



# TROPICAL UPDATE



11 AM EDT

Monday, August 26, 2019

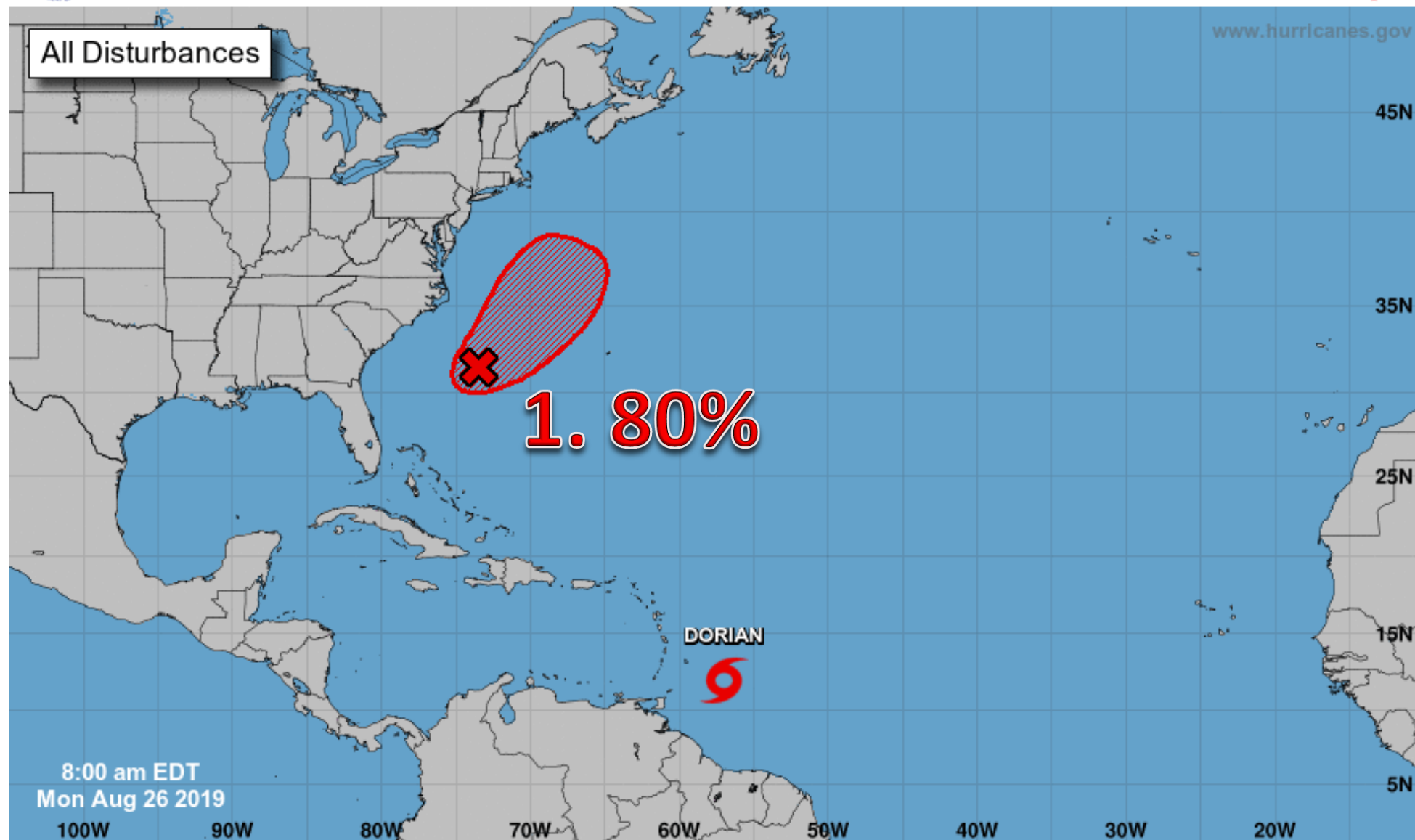
Tropical Storm Dorian  
& Invest 98L (80%)

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).



# Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



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

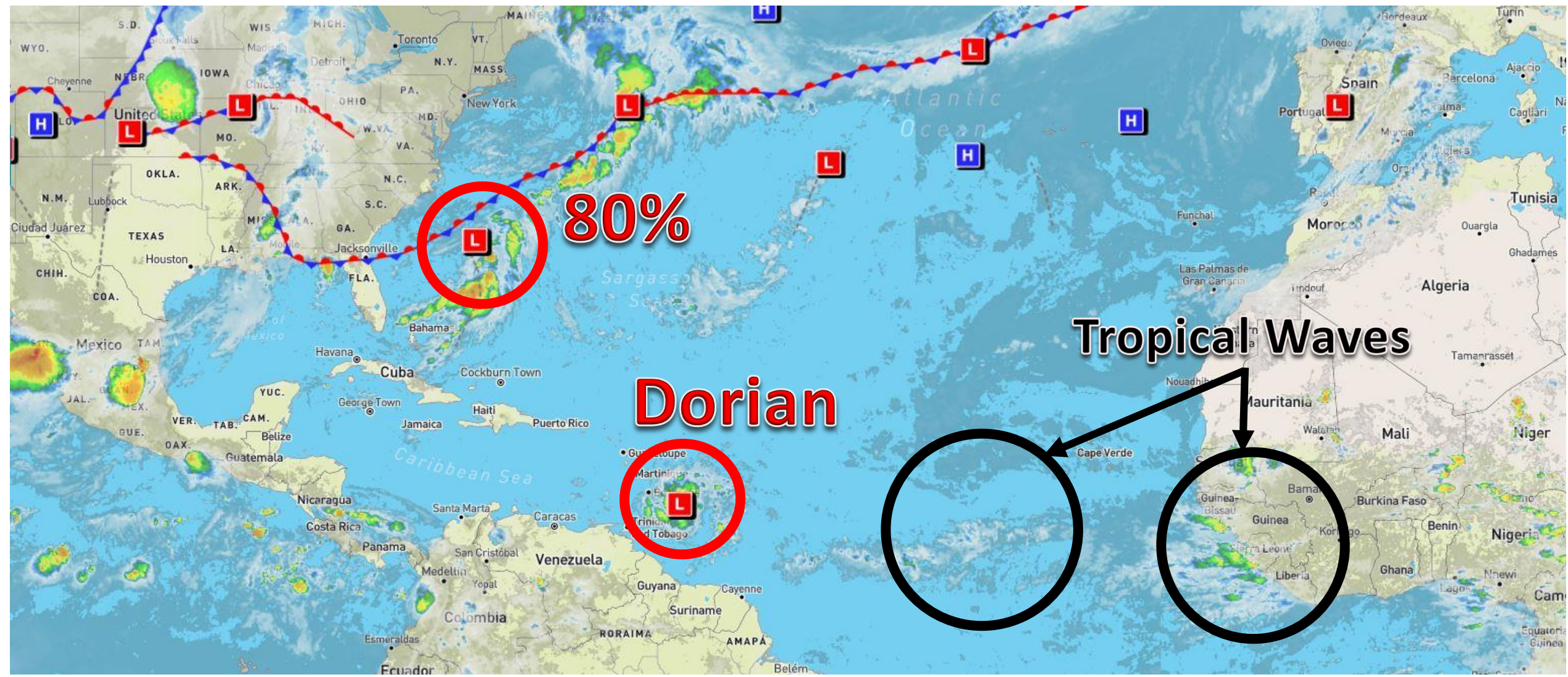
Tropical or Sub-Tropical Cyclone:    Depression    Storm    Hurricane

Post-Tropical Cyclone or Remnants



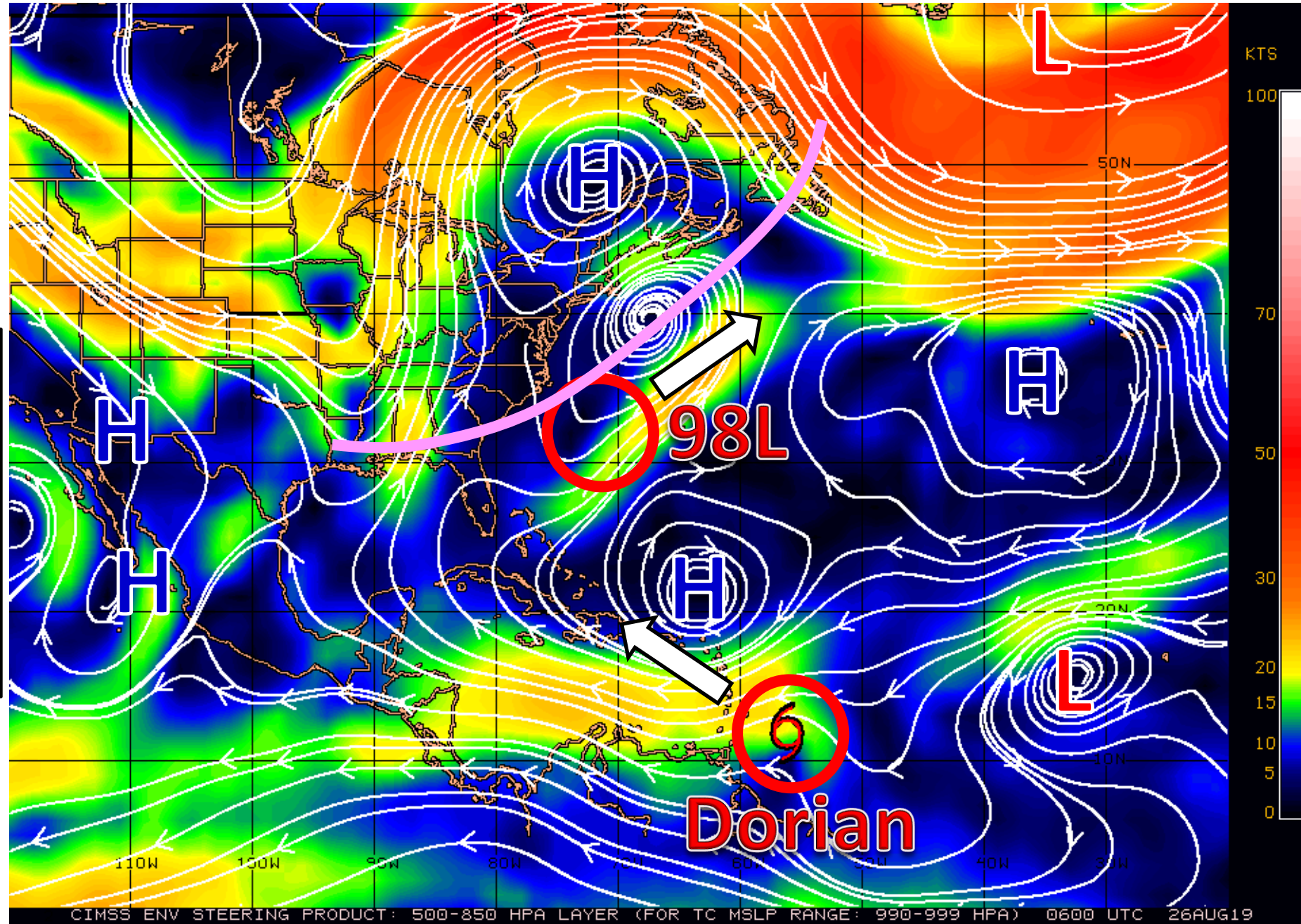
# Atlantic Basin Satellite Image

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





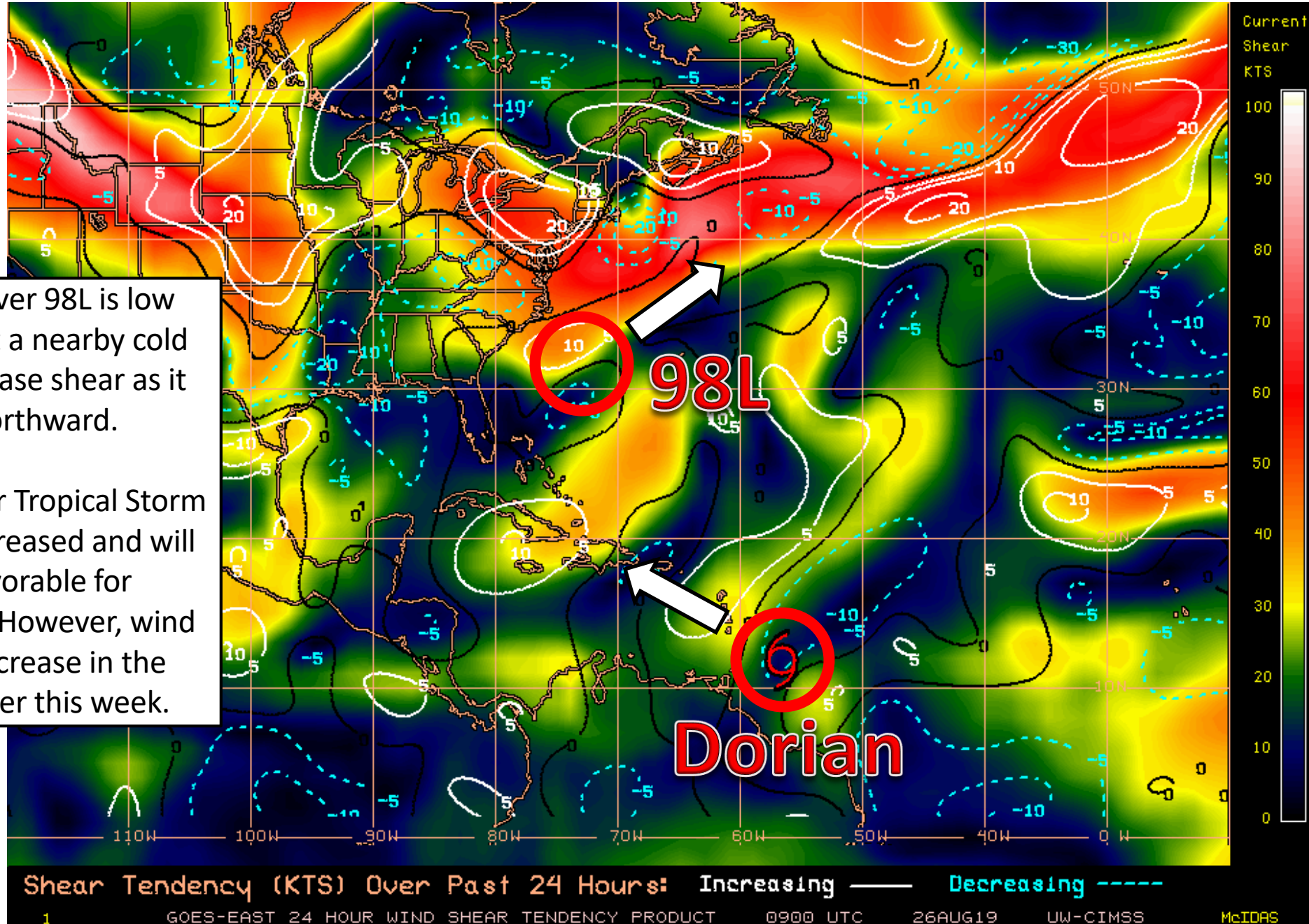
# Steering Currents



Invest 98L, well offshore of the FL East Coast, will move northeastward ahead of a cold front (pink line).

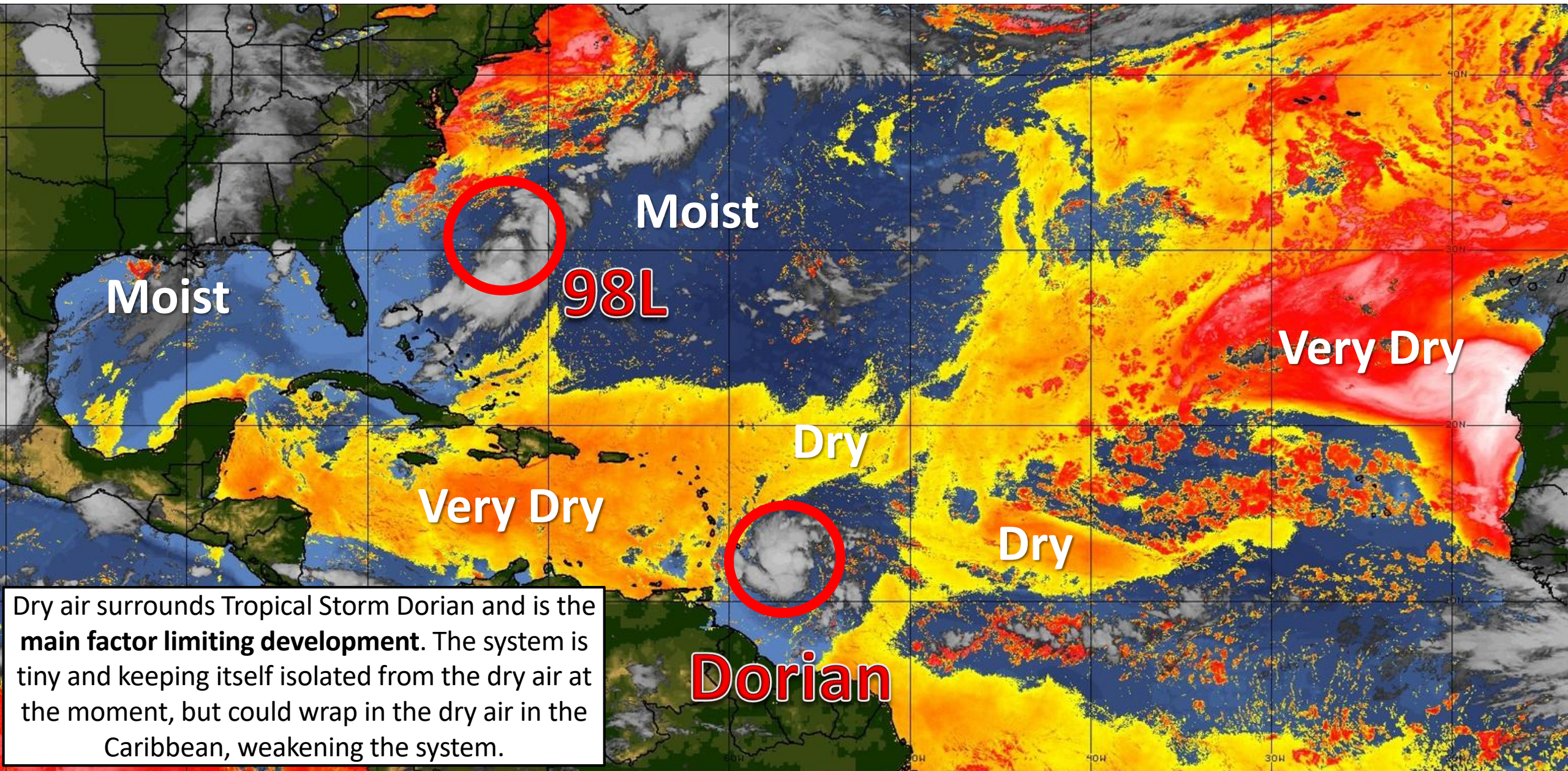
Dorian will move west-northwestward around the southern edge of a large Atlantic high pressure system.

# Wind Shear (shaded) and Wind Shear Tendencies (contoured)





# Dry Air & Saharan Dust



Dry air surrounds Tropical Storm Dorian and is the **main factor limiting development**. The system is tiny and keeping itself isolated from the dry air at the moment, but could wrap in the dry air in the Caribbean, weakening the system.

LESS <----- DRY AIR (LOW/MID-LEVEL) AND/OR DUSTY SAL AIRMASS -----> MORE

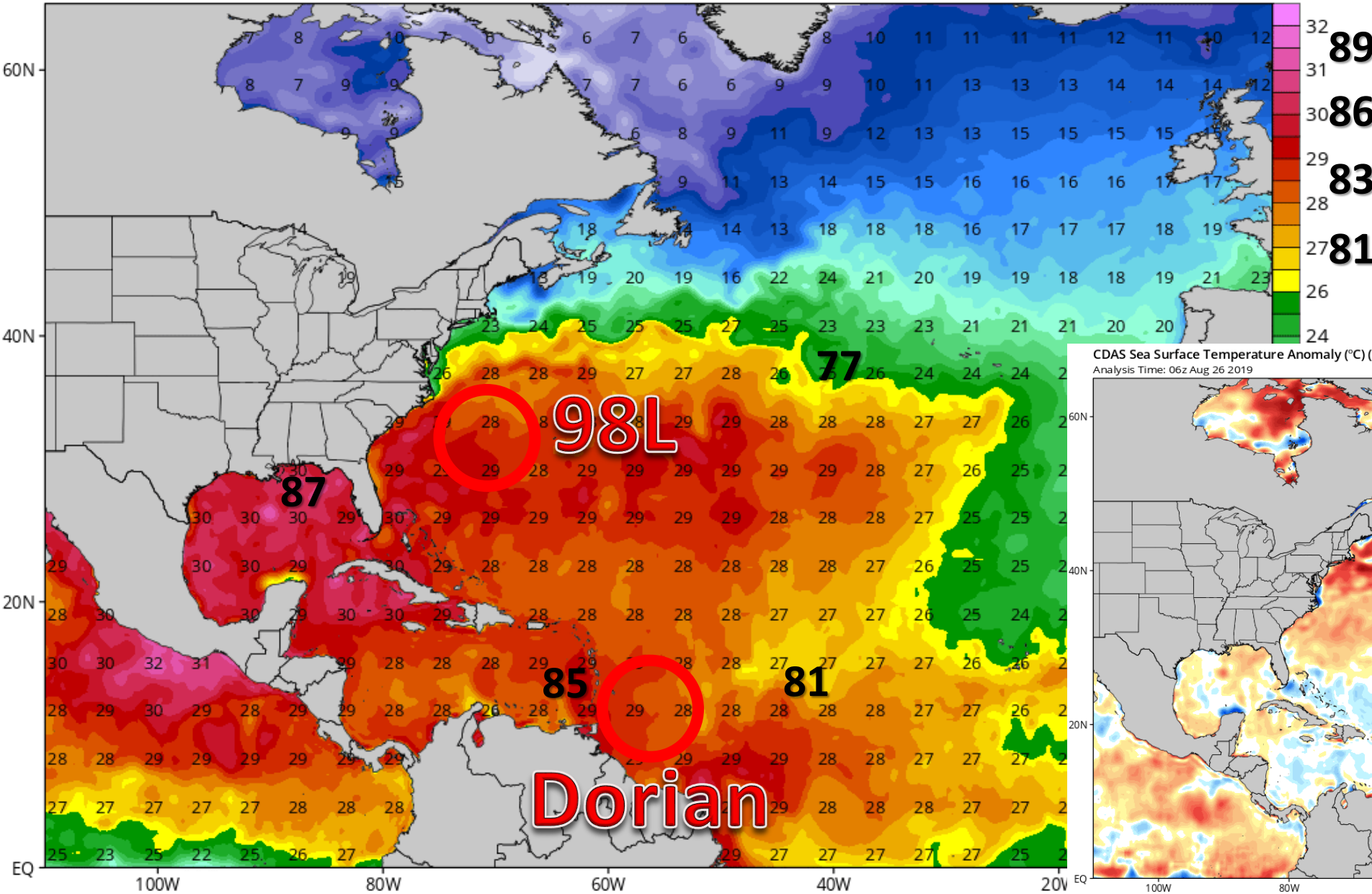


# North Atlantic Sea Surface Temperatures and Anomalies

CDAS Sea Surface Temperature (°C)

Analysis Time: 06z Aug 26 2019

TROPICALTIDBITS.COM

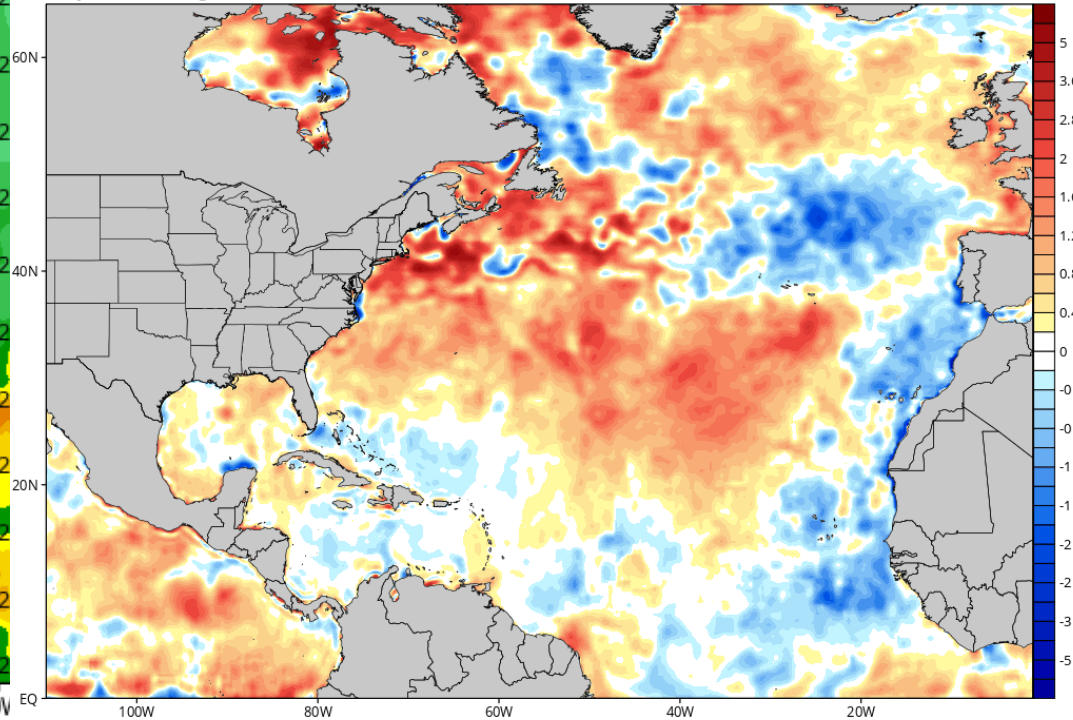


Water temperatures near and ahead of 98L and Dorian are warm enough to support tropical development. Water temperatures will be warming as Dorian travels west. Temperatures are near normal for this time of year in the Caribbean.

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

Analysis Time: 06z Aug 26 2019

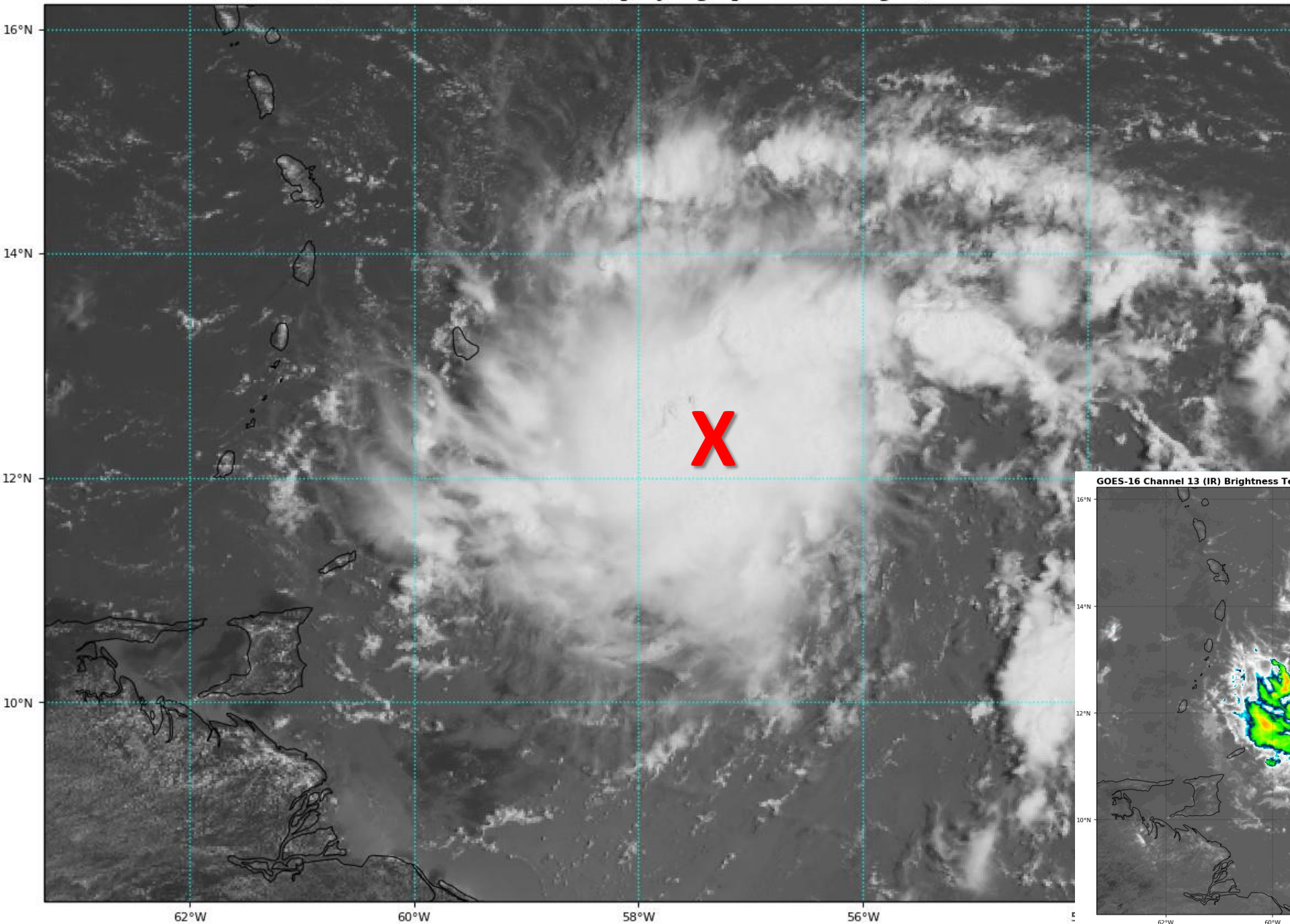
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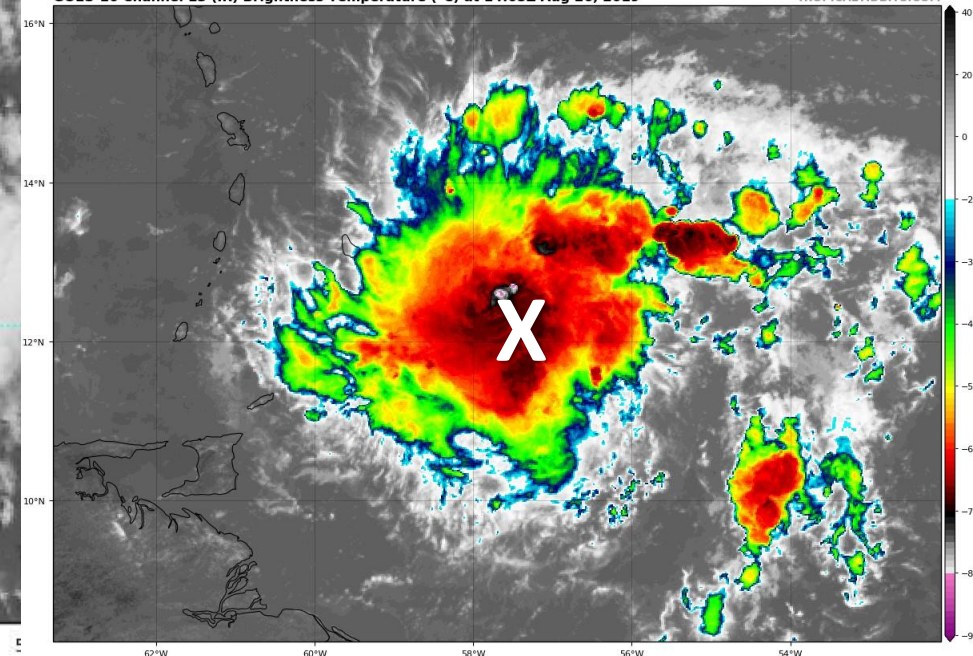
# Tropical Storm Dorian Satellite Image

Tropical Storm Dorian continues to organize and is becoming more symmetric.

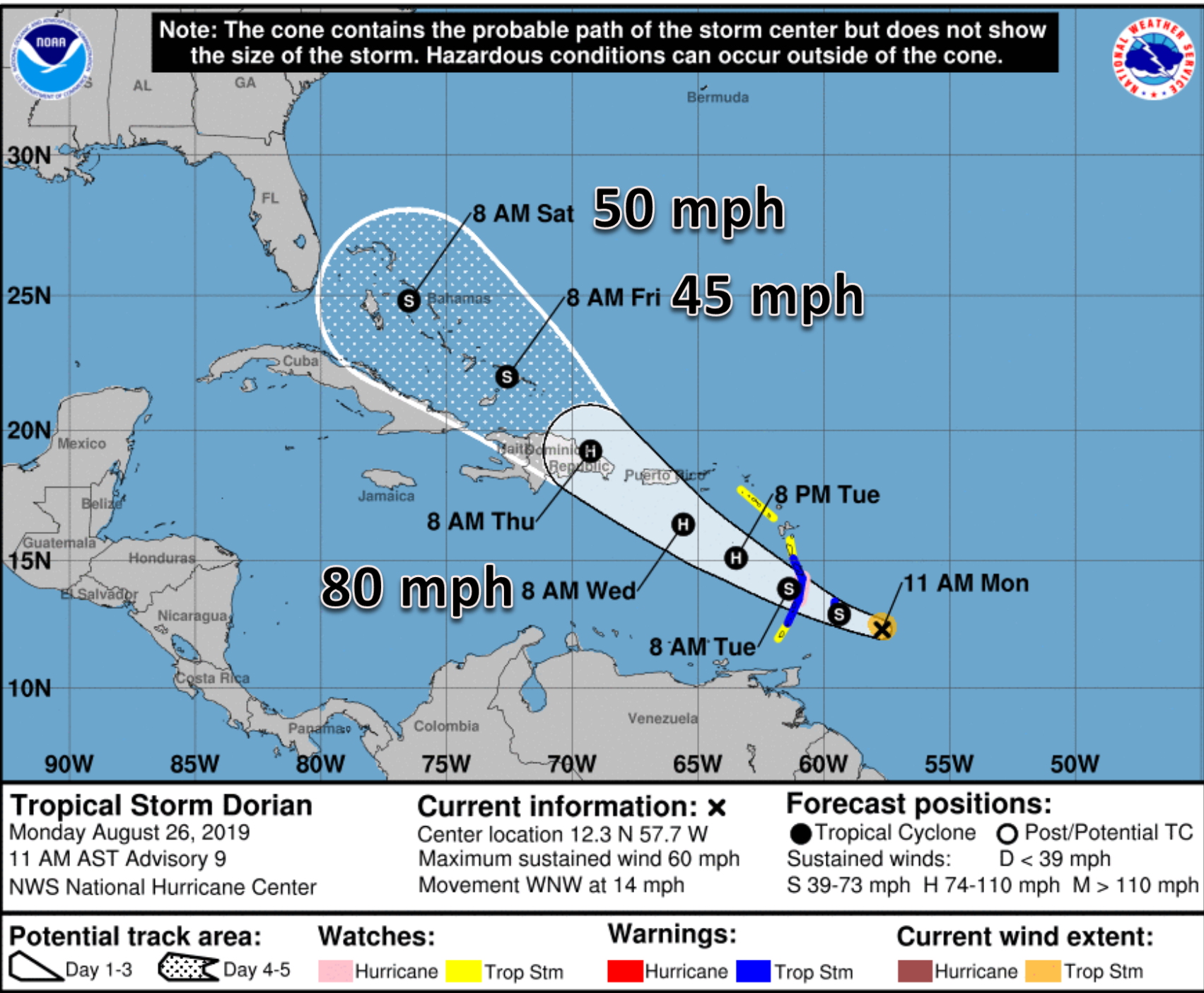


GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 14:05Z Aug 26, 2019

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# Tropical Storm Dorian Forecast Track

Tropical Storm Dorian has now turned to the west-northwest, moving at 14 mph. Dorian is expected to turn toward the northwest by Tuesday.

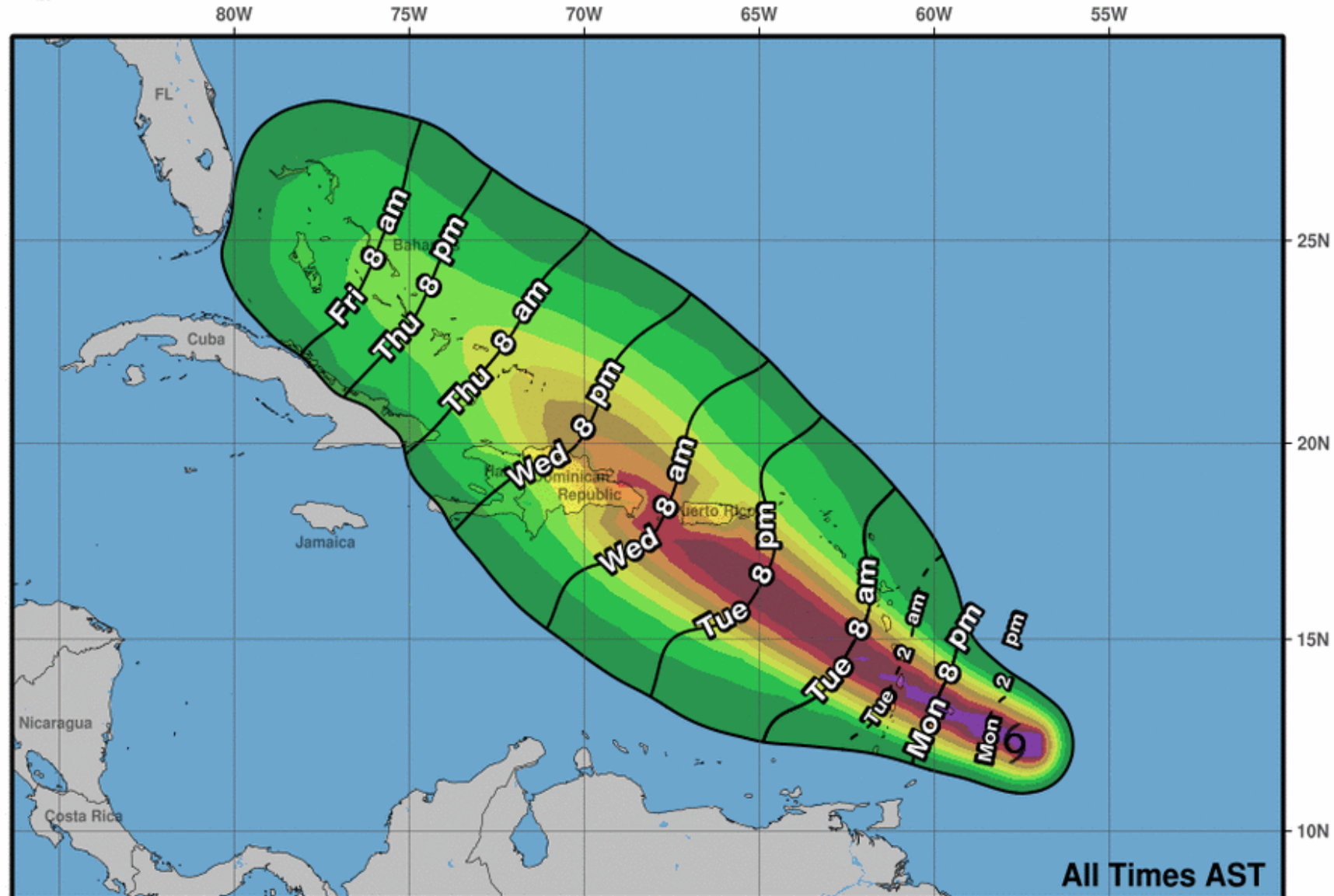
Maximum sustained winds have increased to 60 mph. Further strengthening is forecast, and Dorian is forecast to become a hurricane by Tuesday night in the eastern Caribbean.

Land interaction and unfavorable upper-level winds will likely weaken the system later this week, but **some re-strengthening will be possible in the Bahamas.**





# Earliest Reasonable Arrival Time of Tropical-Storm-Force Winds



**Tropical Storm Dorian**  
Mon. Aug. 26, 2019 11 am AST  
Advisory 9

Storm Location & Wind Speed

○ < 34 kt (39 mph)

○ 34-63 kt (39-73 mph)

● ≥ 64 kt (74 mph)

5-day chance of receiving sustained 34+ kt (39+ mph) winds

5

10

20

30

40

50

60

70

80

90

100 %

Puerto Rico and the US Virgin Islands generally have a 1 in 2 chance of seeing tropical storm force winds.

Watches will likely be issued for Puerto Rico later today.





# Key Messages for Tropical Storm Dorian

Advisory 9: 11:00 AM AST Mon Aug 26, 2019



1. Dorian is expected to bring tropical storm conditions to portions of the Lesser Antilles tonight and Tuesday, where tropical storm watches and warnings are in effect. Hurricane conditions are also possible in portions of the Windward Islands, and a hurricane watch has been issued for St. Lucia. Residents in these areas should refer to advice from local government officials and products from their local meteorological service for additional information.

2. Dorian is expected to produce 3 to 8 inches of rainfall from Martinique to St. Vincent, including Barbados, with isolated totals as high as 10 inches in portions of the northern Windward Islands.

3. The risk of direct impacts from wind and rainfall has increased for Puerto Rico and Hispaniola. Interests in those areas should monitor the progress of Dorian and tropical storm or hurricane watches will likely be required later today.

4. Any potential impacts from Dorian in the Bahamas and Florida later this week are highly uncertain, given the potential for the system to interact with the high terrain of Hispaniola.



For more information go to [hurricanes.gov](https://hurricanes.gov)



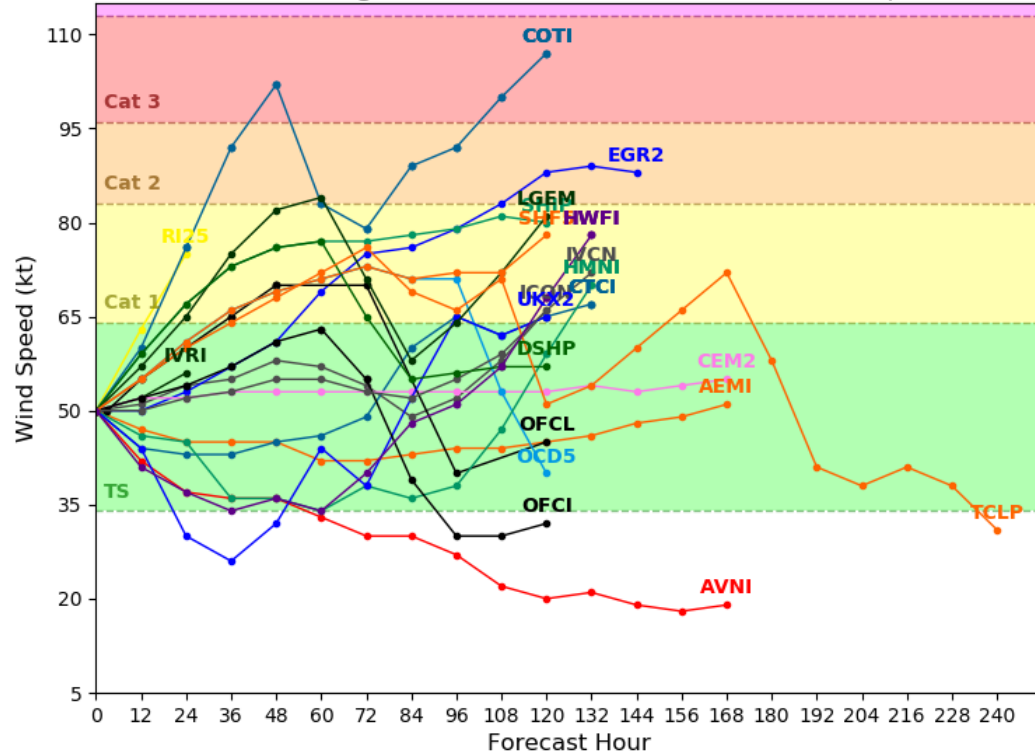
# T.S. Dorian Model Guidance

- While models agree on bringing Dorian near Puerto Rico and Hispaniola in about 72 hours, models diverge after 5 days in the Bahamas.
- Intensity remains more uncertain as there is a wide spread in the model guidance. The uncertainty in the intensity forecast is due to the small size of Dorian and land interaction later this week with Hispaniola.

## Tropical Storm DORIAN Model Intensity Guidance

Initialized at 12z Aug 26 2019

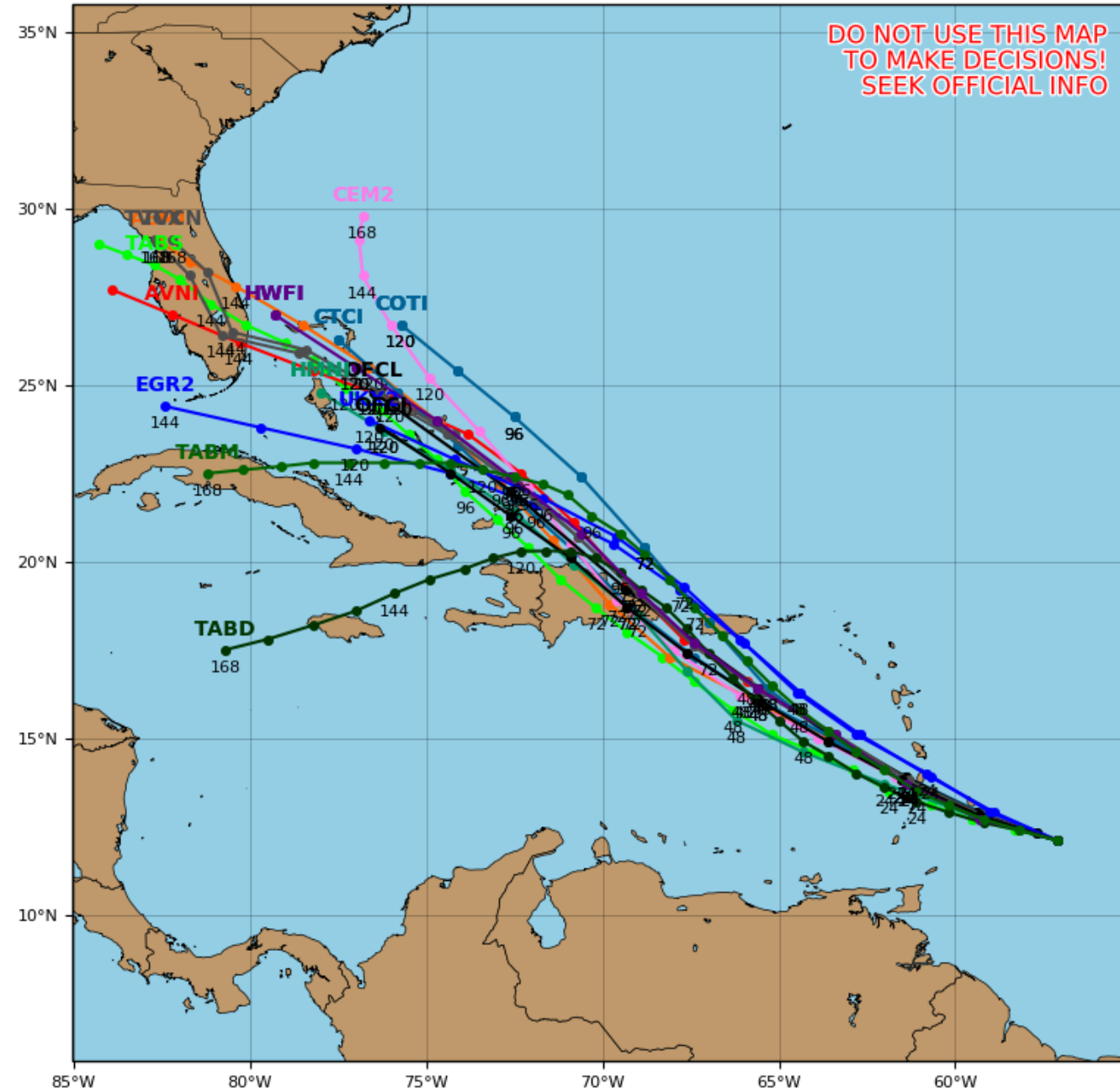
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## Tropical Storm DORIAN Model Track Guidance

Initialized at 12z Aug 26 2019

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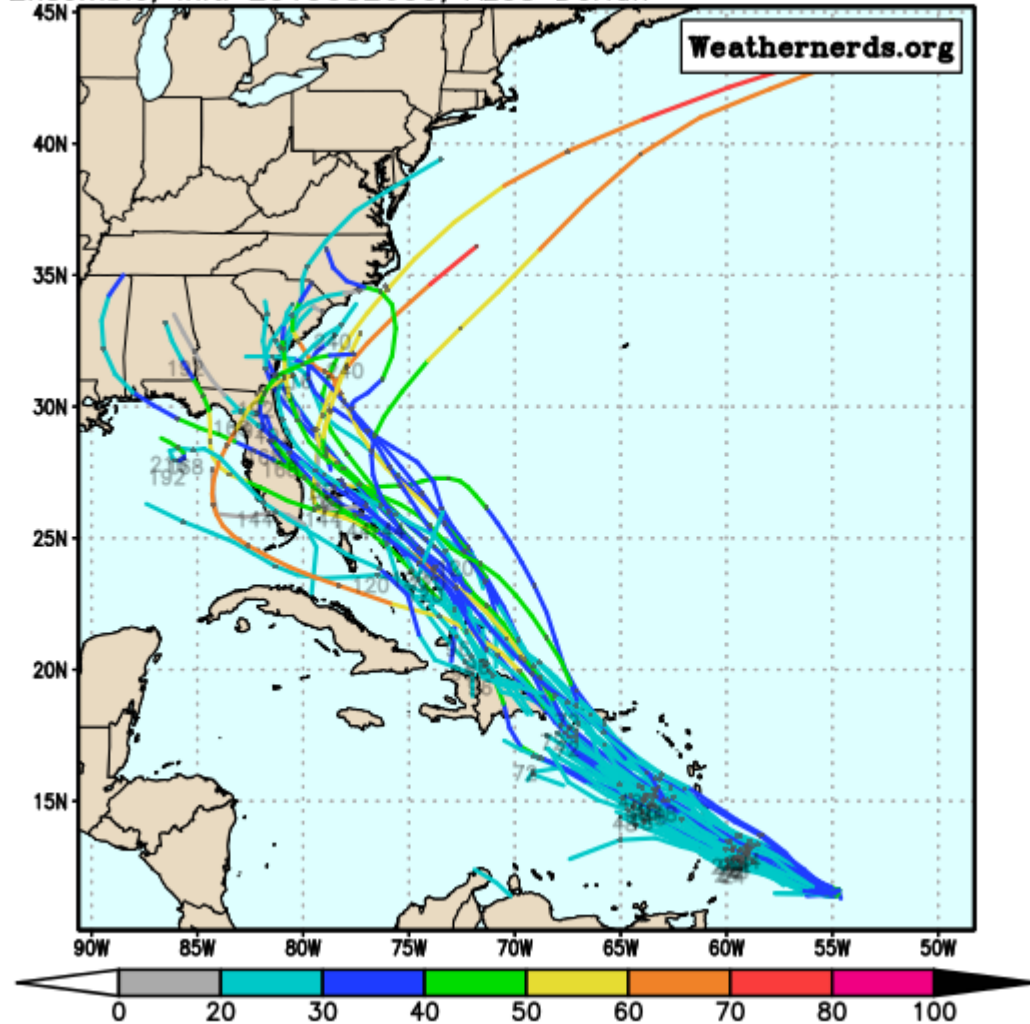




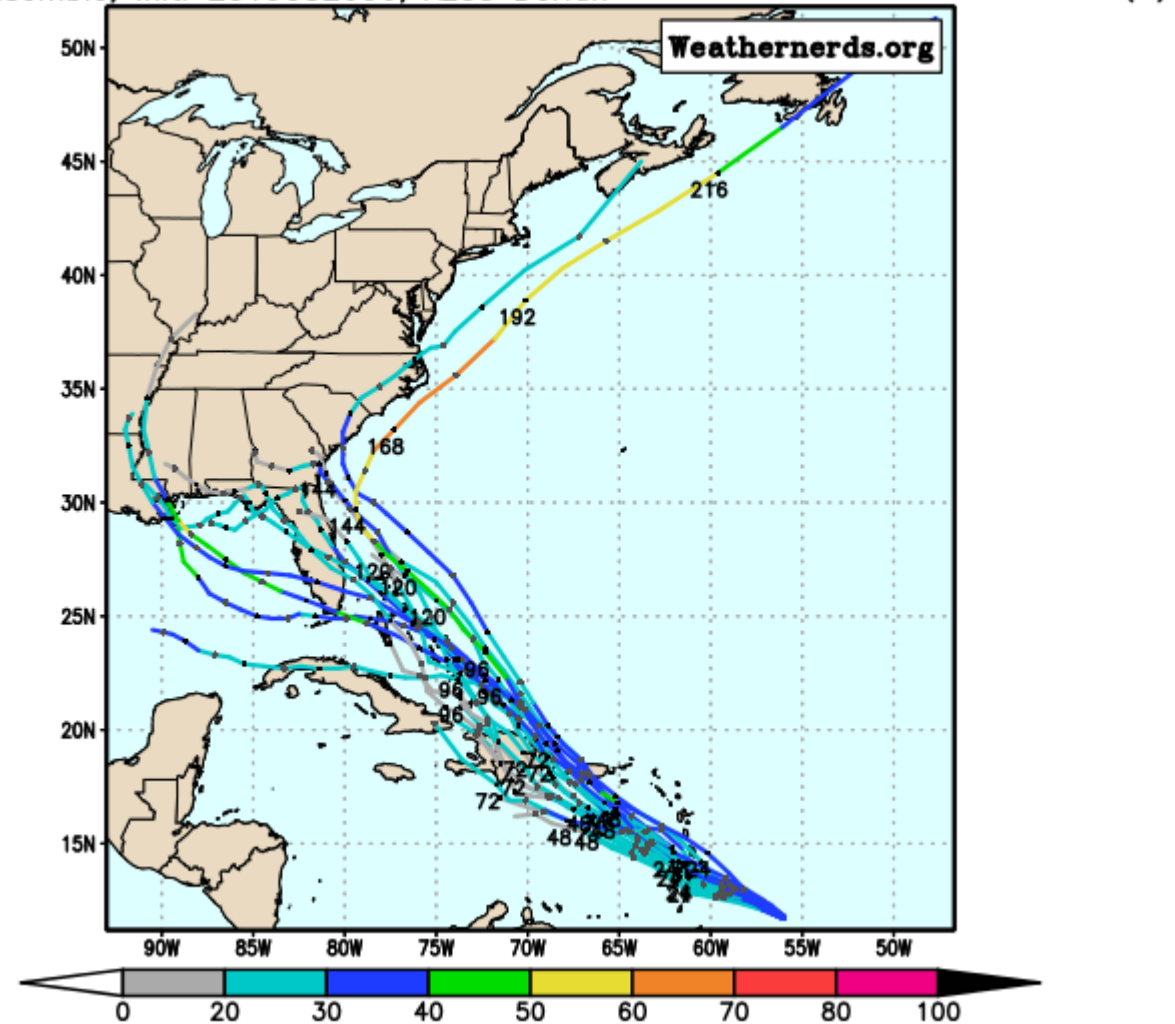
# Current Forecast Ensemble Model Guidance

There is a wide spread in solutions for the track and strength of Dorian later this week. Each line is a possible model solution, with the color representing wind strength. Strength ranges from remnant low to strong Tropical Storm, with location from the eastern Gulf of Mexico to off the coast of the Mid-Atlantic.

ECMWF Ensemble, init: 2019082600, AL05 Dorian



color = max win GFS Ensemble, init: 2019082606, AL05 Dorian





# Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



www.hurricanes.gov

Disturbance 1



1  
(80%)

1. An elongated area of low pressure located about 275 miles south-southeast of Cape Hatteras, North Carolina has become a little better organized overnight. Environmental conditions appear conducive for additional gradual development, and a tropical or subtropical cyclone is likely to form later today or Tuesday while the system moves slowly northeastward well offshore of the United States east coast. The reconnaissance aircraft mission for today has been canceled.

\* **Formation chance through 48 hours...high...80 percent.**

\* **Formation chance through 5 days...high...80 percent.**

8:00 am EDT  
Mon Aug 26 2019

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

25N

15N

5N

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



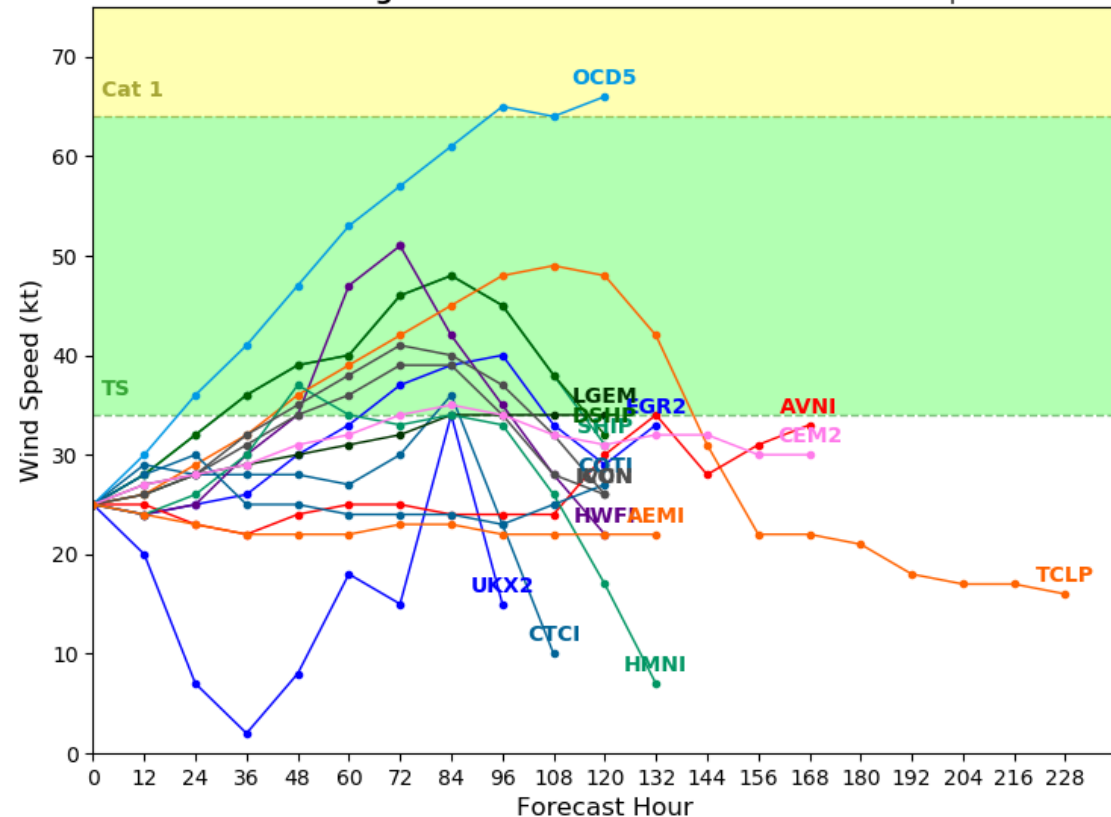
# Invest 98L Model Guidance

98L will move northeastward for the next several days. Models keep the storm well away from the U.S. East Coast. 98L will likely stay weak.

## Invest 98L Model Intensity Guidance

Initialized at 12z Aug 26 2019

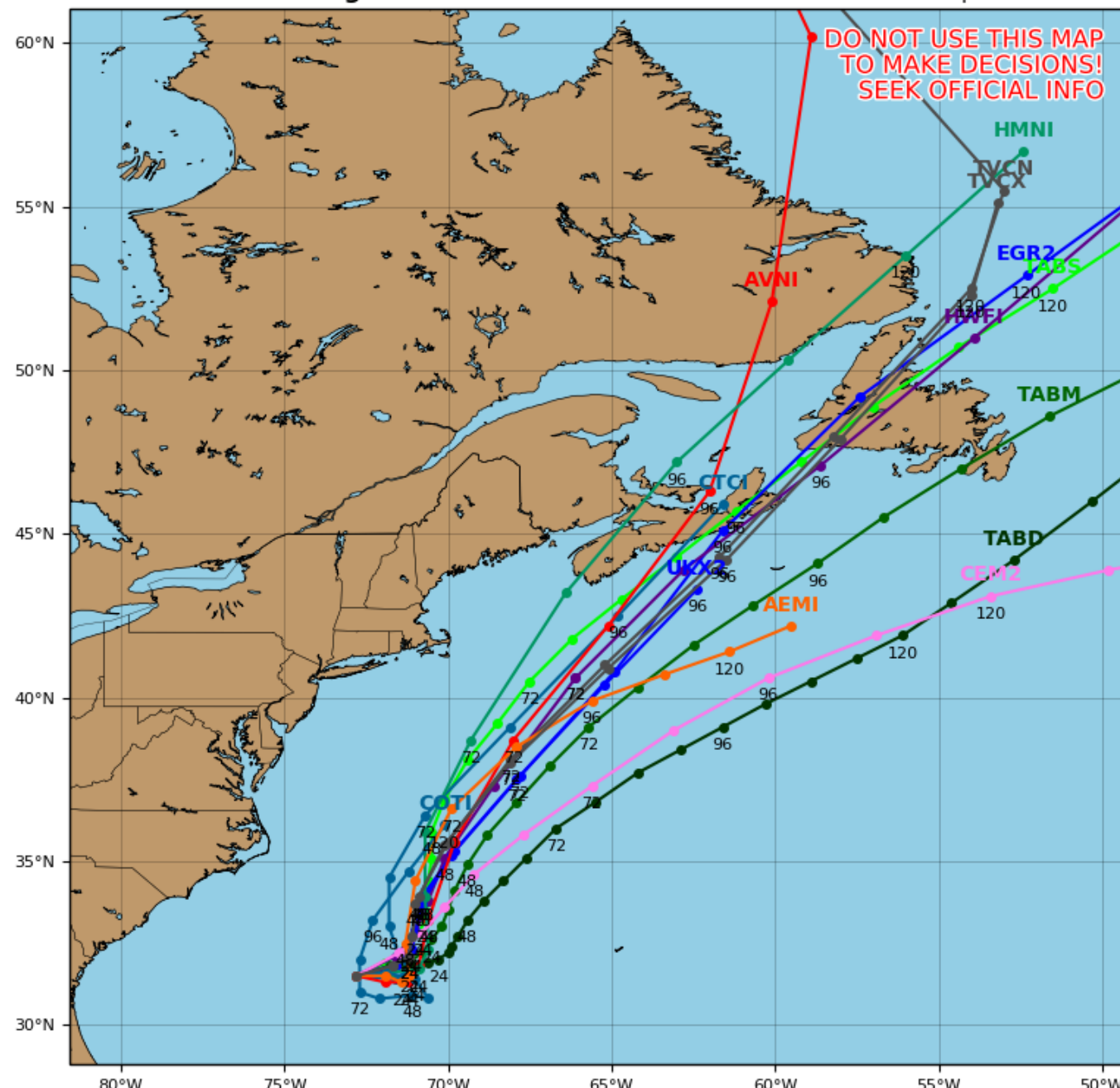
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## Invest 98L Model Track Guidance

Initialized at 12z Aug 26 2019

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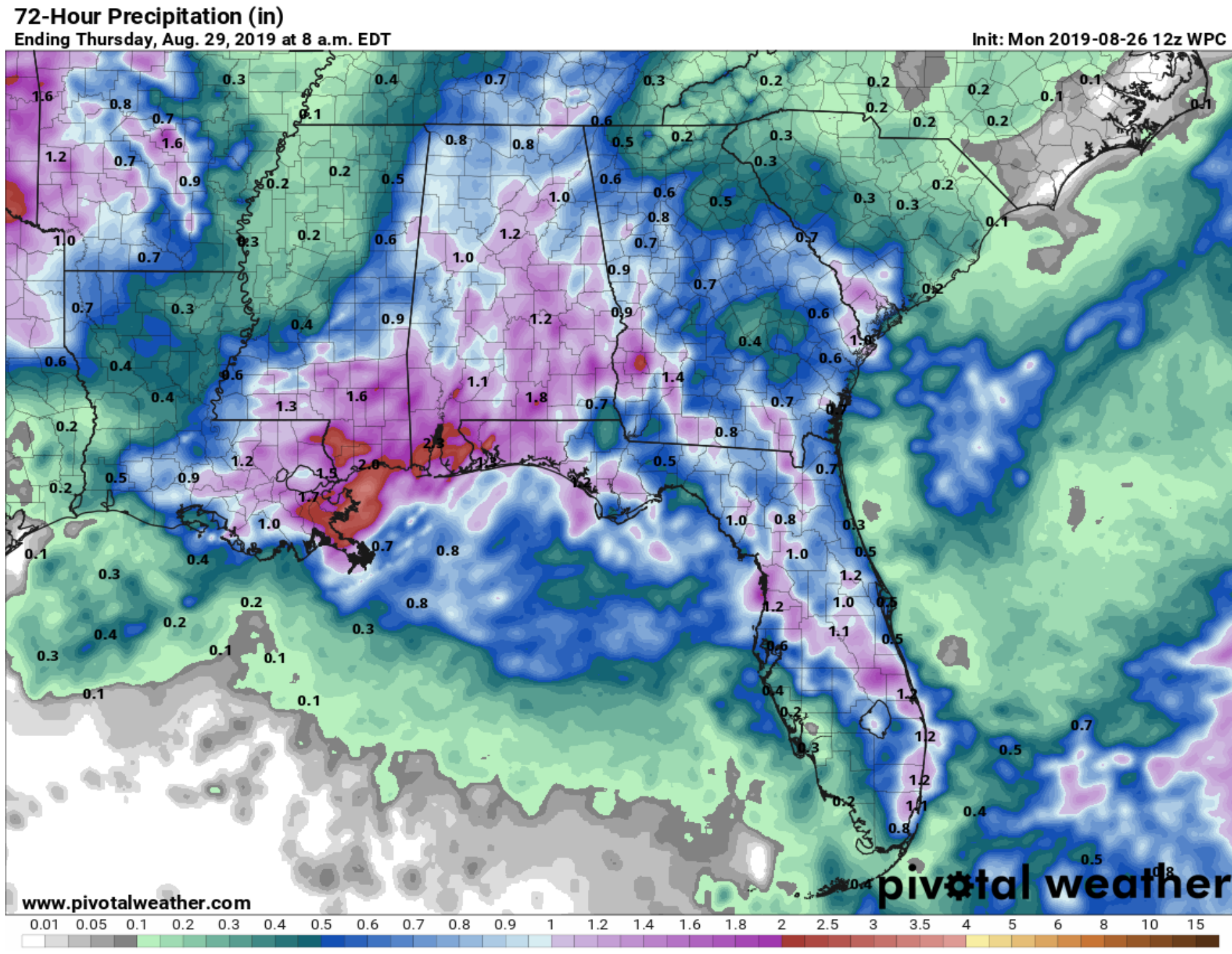
# Rainfall Totals Next 3 Days

A cold front in North Florida will increase rain chances through Tuesday, with some areas of the Panhandle receiving a widespread 3-4".

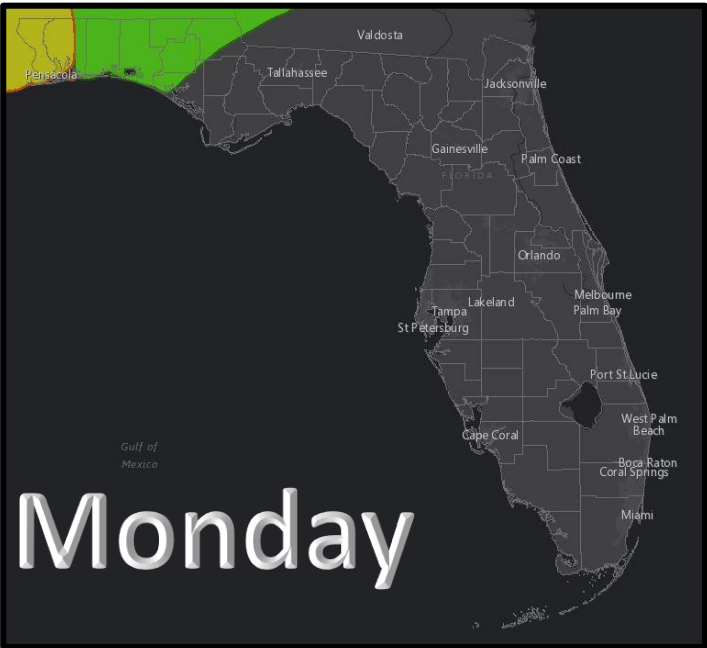
Typical summer thunderstorms in the Peninsula.

**These rainfall totals are not expected to impact river levels.**

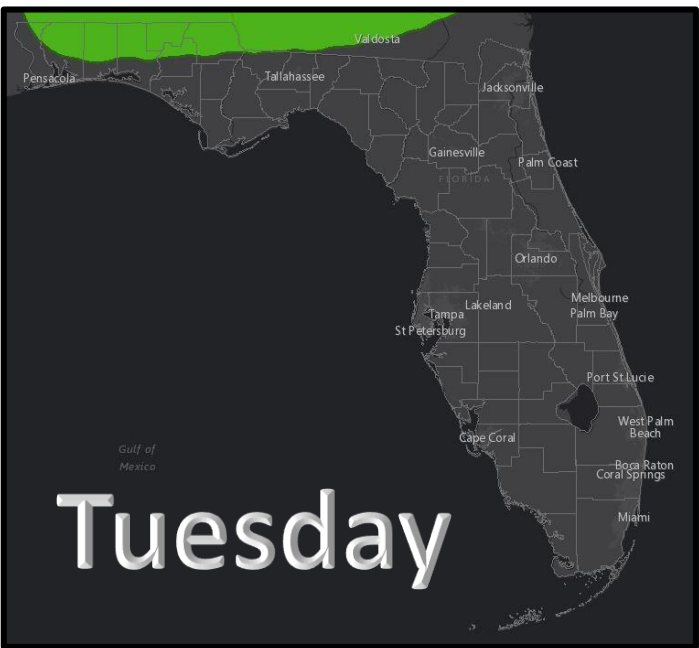
*Ponding of water on roadways is possible in the afternoon in urban areas of the Panhandle.*













Monday



Tuesday

# Flash Flood Outlooks

A stalling cold front across North Florida will increase rain chances for the next couple of days. Recent dry conditions inland will limit the flood threat. The most susceptible areas for flooding will be urban areas of the western Panhandle. **Minor street flooding will be the primary impact.**

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			
	NO Flash Flooding			
  WEATHER PREDICTION CENTER				

# Summary

## **Tropical Storm Dorian**

- Tropical Storm Dorian continued to organize overnight with more persistent shower and thunderstorm activity and a more symmetric look. However, dry air continues to prevent rapid intensification.
- As of the 11 AM ET advisory, maximum sustained winds have increased to 60 mph. Slow but steady strengthening is forecast to continue for the next couple of days. The tropical storm may become a hurricane Tuesday or Wednesday in the eastern Caribbean Sea.
- Dorian is located about 135 miles east-southeast of Barbados and has now turned to the west-northwest at 14 mph. A turn to the northwest is expected by tomorrow.
- Dorian should reach the Lesser Antilles later today and Puerto Rico/Dominican Republic sometime Wednesday.
- This weekend, Dorian, or the remnants, will track near the Florida Peninsula. Small systems such as Dorian are more susceptible to surrounding atmospheric conditions, which could lead to significant fluctuations in the intensity and track forecast.
- Any land interaction with Hispaniola is likely to significantly weaken the small system. For Dorian to be a threat to the Bahamas and Florida this weekend, it will need to avoid the mountainous islands, ingest little dry air, and fight off increasing wind shear in the Caribbean.

## **Invest 98L**

- Invest 98L is well off the East Coast of the United States and will continue to move northeastward away from land.
- 98L is likely to become a tropical or subtropical storm later today or tomorrow.
- This system has an 80% (high) chance of formation during the next 48 hours and next 5 days.
- The next name on the list is Erin.



## Florida Outlook:

- Invest 98L off the East Coast poses no threat to Florida.
- Unrelated to the tropics, locally heavy rainfall is possible across the Panhandle Monday and Tuesday. Minor street flooding in urban areas will be the main impact.
- Only one River Flood Warning is in effect (Peace River at Arcadia). All other rivers have fallen below flood stage.
- Tropical Storm Dorian poses no threat to Florida over the next 5 days.
- Florida is not currently in the cone or under any watches or warnings.
- *On the current most-likely forecast, land interaction and wind shear will weaken the system later this week.*
- *To pose a significant threat to Florida, Dorian will need to reach the Bahamas with minimal land interaction with Puerto Rico, and more importantly, the Dominican Republic.*
- *In addition, upper-level winds may become unfavorable for the small system in the Caribbean.*
- **However, it should continue to be monitored for impacts over the Labor Day Weekend.**
- GIVEN THE UNKNOWN DEGREE OF INTERACTION WITH HISPANIOLA, THE INTENSITY FORECAST AT DAYS 4 AND 5 IS OF VERY LOW CONFIDENCE.

The next tropics packet will be issued Monday afternoon. For the latest information on the tropics, please visit the National Hurricane Center website at [www.hurricanes.gov](http://www.hurricanes.gov). For the latest flood updates, see the latest products from your local National Weather Service, the [Southeast River Forecast Center](#), and the [Weather Prediction Center](#).



# TROPICAL UPDATE



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State Meteorological Support Unit

Florida Division of Emergency Management

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