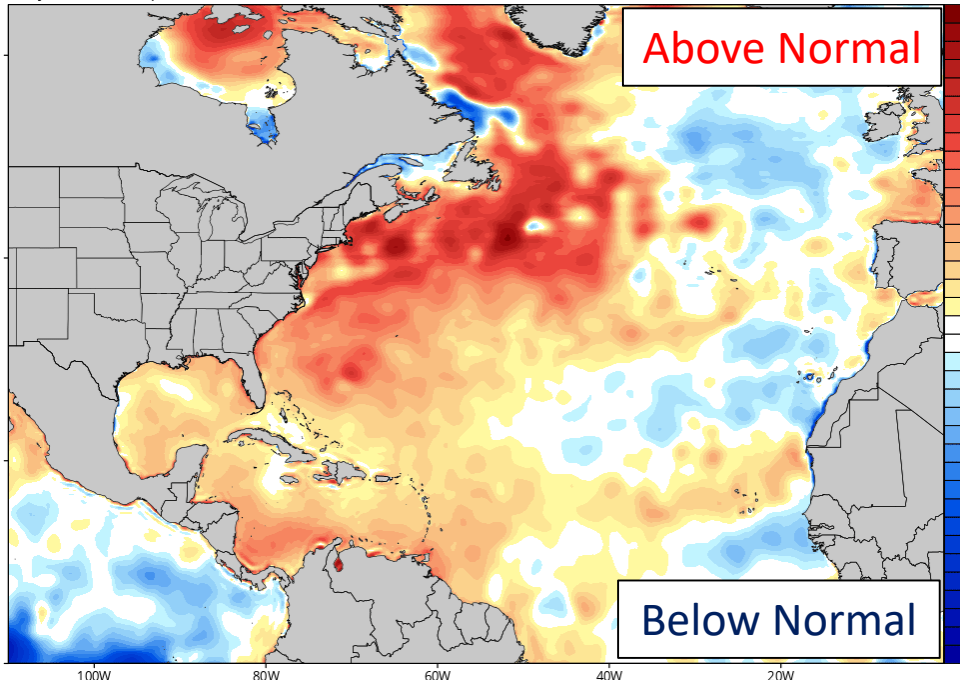
CDAS Sea Surface Temperature Anomaly (°C) (based on CFSR 1981-2010 Climatology)

Analysis Time: 06z Sep 11 2020

TROPICALTIDBITS.COM

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



www.hurricanes.gov

Disturbance 1

1
(60%)

8:00 am EDT
Fri Sep 11 2020

100W 90W 80W 70W 60W 50W 40W 30W 20W

Current Disturbances and Five-Day Cyclone Formation Chance:
Tropical or Sub-Tropical Cyclone: ○ Depression ⚡ Storm 🌀 Hurricane
⊗ Post-Tropical Cyclone or Remnants

A surface trough of low pressure located over the northwestern Bahamas is producing a large area of disorganized showers and thunderstorms that extend from the northwestern and central Bahamas eastward a few hundred miles over the western Atlantic.

This system is forecast to move westward at about 10 mph, crossing the Bahamas and Florida today and tonight and moving into the eastern Gulf of Mexico on Saturday.

Upper-level winds are expected to become conducive for development, and a tropical depression could form while this system moves slowly west-northwestward over the eastern Gulf of Mexico this weekend and early next week.

This system could bring heavy rainfall to much of the state over the next several days. Dangerous rip currents are also expected along Gulf beaches into early next week. Other details and impacts are uncertain.

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

***Formation chance through 5 days...medium...60%**



Tropical Weather Outlook

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



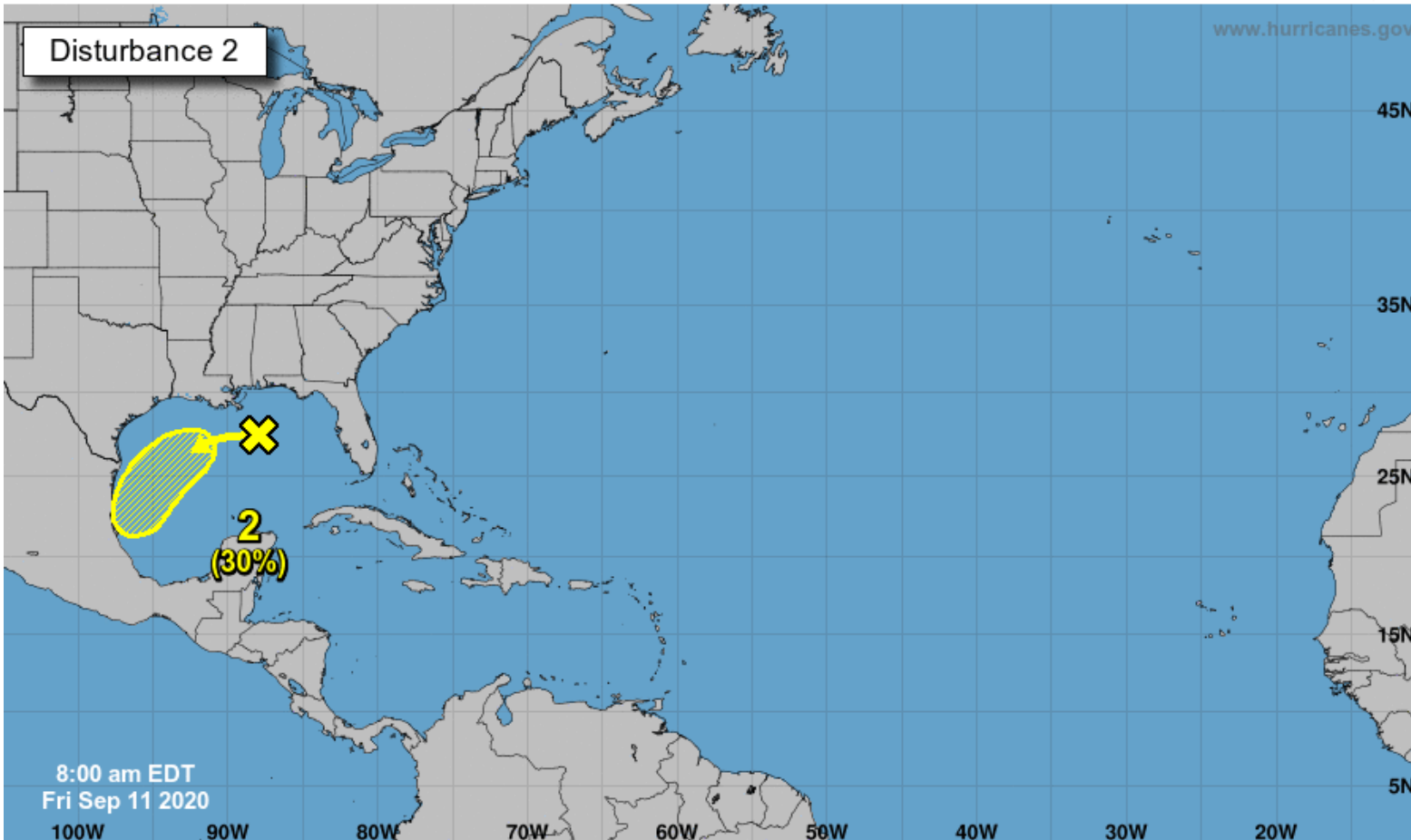
Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



www.hurricanes.gov

Disturbance 2



Another trough of low pressure is located over the north-central Gulf of Mexico.

Although the associated shower and thunderstorm activity is currently minimal, some slow development of this system is possible while it moves westward and then southwestward over the northern and western Gulf of Mexico through early next week

This system may bring additional showers and storms to the Panhandle coast today and Saturday, but no other direct impacts are expected.

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

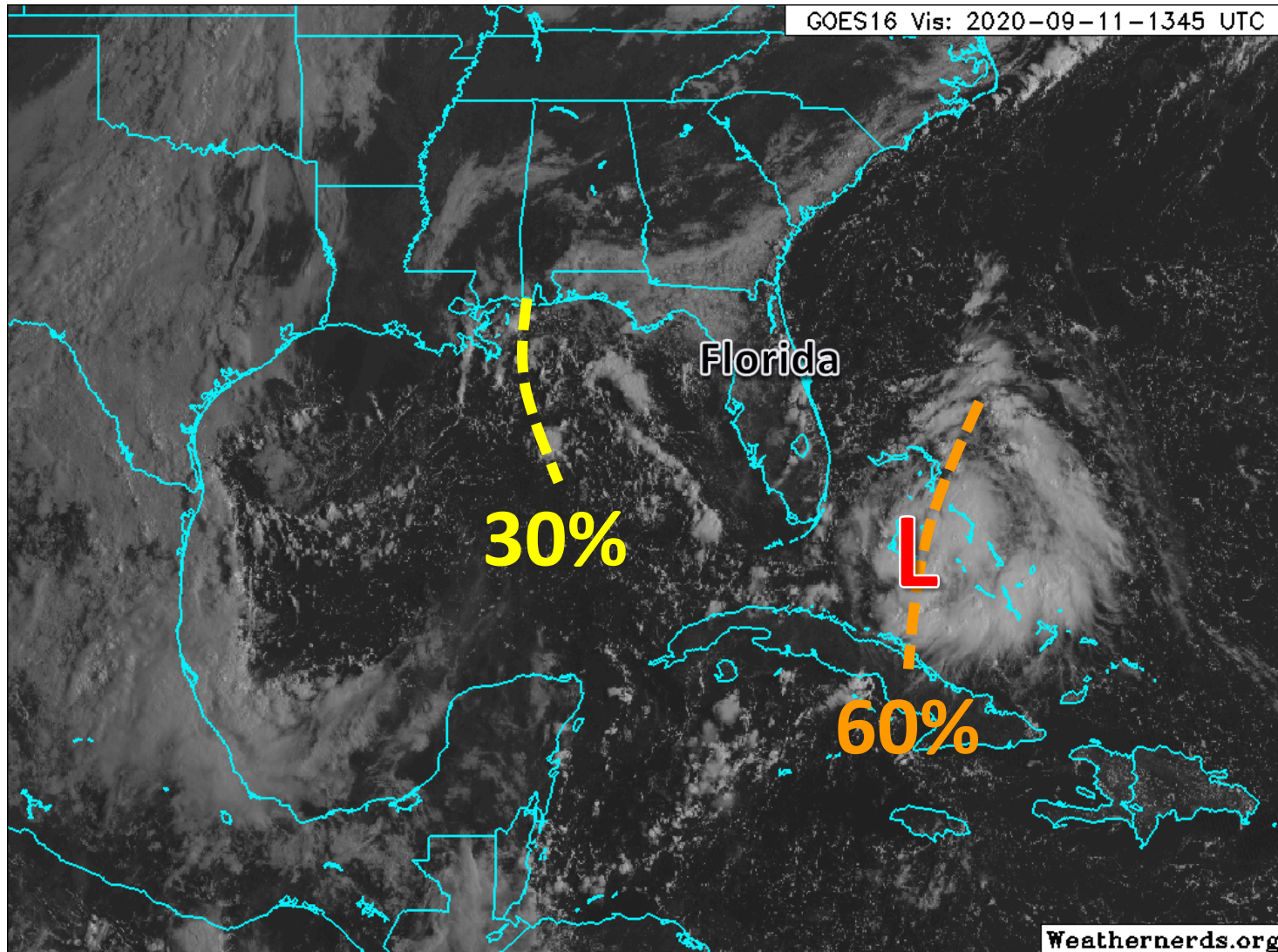
***Formation chance through 5 days...low...30%**

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

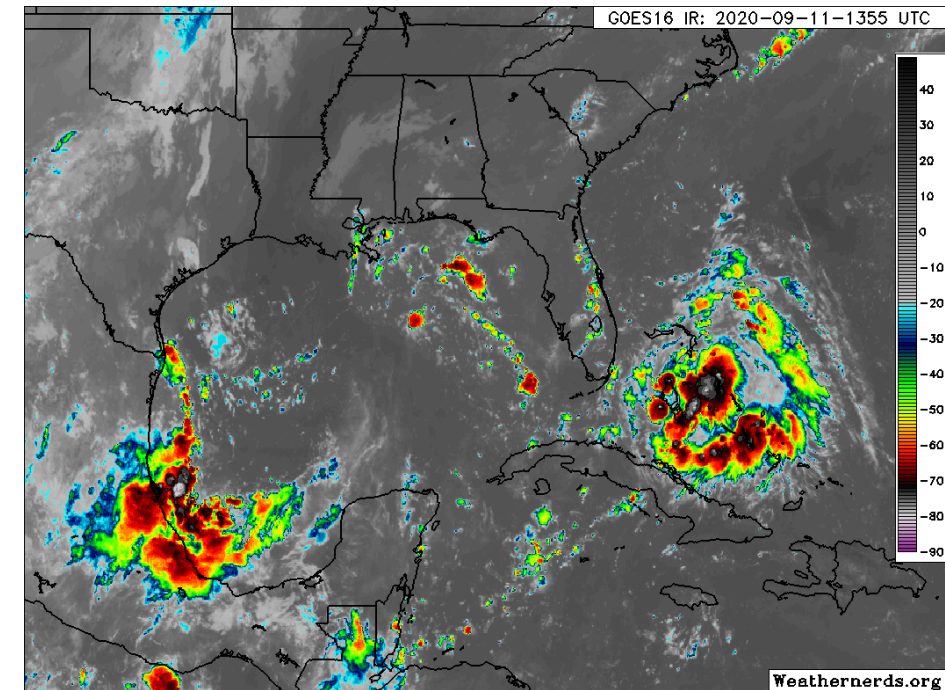


Satellite Imagery

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 over the Gulf of Mexico.

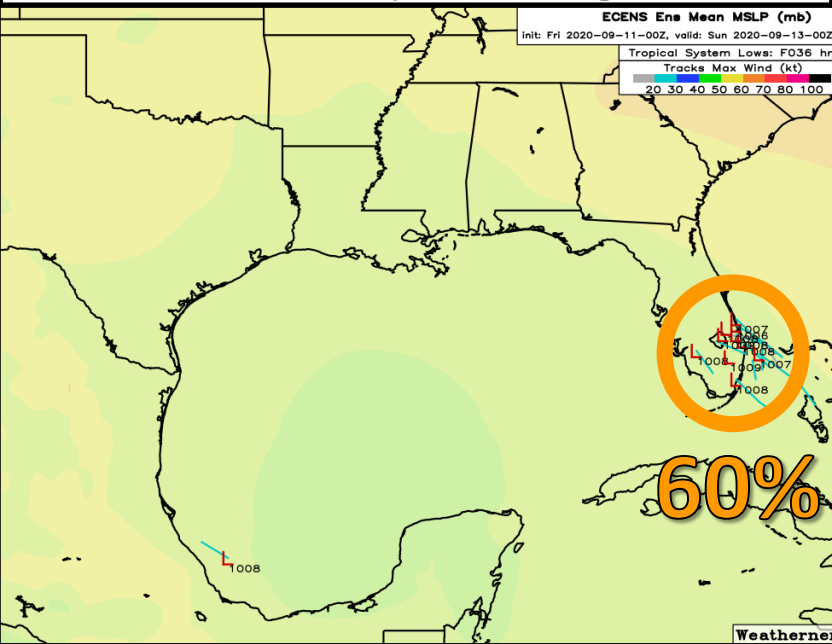




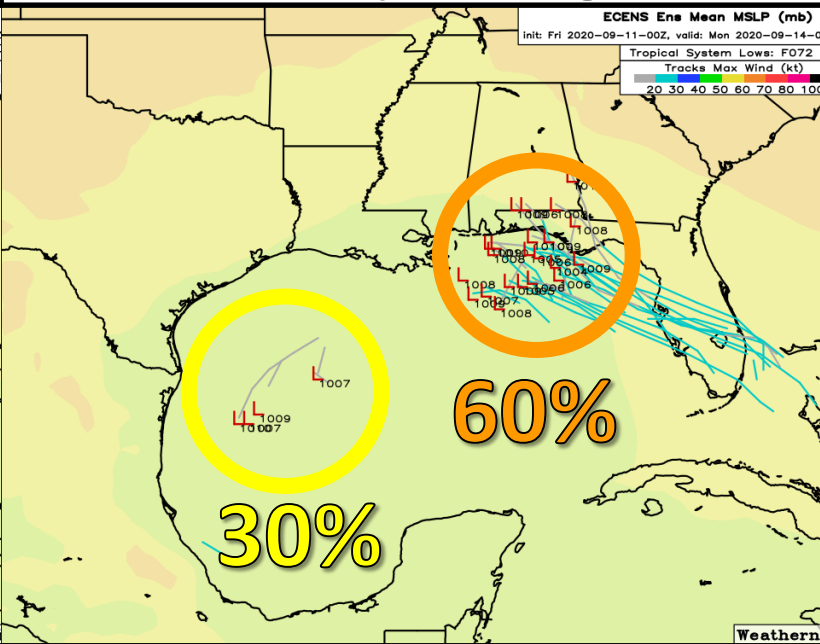
Model Forecasts

Ensemble Models – Gulf of Mexico Systems

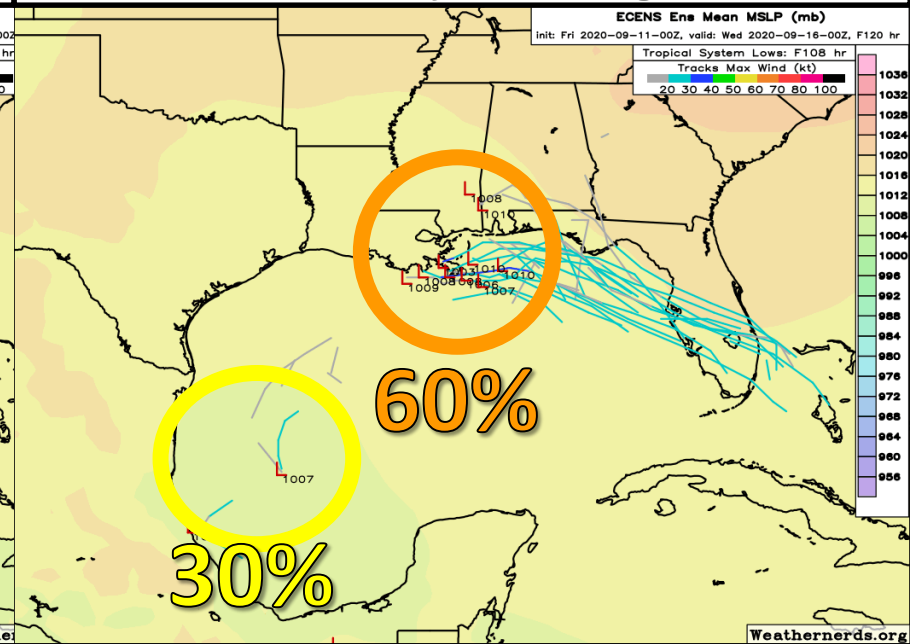
Saturday Morning



Sunday Evening



Tuesday Morning



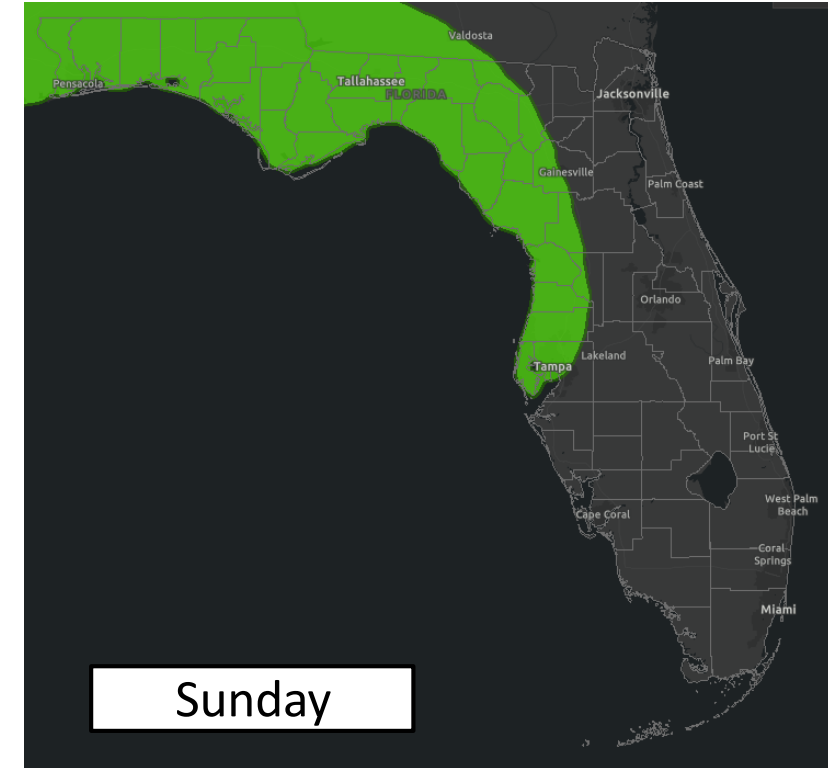
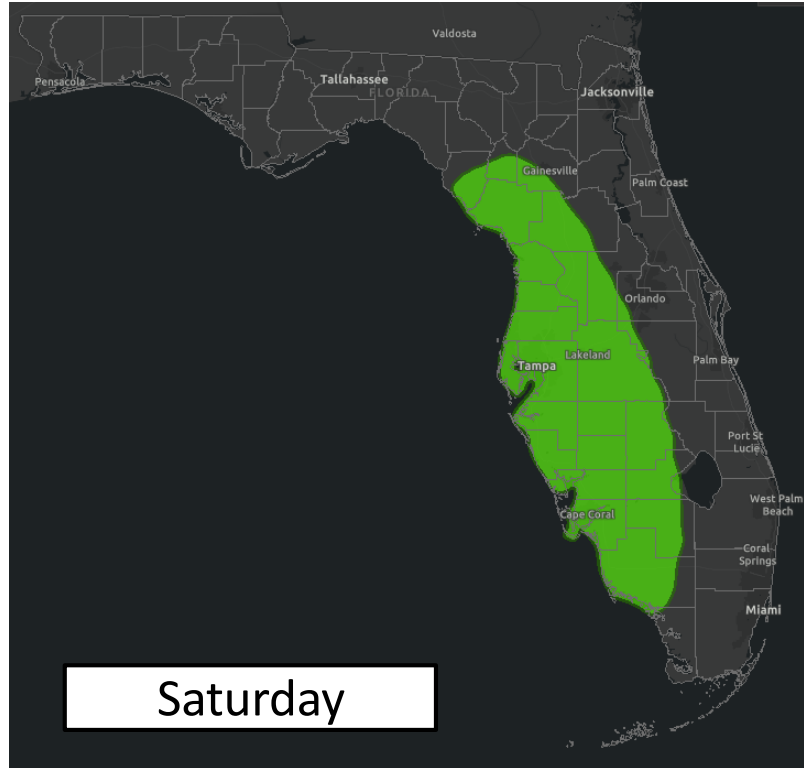
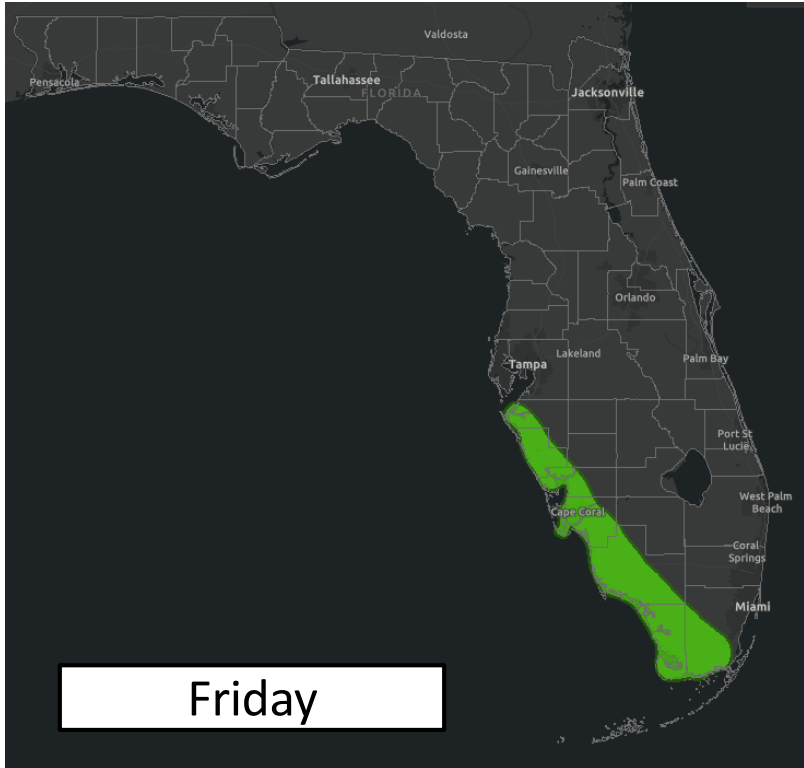
Invest 96L (60%) will move across South Florida today or tonight before emerging into the Gulf of Mexico on Saturday. This system will continue moving west-northwest but will slow down on approach to the northern Gulf Coast early next week. It may even stall near the north central Gulf Coast or move very slowly westward. This will produce a heavy rainfall threat across North Florida and the West Coast over the next several days.

The other trough of low pressure in the Gulf of Mexico may find more favorable conditions for some development as it moves toward the western Gulf or the Bay of Campeche early next week. However, this will not produce any direct impacts to Florida outside of additional showers near the Panhandle coast today and tonight.



Flash Flood Outlooks

From the 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%

Because of the recent heavy rainfall, an isolated case of flash flooding is possible across along the West Coast over the next couple days, then spreading toward North Florida on Sunday.



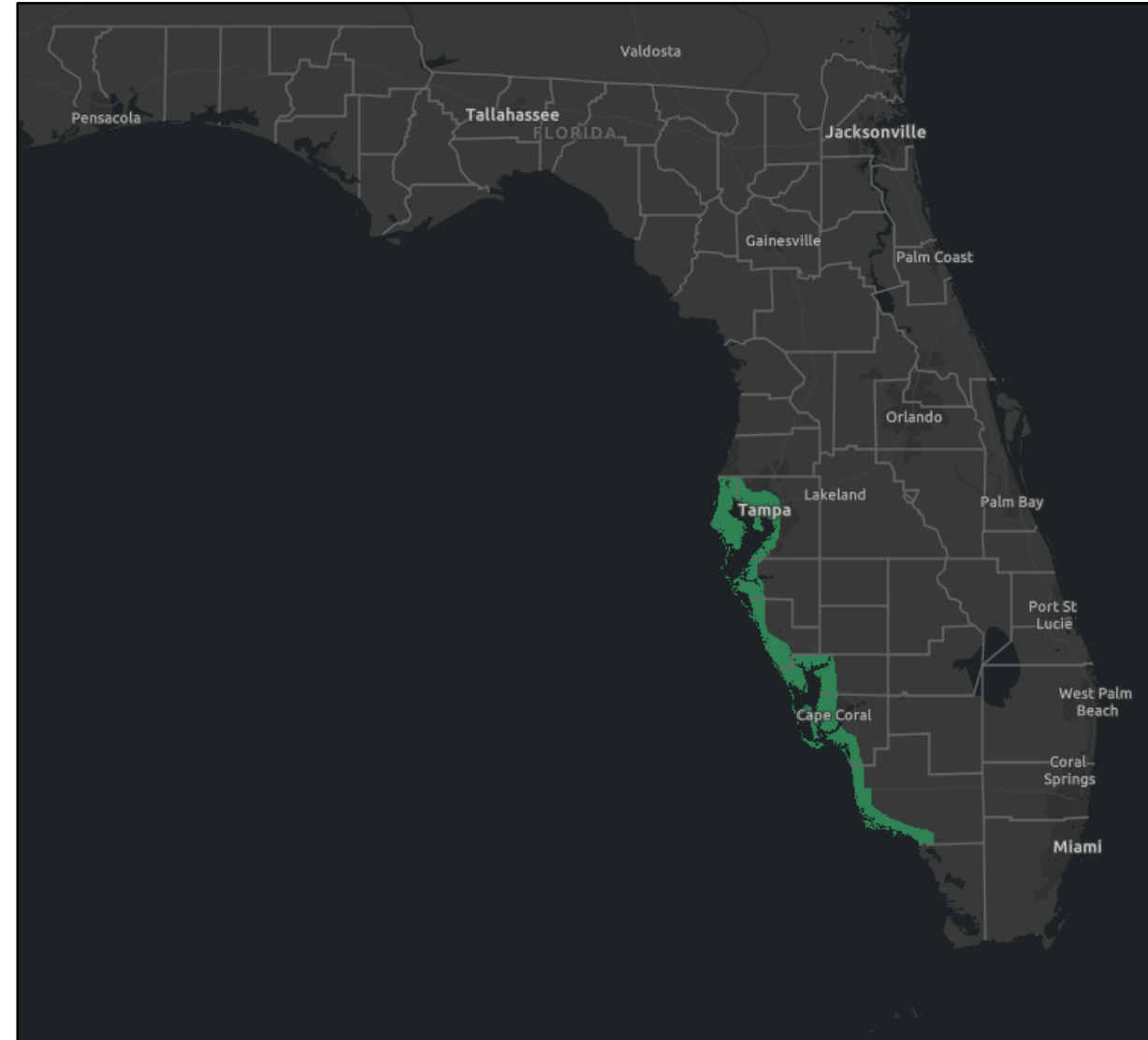
Flood Watches

Links: [NWS Tampa Bay](#) | [NWS Miami](#)

When: 2 PM ET today through 8 AM Sunday morning (through 8 PM Saturday for Collier County)

Counties: Pinellas, coastal Hillsborough, coastal Manatee, coastal Sarasota, coastal Charlotte, coastal Lee, and coastal Collier

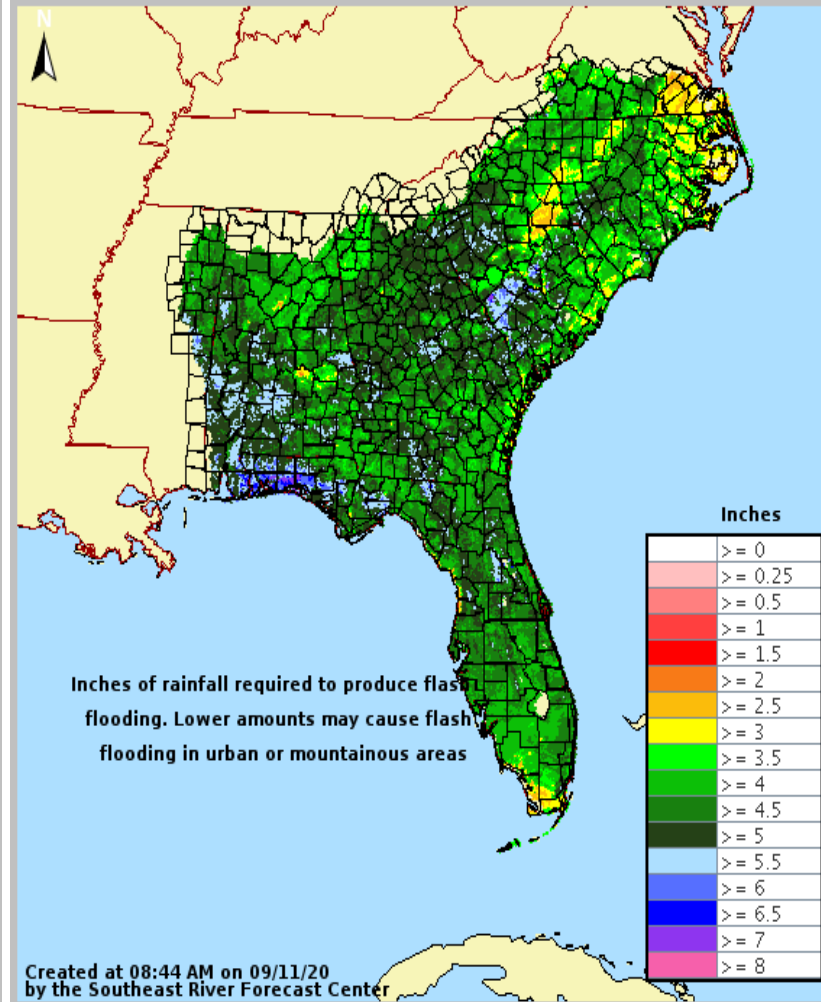
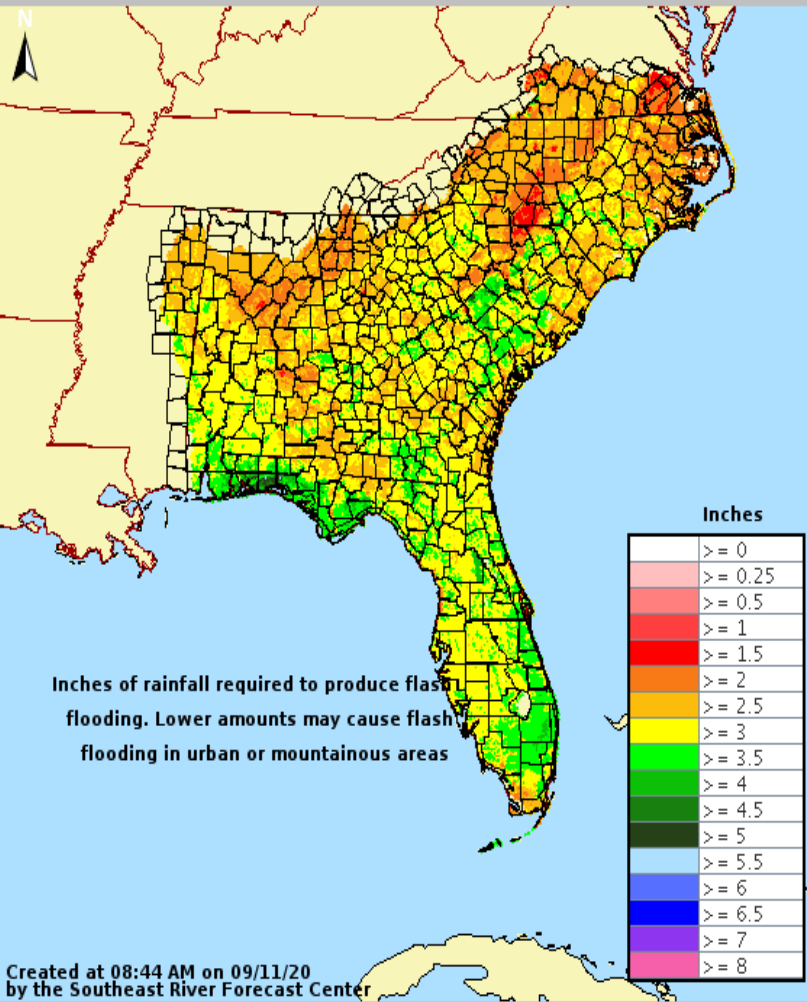
Recent heavy rainfall has saturated the soils across coastal West Central and Southwest Florida. Given increasing moisture, there will be a flood threat each day, but especially this weekend as the low pressure system near the Bahamas moves over the Peninsula this weekend.





Flash Flood Guidance

How Much Rain is Needed to Create Flash Flooding?



Along the West Coast, it will only take about 1.5-3" of rain within 1 hour or 3-5" within 6 hours to cause flash flooding due to recent heavy rainfall.

Elsewhere in the state, it will take about 3-4" in 1 hour or 5+" within 6 hours to cause flash flooding.



Observed Rainfall Last 7 Days

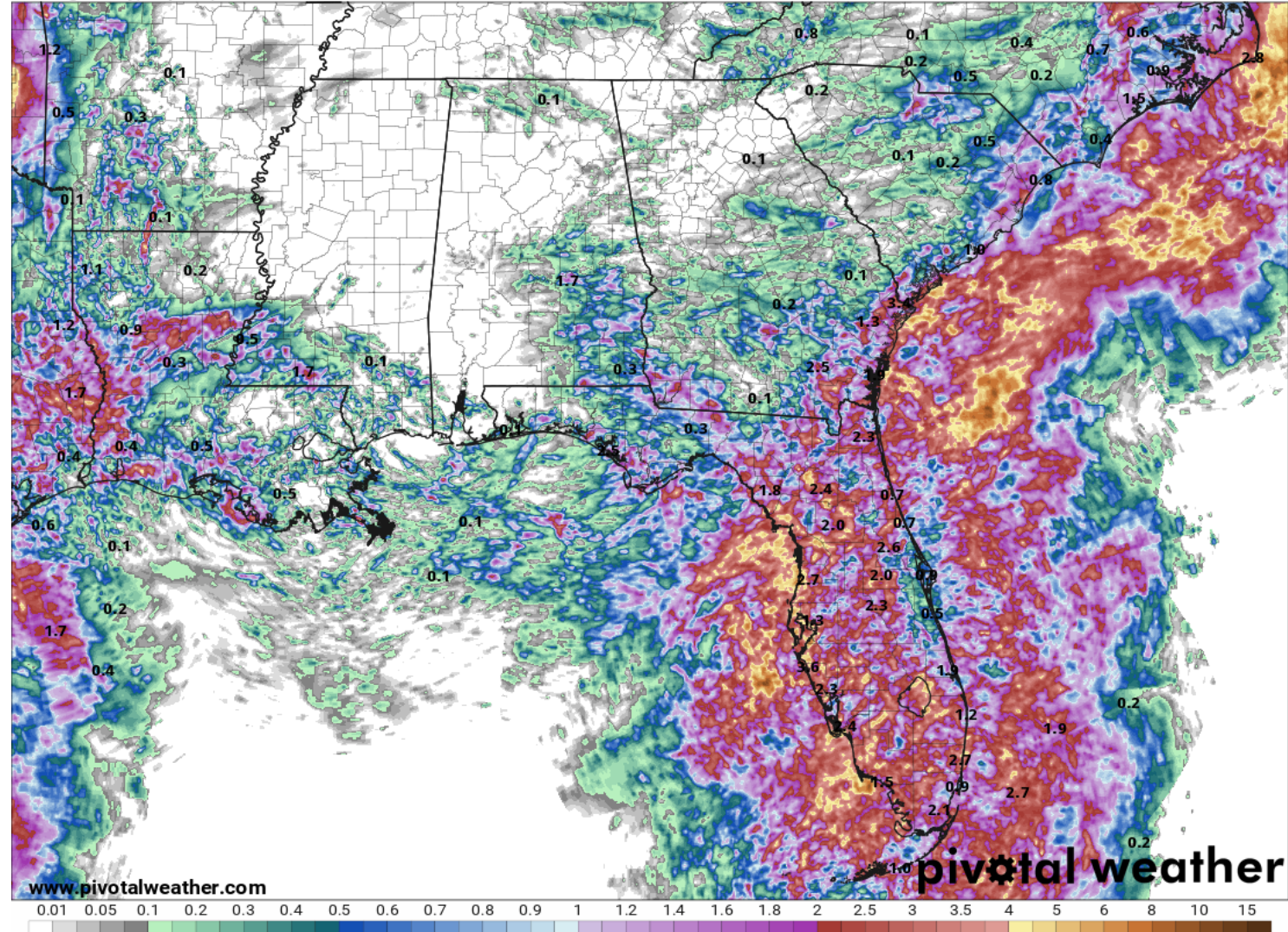
How Much Rain Has Fallen So Far?

Much of the Peninsula has seen over 2" of rainfall over the last 7 days. However, areas near the West Coast have seen up to 4-6" of rain during the last week.

This has saturated the soils and results in an increased threat for flooding.

168-Hour MRMS Gauge-Corrected Precipitation Analysis (in)
Ending Friday, Sep. 11, 2020 at 5 a.m. EDT

Init: Fri 2020-09-11 09z MRMS





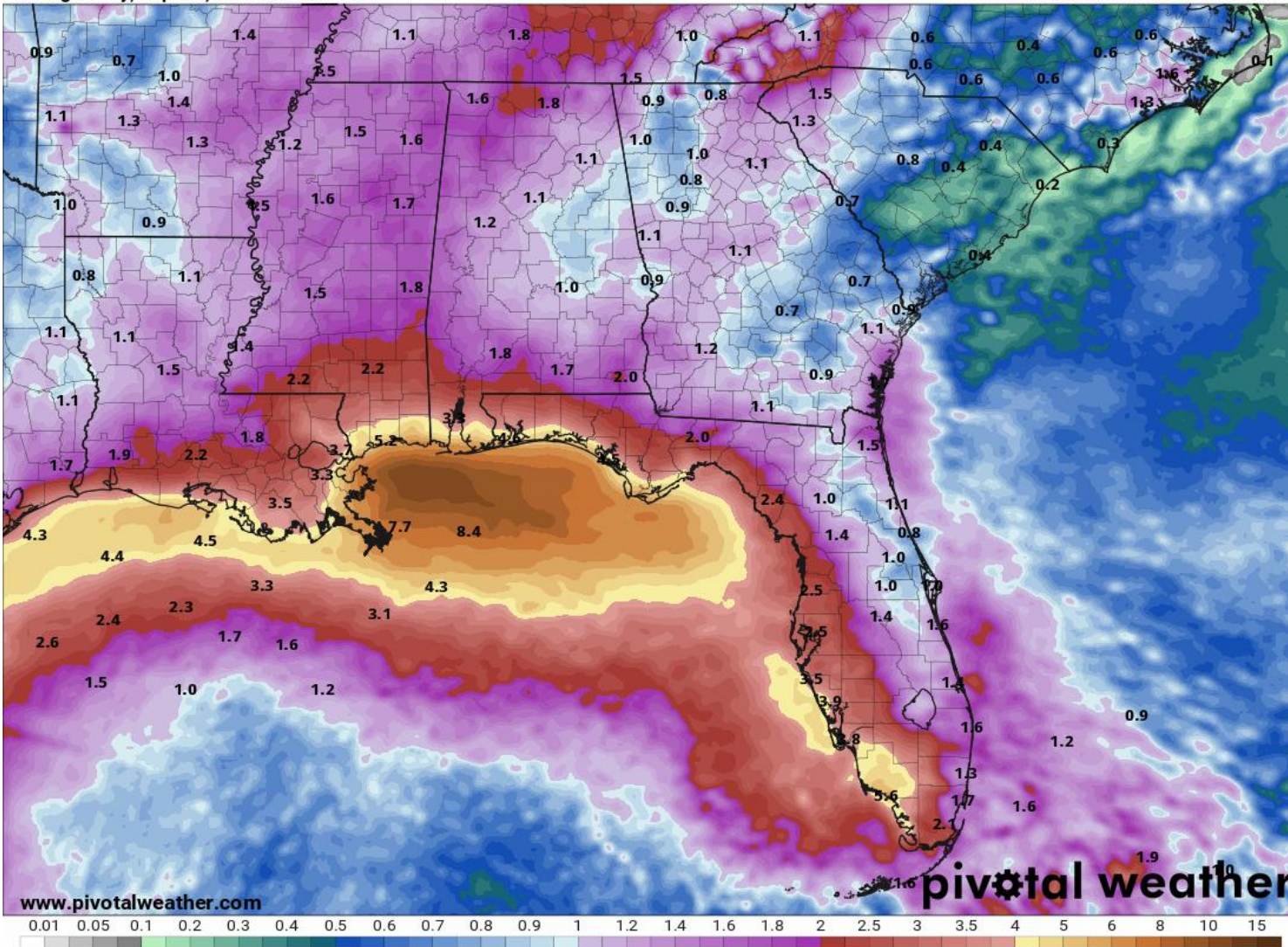
Rainfall Totals Next 7 Days

Ending 8 AM ET Friday 9/18 – Gulf of Mexico Systems

7-Day Precipitation (in)

Ending Friday, Sep. 18, 2020 at 8 a.m. EDT

Init: Fri 2020-09-11 12z WPC



Rainfall totals of 3-5" are expected over the next 7 days along the West Coast and in the Panhandle. Rainfall totals of 1-2" are possible elsewhere.

Localized totals of 6-10"+ are possible due to the abundant tropical moisture present and possible slow-moving thunderstorms.

Exact rainfall totals will change depending on the eventual track of Invest 96L.

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.



Current & Forecast River Flooding

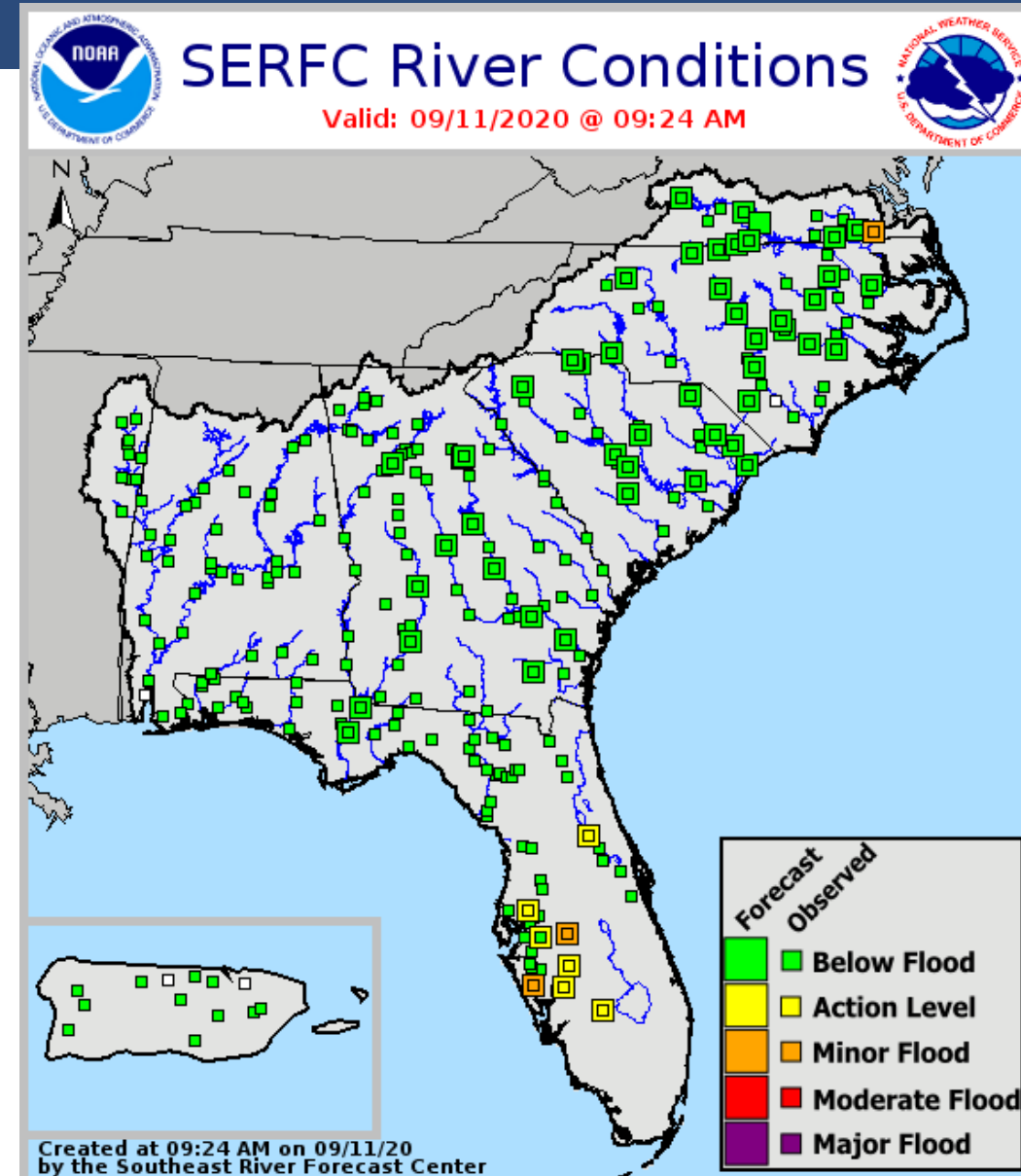
Southeast River Forecast Center

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.

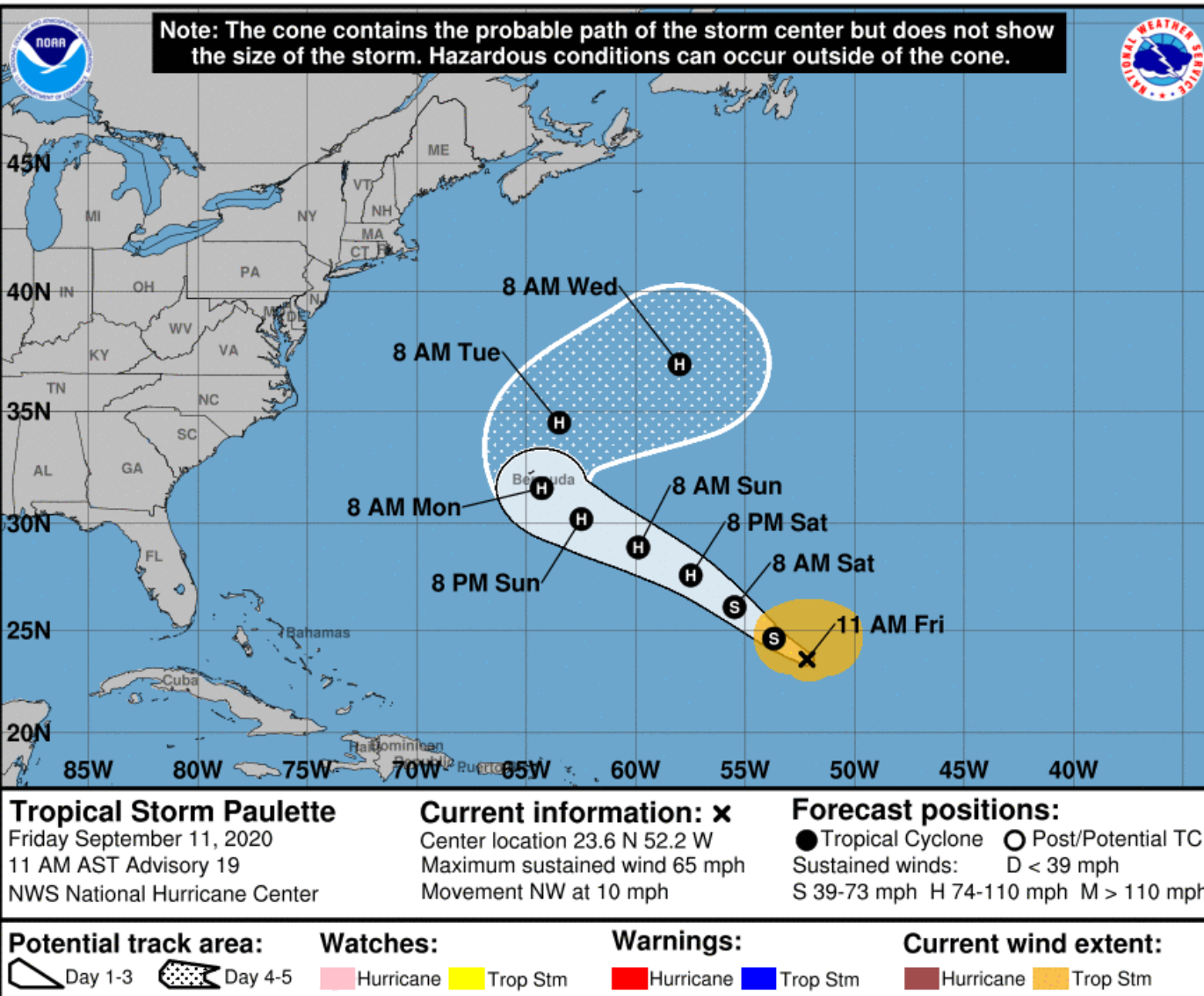
More details on river levels available at the [Southeast River Forecast Center website](#).





Official Forecast Track

From the National Hurricane Center – Tropical Storm Paulette



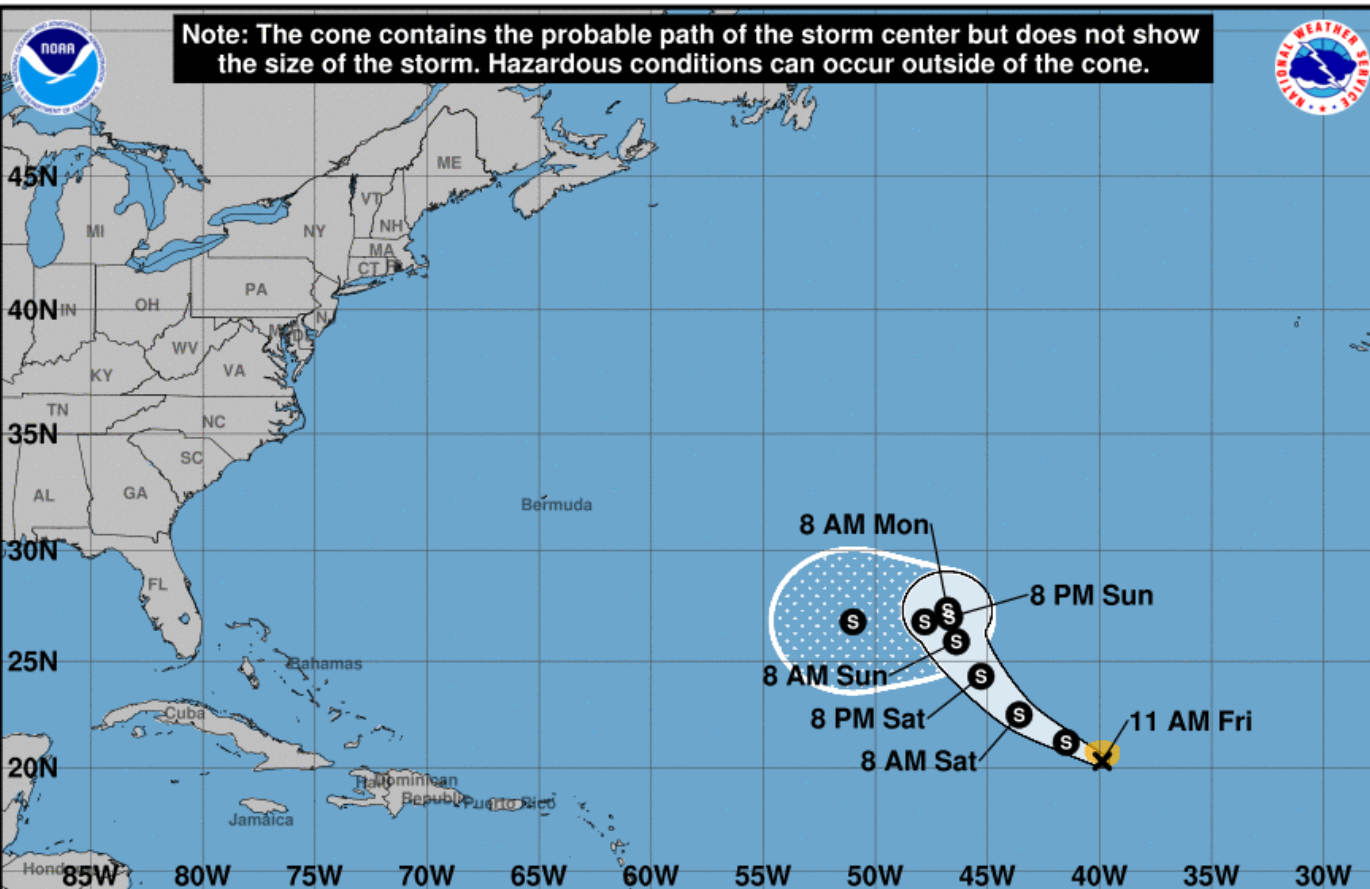
- The center of Paulette is located about 975 miles southeast of Bermuda, or about 1,750 east of Miami.
- Maximum sustained winds are 65 mph, and Paulette is moving to the northwest at 10 mph.
- Strengthening is forecast, and Paulette is expected to become a hurricane on Saturday.
- Paulette could be a Category 2 hurricane as it passes near or over Bermuda on Monday

Direct impacts from Paulette are not expected, but swells may impact the East Coast, increasing the risk for rip currents.



Official Forecast Track

From the National Hurricane Center – Tropical Storm Rene



- The center of Tropical Storm Rene is located 1,085 miles west-northwest of the Cabo Verde Islands, or about 2,600 miles east-southeast of Miami, FL.
- Maximum sustained winds have decreased to 40 mph, and the system is moving to the west-northwest at 13 mph.
- Some strengthening is possible this weekend, followed by weakening early next week.

This system is not a threat to Florida, or the U.S.

Tropical Storm Rene
Friday September 11, 2020
11 AM AST Advisory 18
NWS National Hurricane Center

Current information: x
Center location 20.3 N 39.9 W
Maximum sustained wind 40 mph
Movement WNW at 13 mph

Forecast positions:
● Tropical Cyclone ○ Post/Potential TC
Sustained winds: D < 39 mph
S 39-73 mph H 74-110 mph M > 110 mph

Potential track area:

Day 1-3 Day 4-5

Watches:

Hurricane Trop Stm

Warnings:

Hurricane Trop Stm

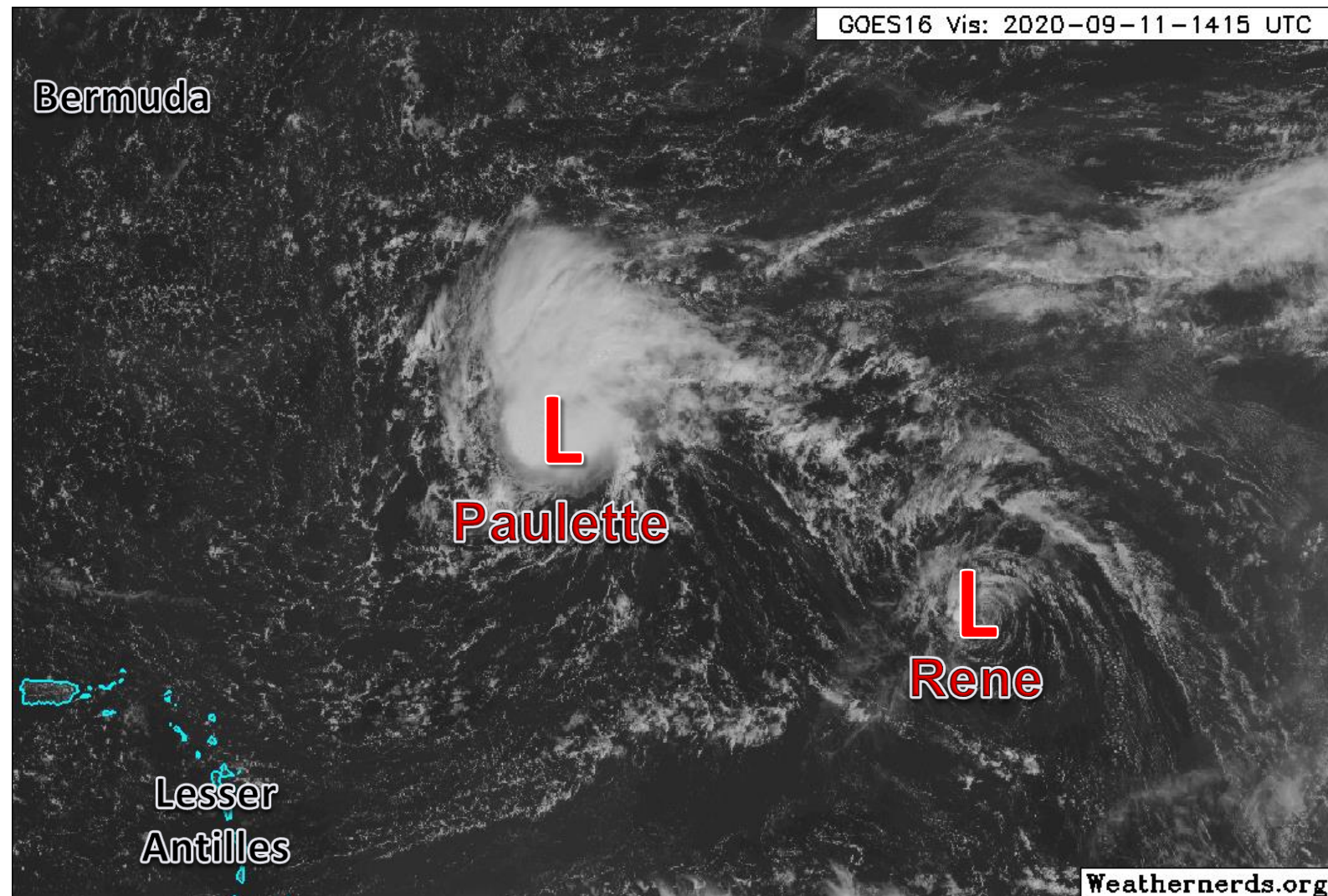
Current wind extent:

Hurricane Trop Stm



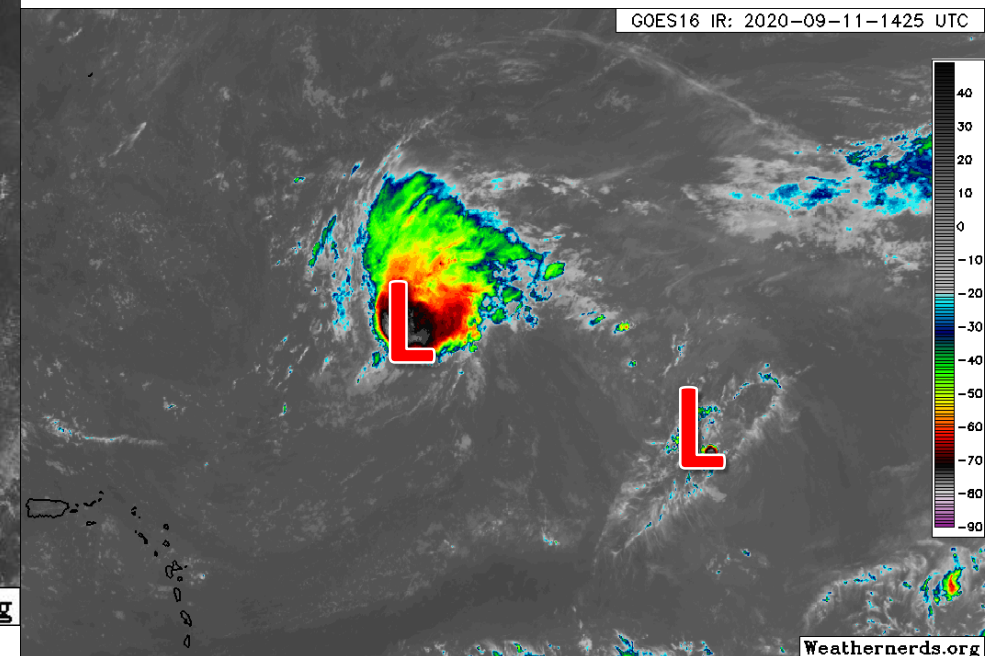
Satellite Imagery

Tropical Storm Paulette & Tropical Storm Rene



Paulette has started to refire convection over its center, and further organization is expected over the next several days as it approaches Bermuda.

Rene, on the other hand, has lost almost all of its convection and is likely weakening.





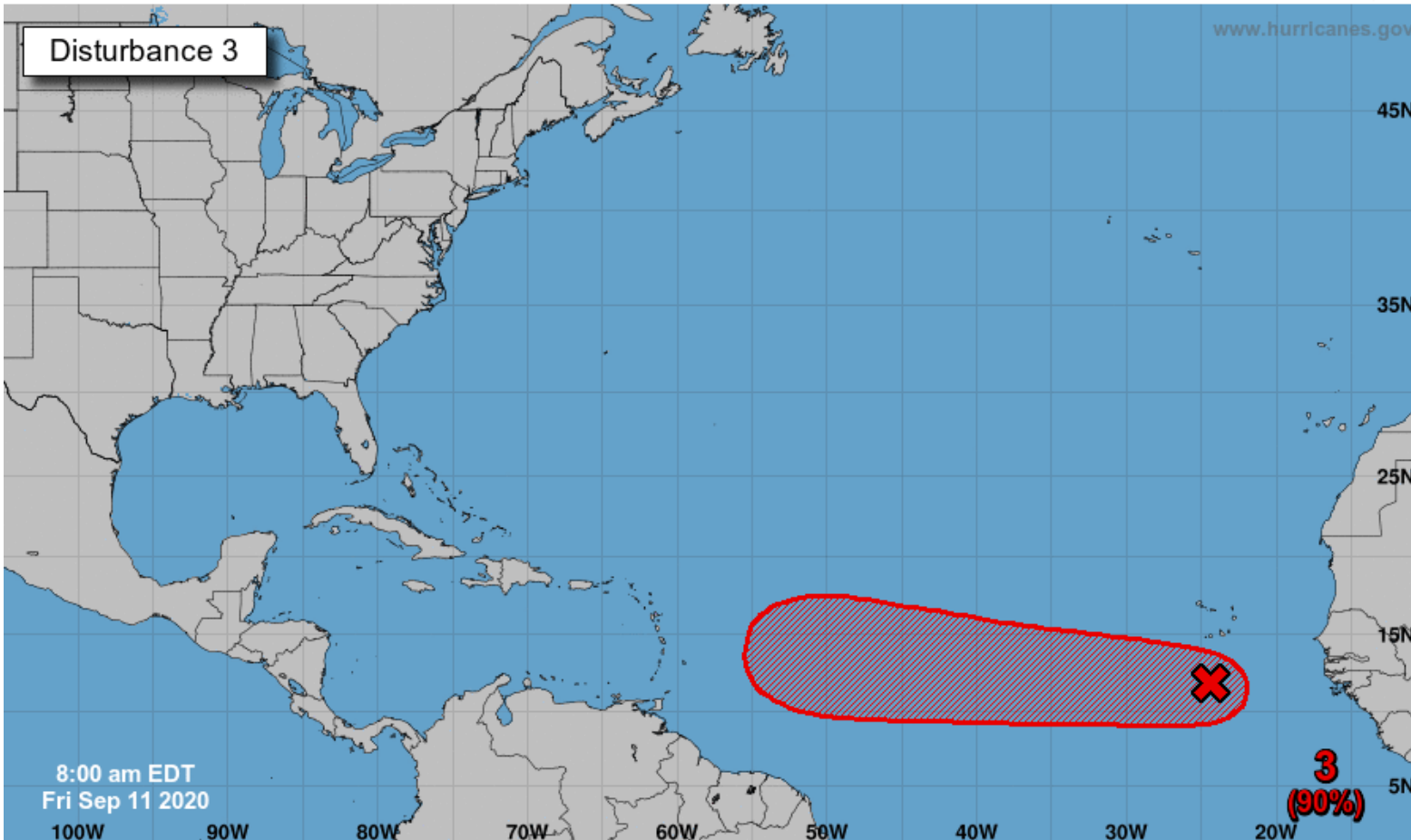
Tropical Weather Outlook

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



Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



A tropical wave is located a few hundred miles south of the Cabo Verde Islands and is producing a large area of disorganized showers and thunderstorms.

Development of this system is forecast, and a tropical depression is expected to form within the next few days while the system moves generally westward at 15 to 20 mph across the eastern and central tropical Atlantic.

This system is about 5-6 days from the Lesser Antilles. This system will need to be monitored heading into next week.

***Formation chance through 48 hrs...high...70%**

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

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 4

4
(40%)

2:00 pm EDT
Thu Sep 10 2020

100W 90W 80W 70W 60W 50W 40W 30W 20W

Current Disturbances and Five-Day Cyclone Formation Chance:
Tropical or Sub-Tropical Cyclone: ○ Depression ⚡ Storm 🌀 Hurricane
⊗ Post-Tropical Cyclone or Remnants

✕ < 40% ✕ 40-60% ✕ > 60%

Another large area of disturbed weather associated with a tropical wave is beginning to move off the west coast of Africa.

Environmental conditions appear conducive for development during the next few days, and a tropical depression could form over the far eastern tropical Atlantic early next week while the system moves slowly westward.

Upper-level winds could become less conducive for development by Monday or Tuesday.

This system does not need to be monitored at this time as it is thousands of miles from the Lesser Antilles. It may need to be monitored next week if it makes it far enough west.

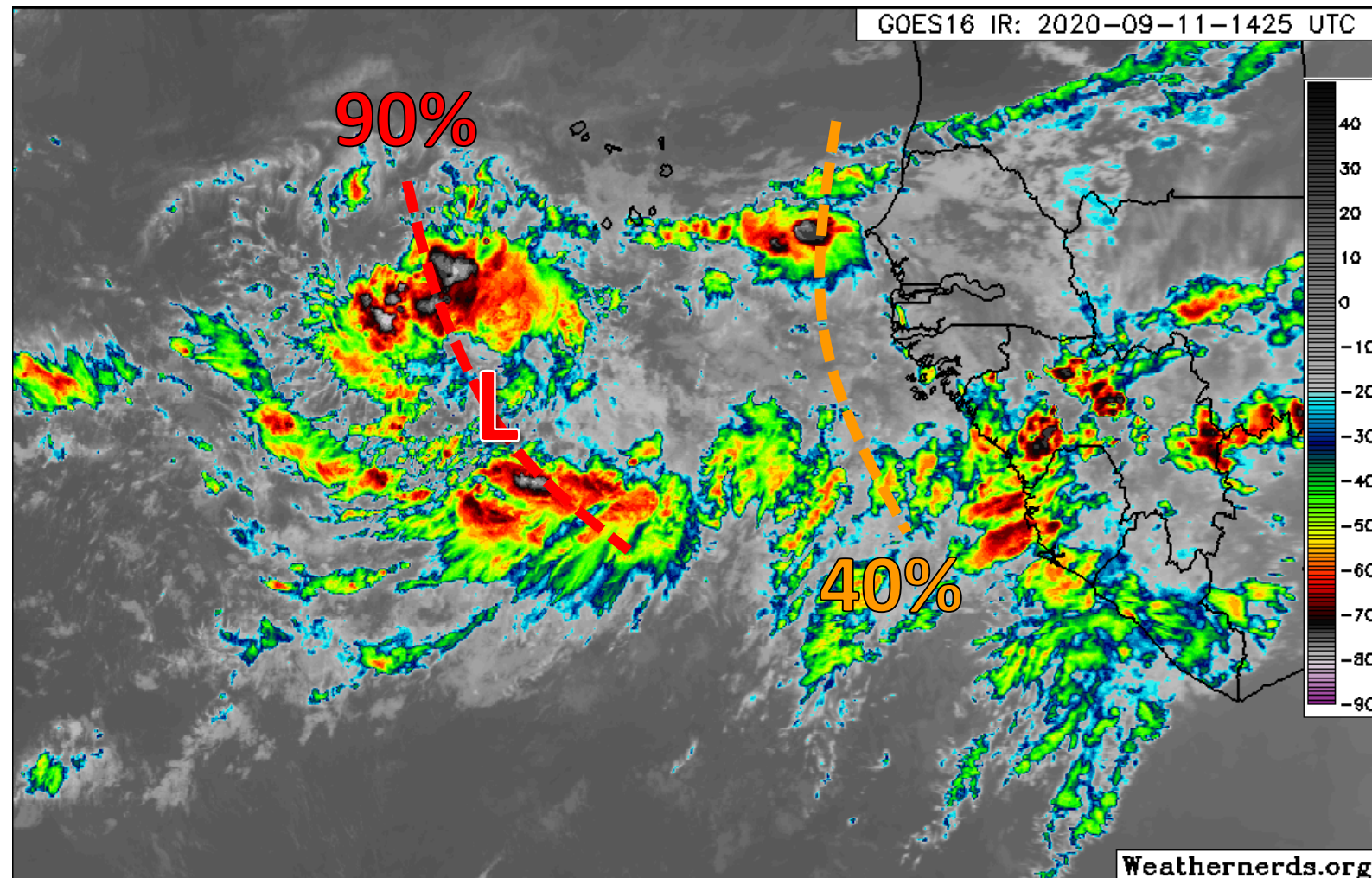
*Formation chance through 48 hrs...low...10%

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



Satellite Imagery

Eastern Atlantic & Western Africa



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

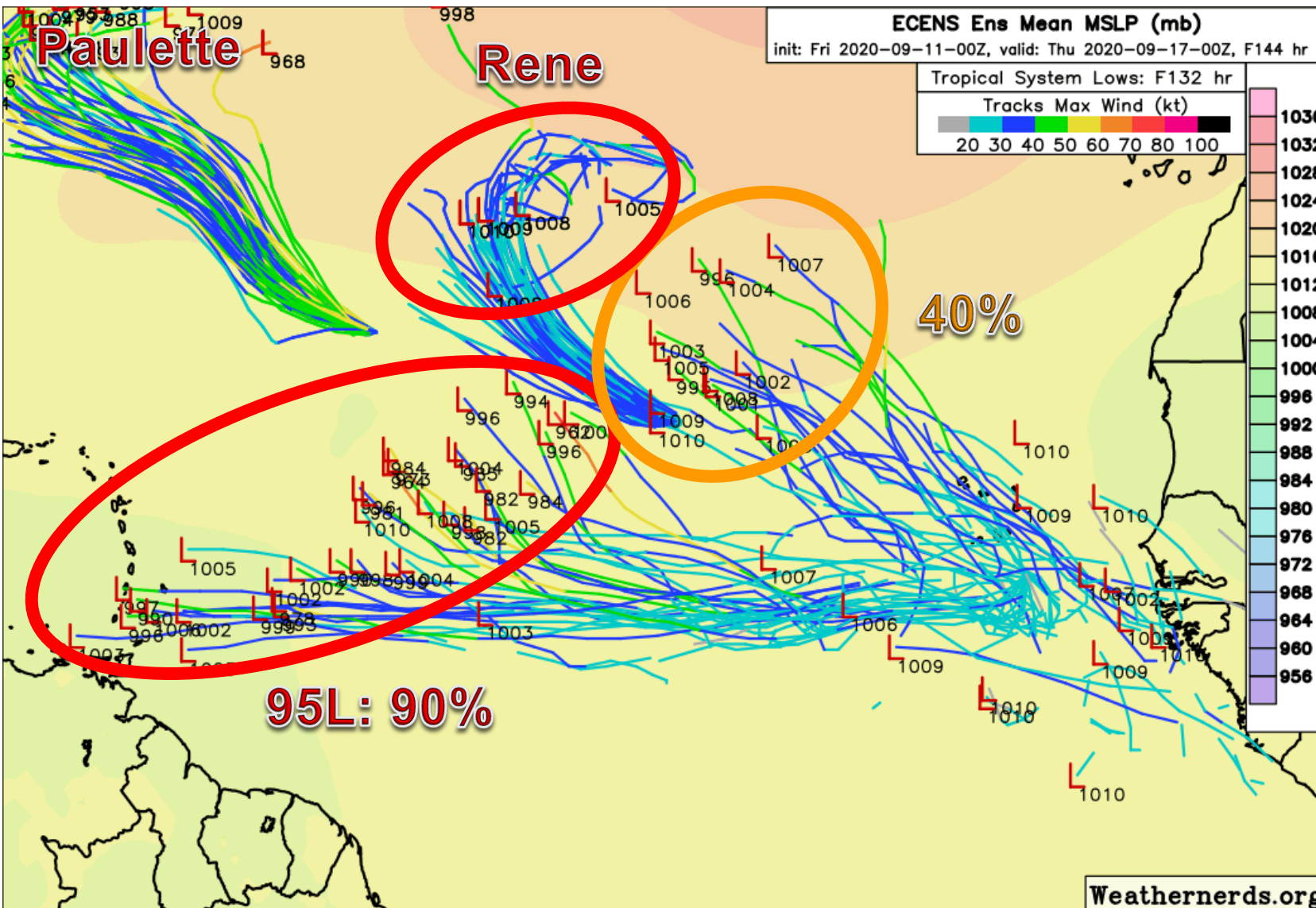
Invest 95L (90%) has two areas of spin fighting against each other currently. Once this consolidates into one center, then further development may occur.

The wave just coming off Africa is still rather disorganized, but conditions appear somewhat favorable for development over the next few days.



Model Forecasts

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



Invest 95L's forecast is rather tricky going into next week as Rene's track also plays a role. A faster, weaker 95L will tend to move farther west. However, a slower, stronger 95L could feel the weakness left by Rene and turn northeastward before reaching the Lesser Antilles.

The next wave coming off Africa (40%) will more likely head west-northwestward over the eastern Atlantic.



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 30% (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.

Invest 96L (near the Bahamas)

- A trough of low pressure over 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 40% (medium) chance of formation during the next 48 hours and a 60% (medium) chance during the next 5 days.
- This system could bring locally heavy rainfall to Florida and the northern Gulf Coast during the next several days.

Tropical Storm Paulette

- The center of Paulette is about 975 miles southeast of Bermuda or about 1,750 miles east of Miami.
- Maximum sustained winds are near 65 mph, and Paulette is moving northwest at 10 mph.
- Paulette is forecast to become a hurricane early next week as it moves near or over Bermuda.
- Swells from Paulette could cause dangerous rip currents along the East Coast.



Overall Summary

Tropical Storm Rene

- The center of Rene is located about 1,085 miles west-northwest of the Cabo Verde Islands, or about 2,600 miles east-southeast of Miami.
- Maximum sustained winds are at 40 mph, and Rene is moving west-northwest at 13 mph.
- Some restrengthening is possible during the next weekend followed by weakening early next week

Eastern Atlantic Tropical Wave

- A tropical wave has moved off the coast of Africa and is rather 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 70% (high) chance of formation over the next 48 hours, and 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 somewhat favorable for development.
- This system has a 10% (low) chance of formation over the next 48 hours, but a 40% (medium) chance over the next 5 days.



Florida Outlook

Florida Outlook:

- Invest 96L will likely produce heavy rainfall across much of the state, particularly near the West Coast, Panhandle, and Big Bend.
- 3-5" of rainfall is expected along the West Coast and in the Panhandle over the next 7 days with 1-2" elsewhere. Localized totals of 6-10" are possible.
- Localized flash flooding and minor river flooding will continue through early next week.
- Flood Watches are now in effect along the West Coast from Pinellas and Hillsborough Counties southward to Collier County.
- Building waves from 96L are possible, and a moderate to high rip current risk is expected for Gulf beaches next week.
- Paulette could generate swells that reach the Atlantic beaches, possibly elevating the rip current risk next week.
- Direct impacts from any other systems in the tropics are not expected over the next several days.
- Invest 95L may need to be monitored next week.

The next briefing packet will be issued this afternoon with the 5 PM advisories for Paulette and Rene. For the latest information on the tropics, please visit the National Hurricane Center website at www.hurricanes.gov.



TROPICAL UPDATE



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State Meteorological Support Unit

Florida Division of Emergency Management

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