



TROPICAL UPDATE



5 AM EDT





Saturday, August 31, 2019

Major Hurricane Dorian

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.

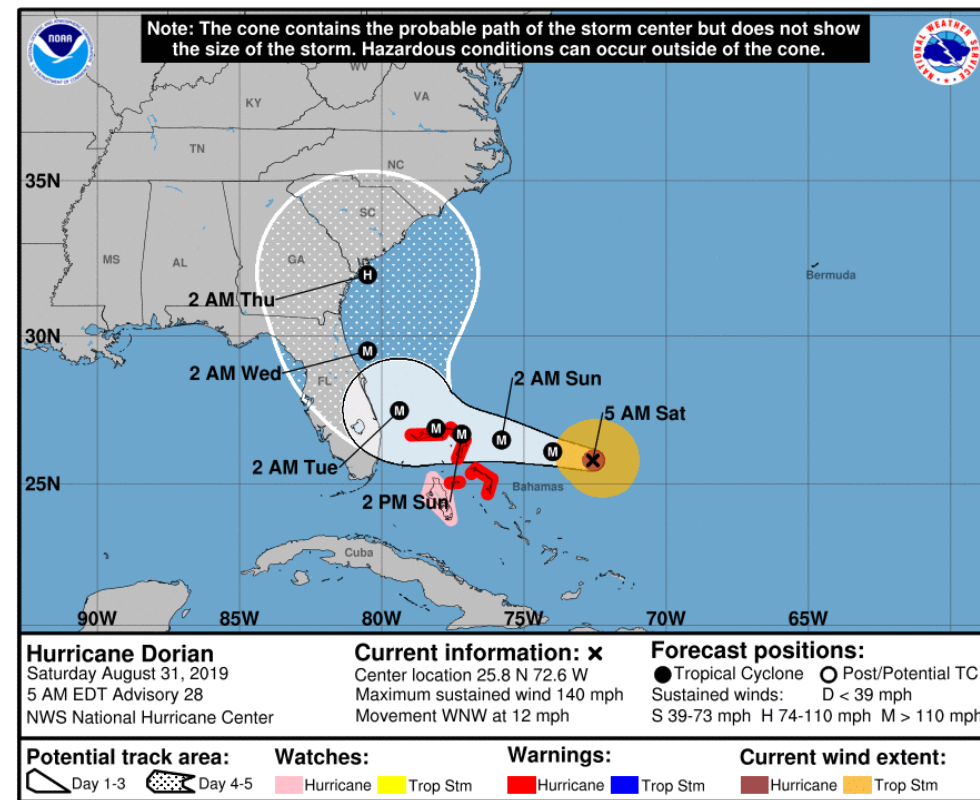
Major Hurricane Dorian

Saturday, August 31, 5 AM ET

	MINIMAL	Low	MODERATE	HIGH	EXTREME
 WINDS					
 STORM SURGE					
 FLOODING					
 TORNADOES					

	Low	MODERATE	HIGH
 RIP CURRENTS			

National Hurricane Center Map



Changes Overnight:

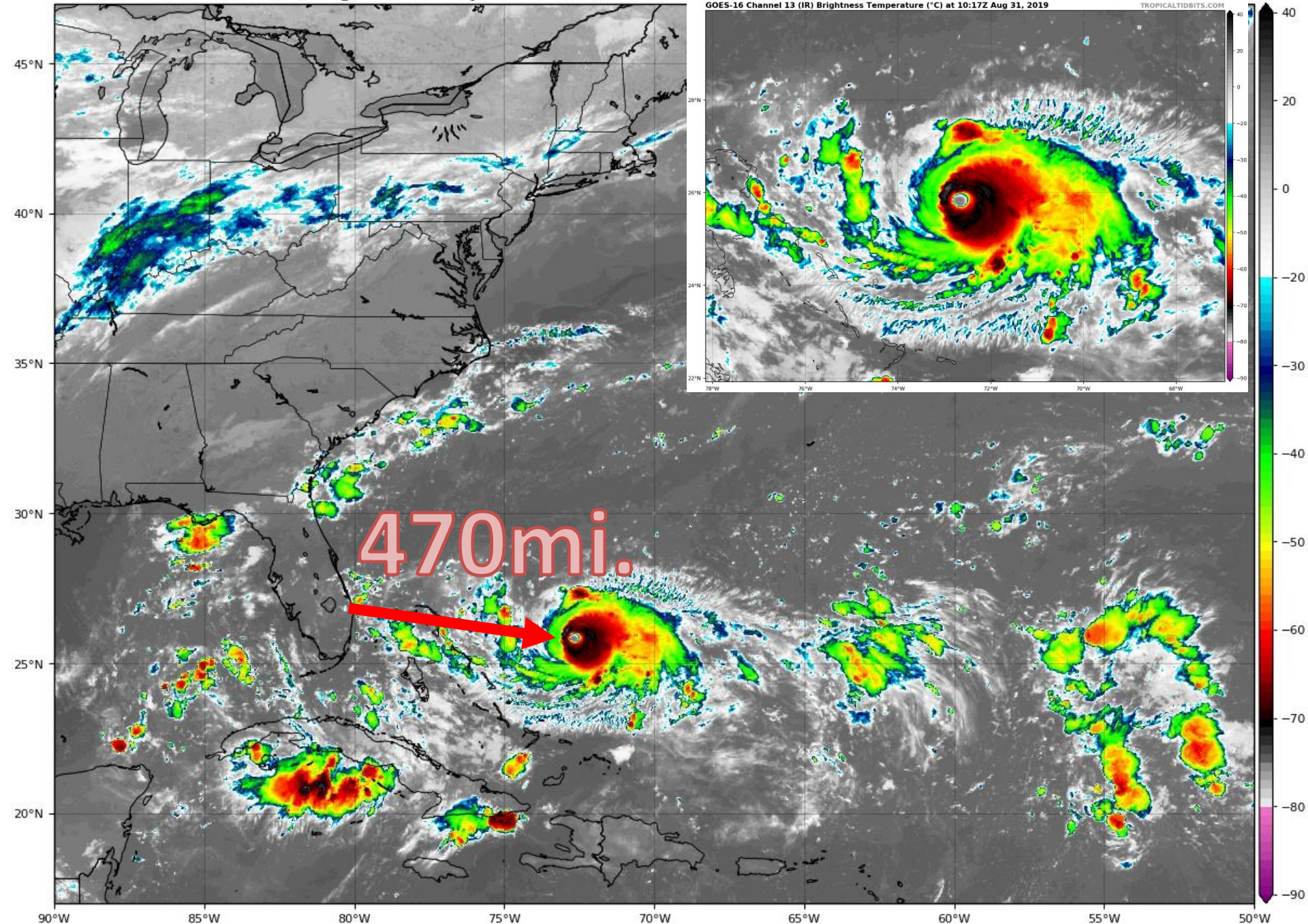
- Dorian has continued to strengthen overnight, now a Major Category 4 hurricane with max sustained winds of 140 mph.
- Still uncertainty in northward turn...but trend has been further to the east, along the coast of Florida
- Life-threatening storm surge and devastating hurricane-force winds are still possible along portions of the Florida east coast by the early to middle part of next week, it is too soon to determine when or where exactly.

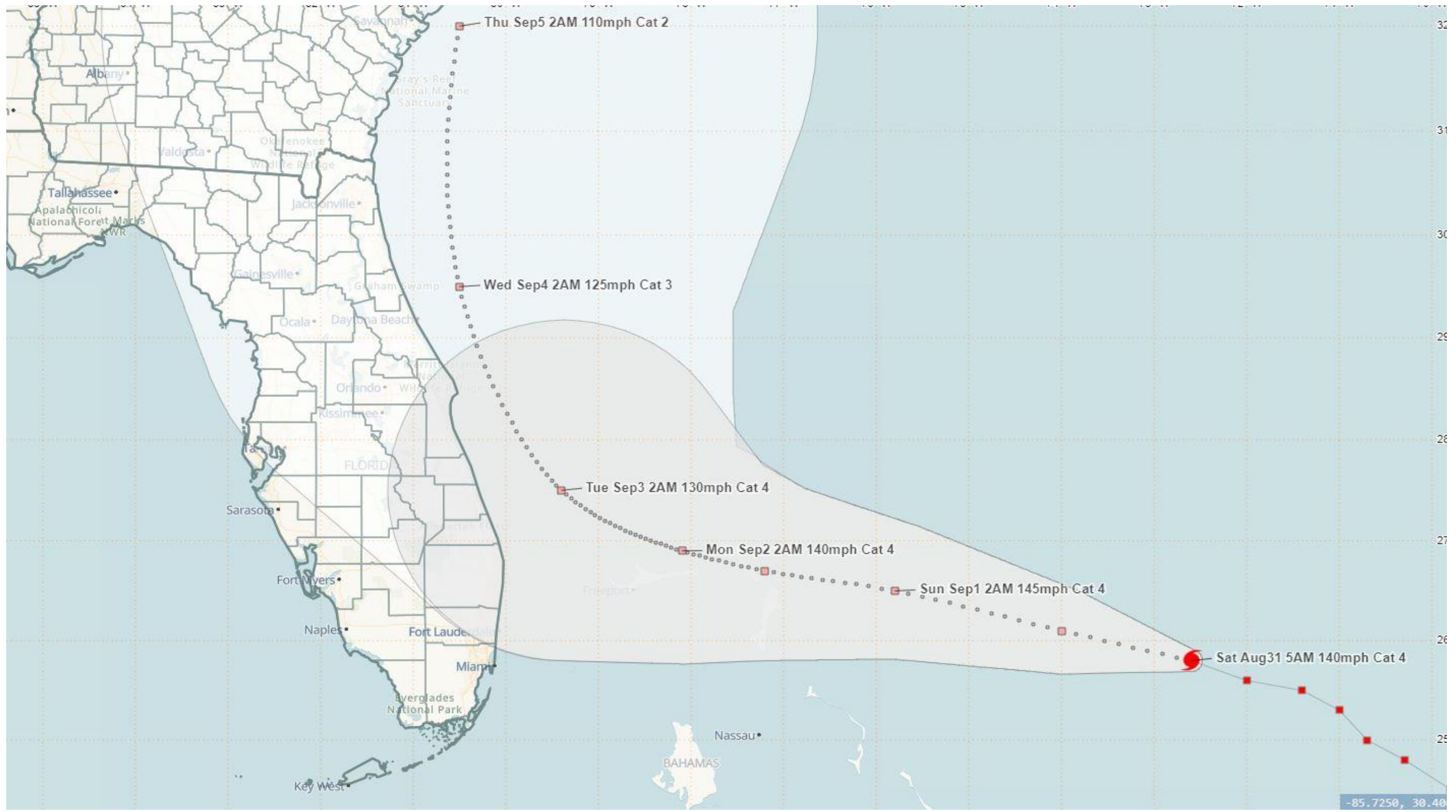
GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 10:15Z Aug 31, 2019

TROPICALTIDBITS.COM

Hurricane Dorian Satellite Image

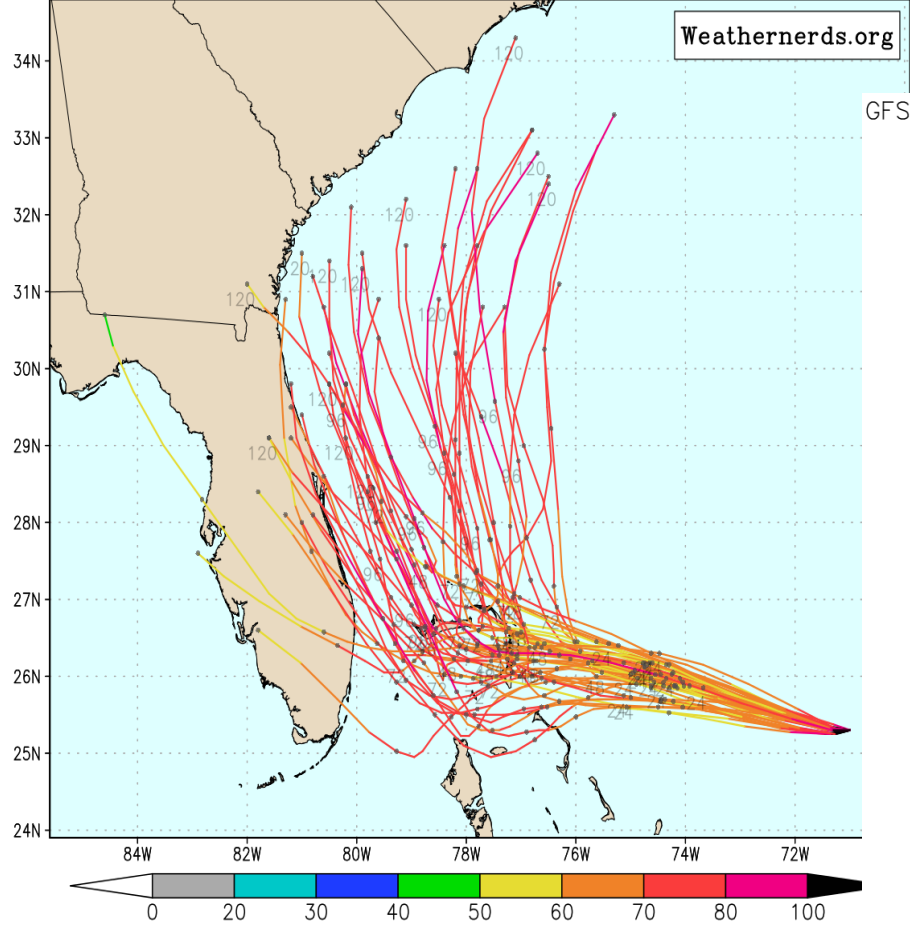
Dorian continues to have a well-defined eye and is tracking toward the west.



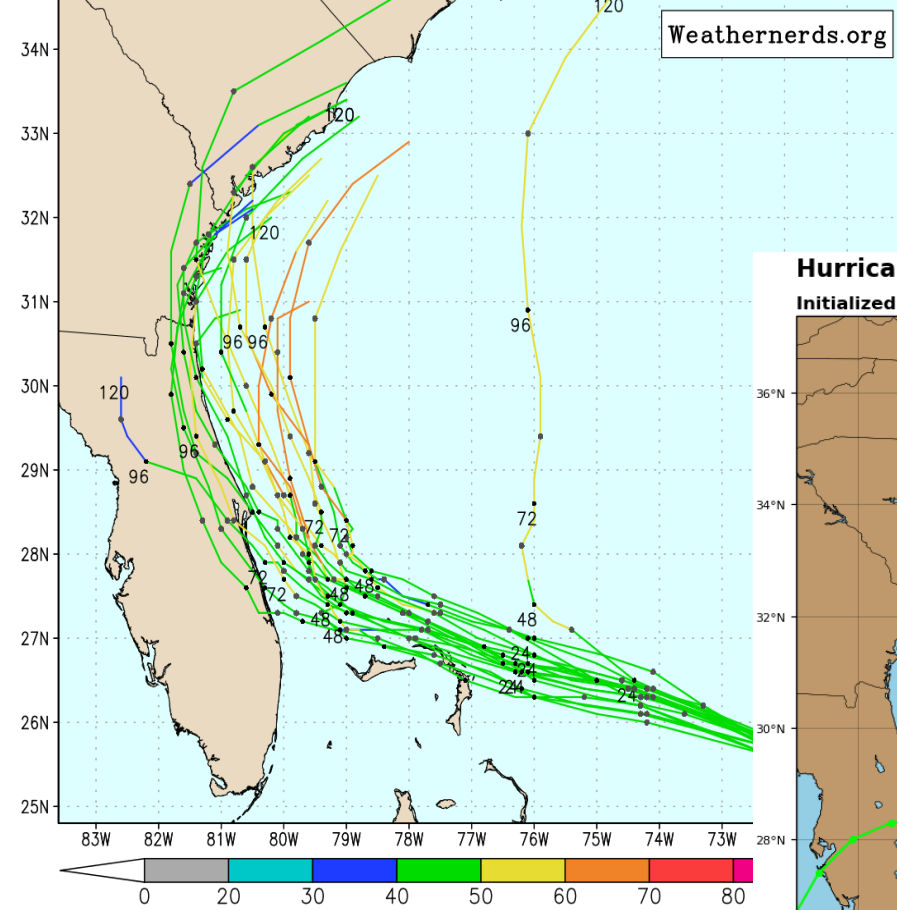


The trend has been to the east again, but there remains options for a direct landfall and a system close enough to the coast to still bring significant impacts to East-Central and Northeast Florida.

ECMWF Ens. (0-120h only), init: 2019083100, AL05 Dorian color = max wind (kt)

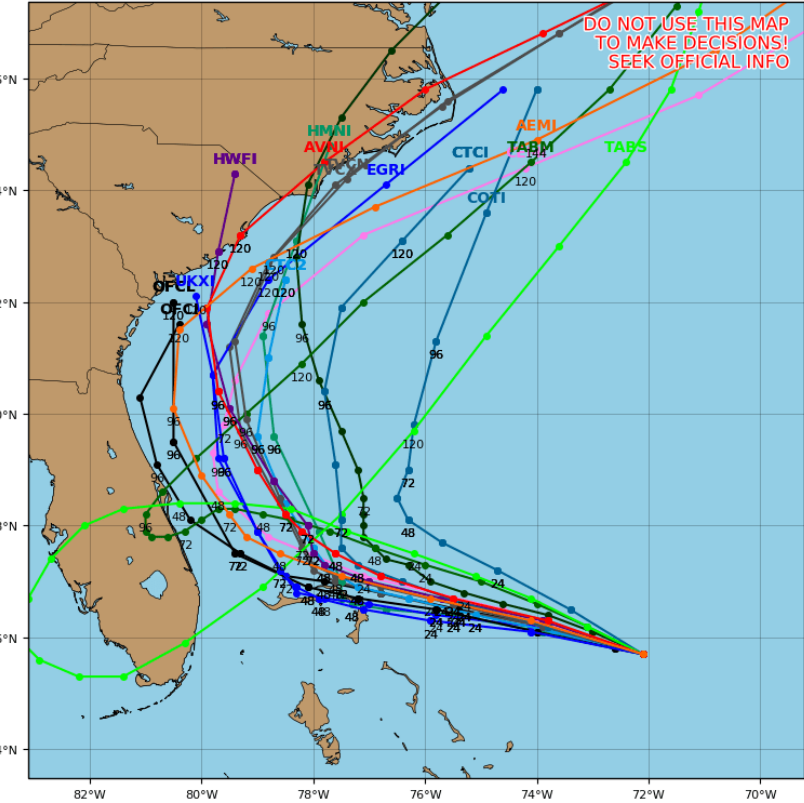


GFS Ens. (0-120h only), init: 2019083100, AL05 Dorian color = max wind (kt)



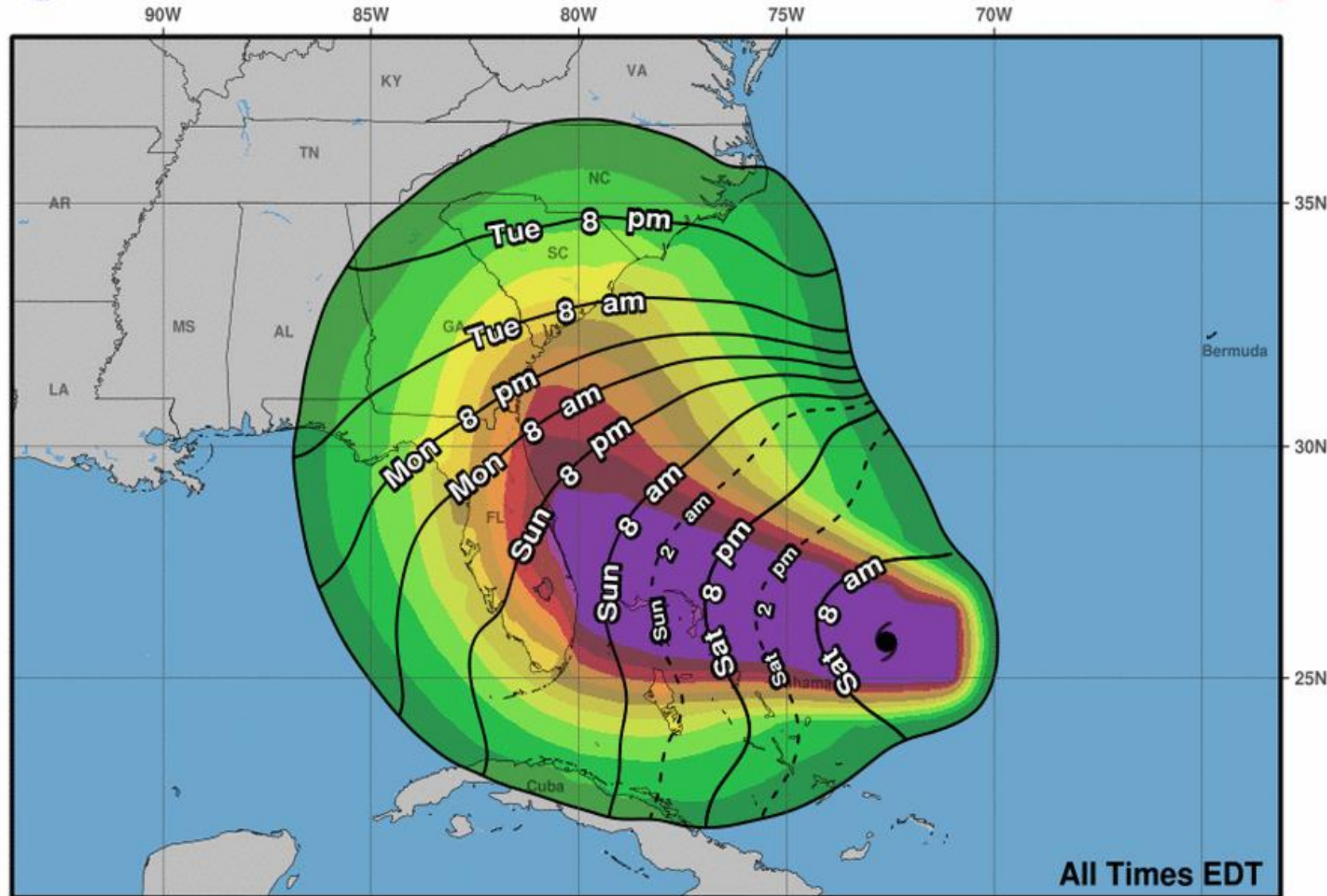
Hurricane DORIAN Model Track Guidance

Initialized at 06z Aug 31 2019





Earliest Reasonable Arrival Time of Tropical-Storm-Force Winds



Hurricane Dorian
Sat. Aug. 31, 2019 5 am EDT
Advisory 28

Storm Location ○ < 34 kt (39 mph)
& ○ 34-63 kt (39-73 mph)
Wind Speed ● ≥ 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 %
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There are no tropical watches or warnings for Florida, but could be issued later today.

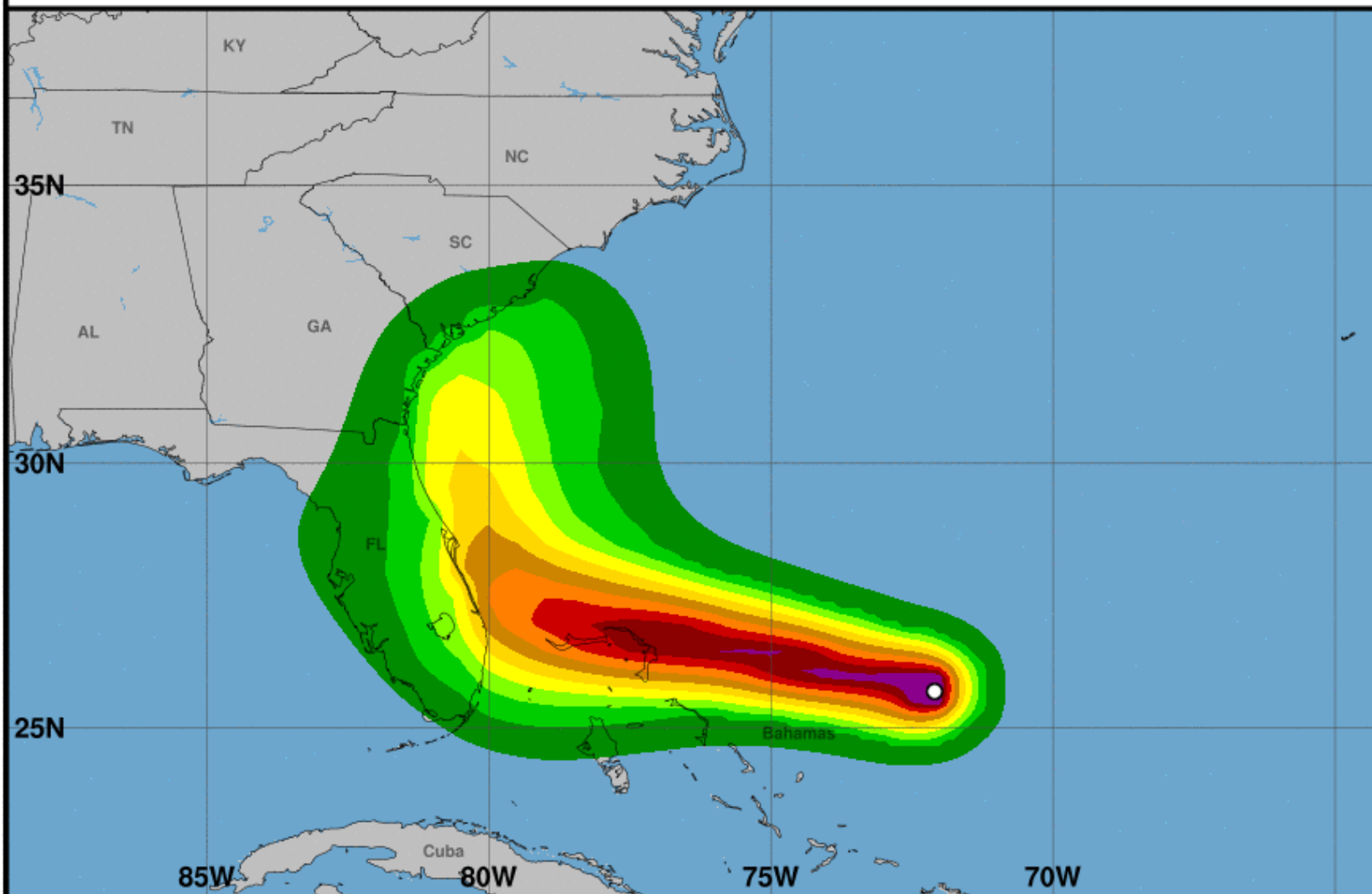
Chance of TROPICAL STORM FORCE WINDS (>39 mph) decreased or remained steady overnight:

Jacksonville: 65%
Daytona Beach: 81%
Orlando: 82%
Cocoa Beach: 95%
West Palm Beach: 95%
Ft. Lauderdale: 88%
Miami: 63%
Naples: 42%
Marathon: 37%
Key West: 24%
Tampa: 49%
Tallahassee: 22%
Panama City: 14%



Hurricane-Force Wind Speed Probabilities

For the 120 hours (5.00 days) from 2 AM EDT SAT AUG 31 to 2 AM EDT THU SEP 05



Probability of hurricane-force winds (1-minute average ≥ 74 mph) from all tropical cyclones
○ indicates Hurricane Dorian center location at 2 AM EDT SAT AUG 31, 2019 (Forecast/Advisory #28)



Chance of HURRICANE FORCE WINDS
(>74 mph) decreased overnight:

Jacksonville: 9%
Orlando: 19%
Cocoa Beach: 47%
West Palm Beach: 45%
Ft. Lauderdale: 28%
Miami: 12%
Naples: 4%
Marathon: 2%
Key West: 3%
Tampa: 6%
Tallahassee: 3%
Panama City: 1%

Chances dropped by $\sim 20\%$ across
inland Central Florida



Key Messages for Hurricane Dorian

Advisory 28: 5:00 AM EDT Sat Aug 31, 2019



1. A prolonged period of life-threatening storm surge and devastating hurricane-force winds are likely in portions of the northwestern Bahamas, particularly on the Abaco Islands and Grand Bahama Island. A hurricane warning is in effect for these areas, and residents should listen to advice given by local emergency officials and have their hurricane preparations completed today.

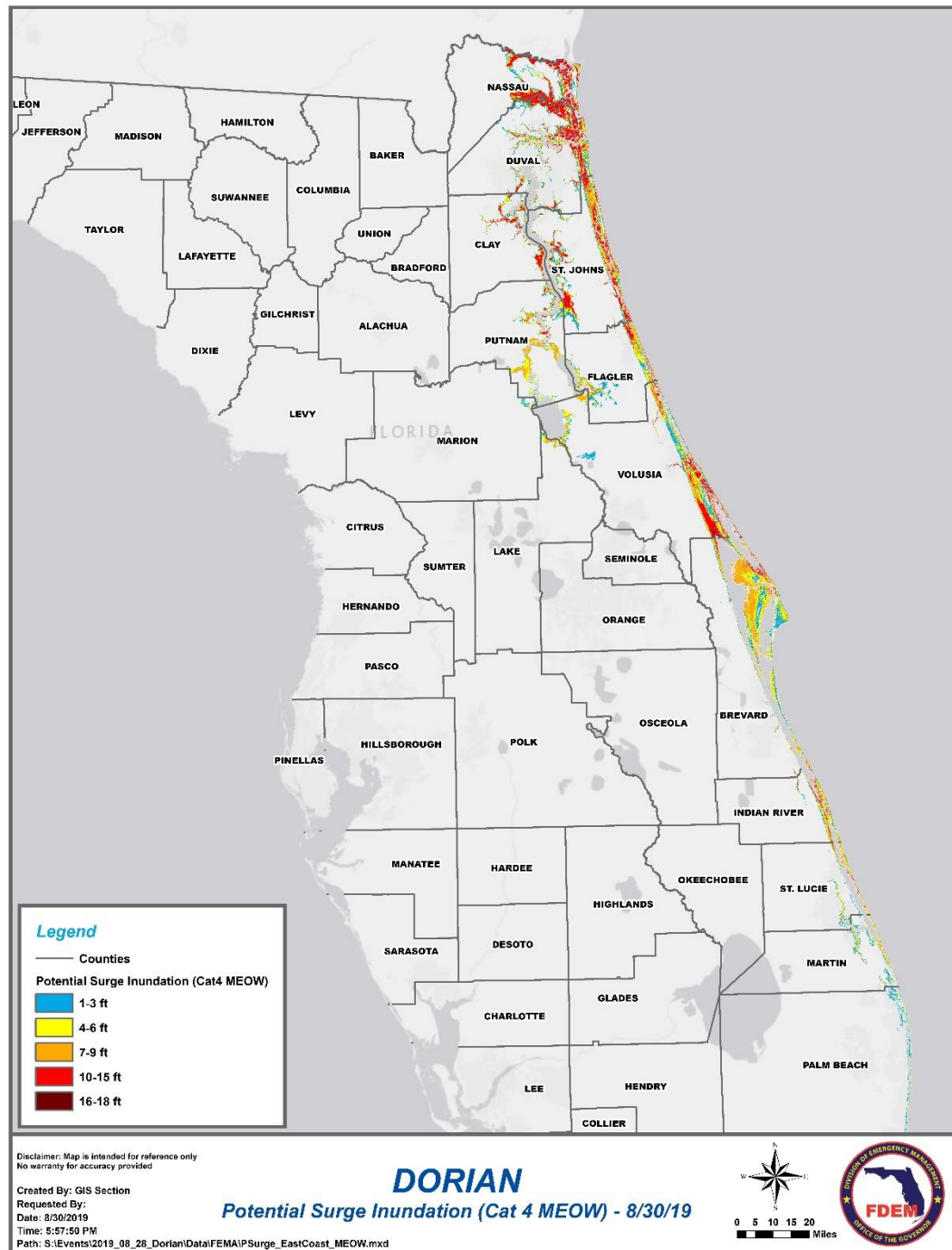
2. Life-threatening storm surge and devastating hurricane-force winds are still possible along portions of the Florida east coast by the early to middle part of next week, but since Dorian is forecast to slow down and turn northward near the coast, it is too soon to determine when or where the highest surge and winds will occur. Residents should have their hurricane plan in place, know if they are in a hurricane evacuation zone, and listen to advice given by local emergency officials.

3. The risk of strong winds and life-threatening storm surge is increasing along the coasts of Georgia and South Carolina during the middle of next week. Residents in those areas should continue to monitor the progress of Dorian.

4. Heavy rains, capable of life-threatening flash floods, are expected over portions of the Bahamas and coastal sections of the southeastern United States this weekend through much of next week.



For more information go to hurricanes.gov



Potential surge heights using the Blended MEOWs

- Palm Beach= 2-6'
 - Treasure Coast = 7-11'
 - Space Coast = 5-10'
 - Northeast FL = 4-8'
-
- Minor coastal flooding at high tide already occurring

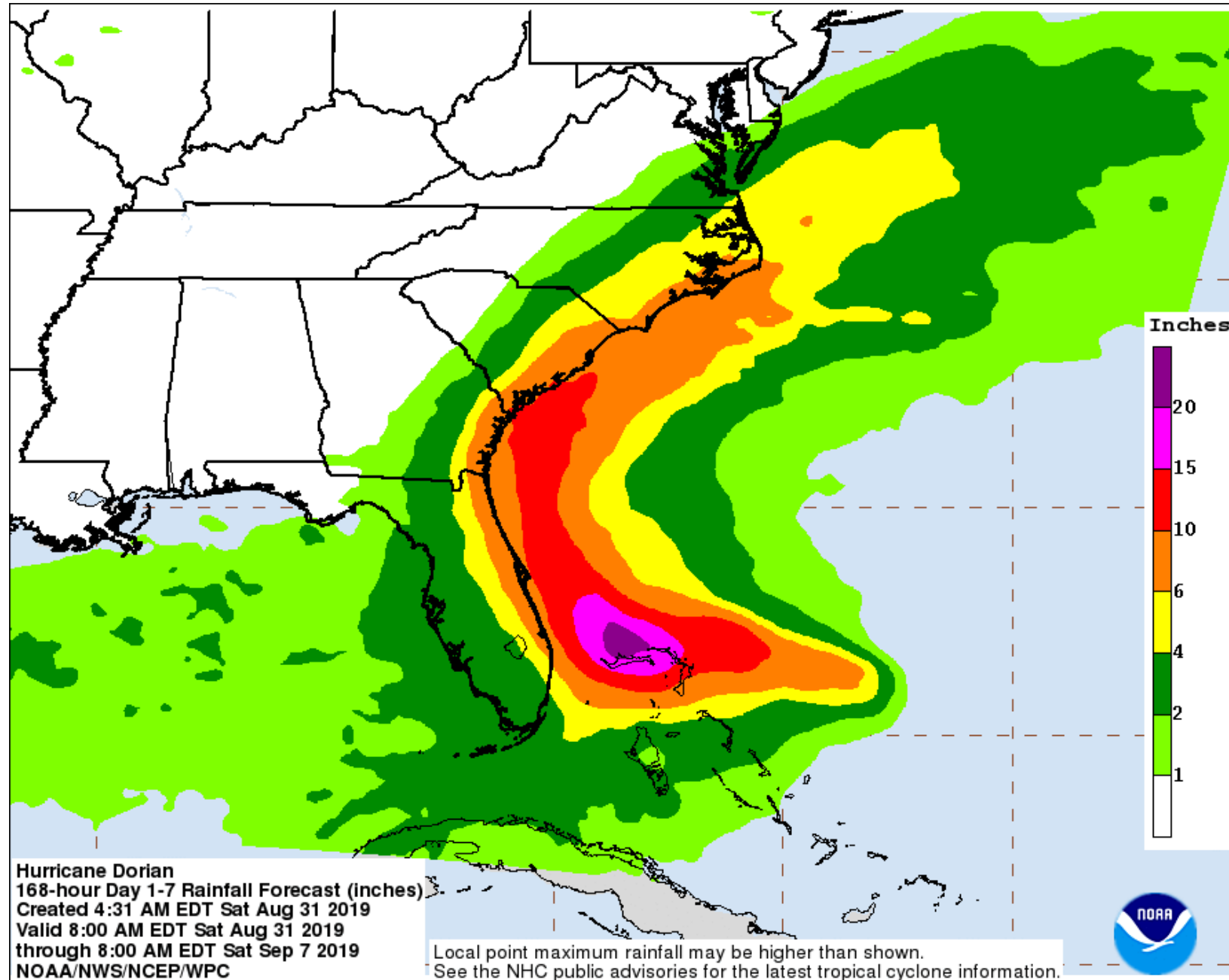
Rainfall Forecast Next 7 Days

Given the recent stretch of wet weather, these rainfall amounts could create significant flash flooding and river flooding across the Peninsula.

These rainfall forecasts are track-dependent and will likely change with subsequent forecasts.

Wherever Dorian tracks, the heaviest rainfall totals will follow the eastern side of the track.

However, a widespread 6-10" of rain is expected across much of the eastern Peninsula, with higher totals of 15-20" possible.

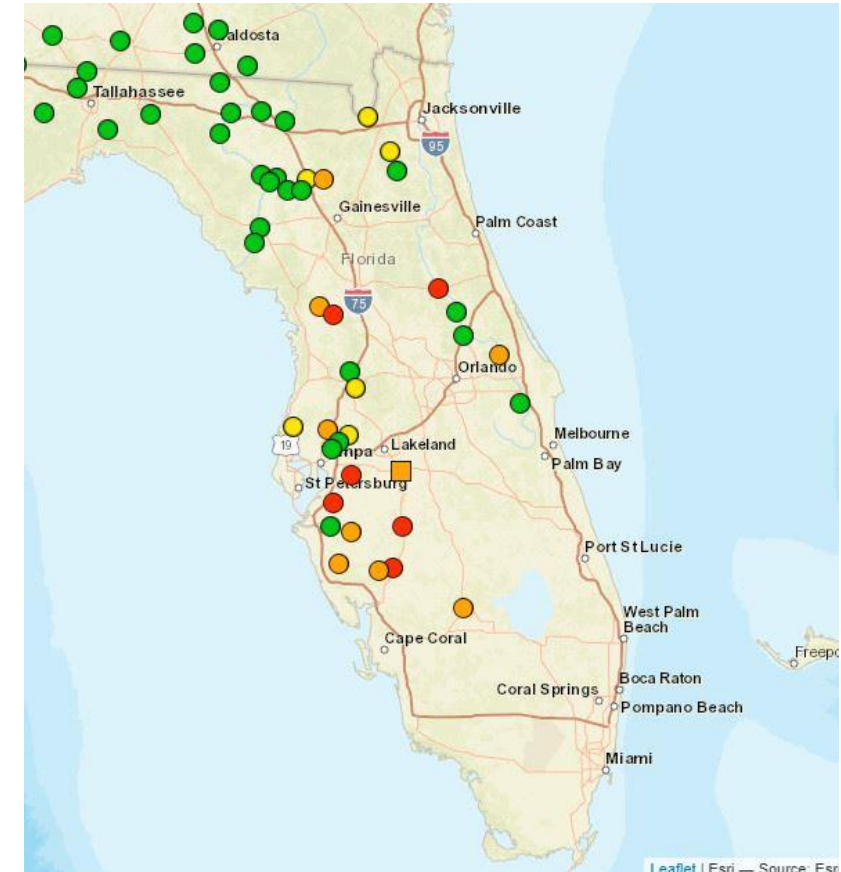
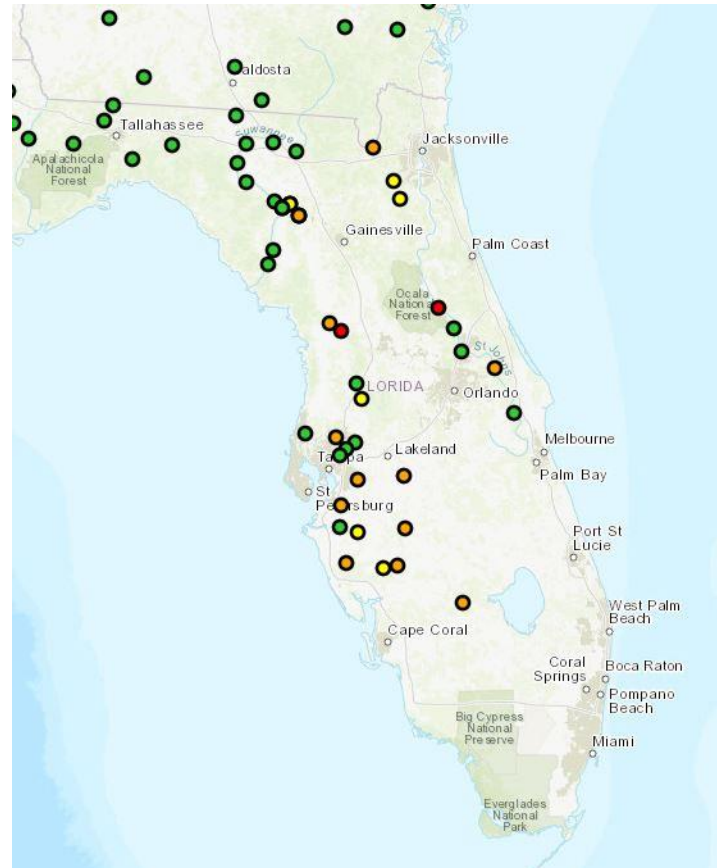


Projected River Conditions

Many rivers are elevated and additional rainfall will raise water levels over the next week. Large potential for moderate to major flooding, especially in West Central Florida and along the St. Johns and Santa Fe River basins.

From the Southeast River Forecast Center: “Moderate and major river flooding is possible over much of Florida. Many rivers in Florida and in the southeast coastal plains could flood for days and weeks even after Dorian has moved out of the area.”

NOTE: Not current
river stages –
potential FUTURE
river stages



Chance of Exceedance		
30%	Level	70%
	Action	
	Minor Flood	
	Moderate Flood	
	Major Flood	
= less than 30% chance of reaching Action level		
= no critical levels defined for this point		



Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



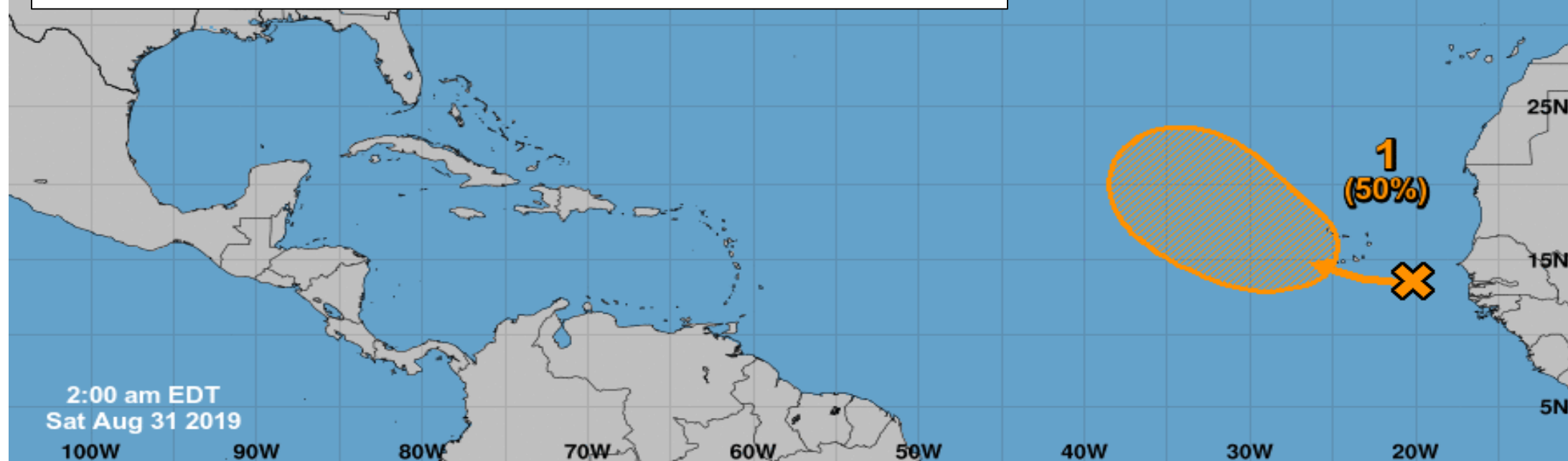
www.hurricanes.gov

Disturbance 1

1. A tropical wave located about midway between the coast of Africa and the Cabo Verde Islands is producing a large area of disorganized showers and thunderstorms. Environmental conditions appear conducive for development of this system, and a tropical depression could form next week while the system moves westward to west-northwestward at 10 to 15 mph across the eastern tropical Atlantic Ocean.

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

* **Formation chance through 5 days...medium...50 percent.**



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



Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



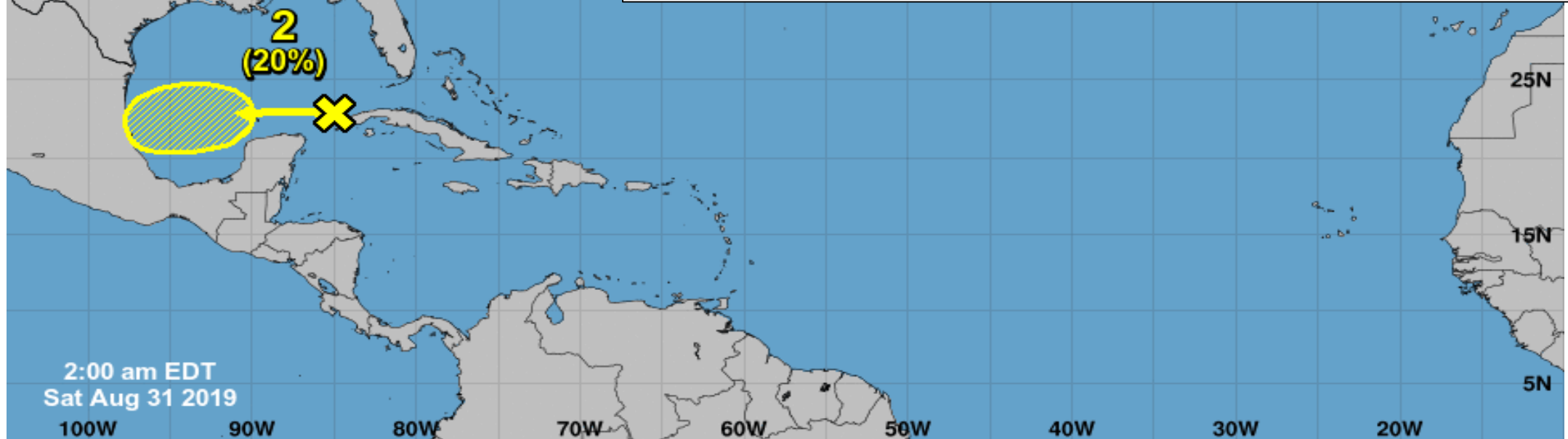
www.hurricanes.gov

Disturbance 2

2. Disorganized showers and thunderstorms over the southeastern Gulf of Mexico are associated with a broad area of low pressure. Some slow development of this system is possible during the next several days while it moves generally westward across the southern and southwestern Gulf of Mexico at 5 to 10 mph.

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

* **Formation chance through 5 days...low...20 percent.**



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

Summary

Major Hurricane Dorian

- As of the 5 AM ET advisory, Hurricane Dorian was located 470 miles east of West Palm Beach, and moving to the west-northwest at 12 mph.
- Maximum sustained winds have increased to 140 mph, which is a Category 4 Major Hurricane. Dorian is forecast to strengthen slightly and maintain Category 4 strength as it nears the Florida Peninsula early next week.
- Dorian will continue a westward turn tonight and into this weekend. A northward turn is expected Monday or Tuesday near the Florida Peninsula, but how far west Dorian gets before the turn remains uncertain.
- Dorian is expected to slow its forward movement over the western Bahamas as it starts to make a northward turn, increasing the duration of impacts.
- Dorian could also expand in size as it moves toward the Florida Peninsula, which could increase the area of possible wind impacts. A larger storm could track further off the coast, but still bring direct impacts to Florida.
- Hurricane Hunters will continue to investigate the system regularly over the next few days.

- Elsewhere, a tropical wave has moved off the west coast of Africa. Some development if this wave is possible next week and the National Hurricane Center is predicting a 50% (medium) chance of becoming a tropical depression within the next 5 days.

- A broad area of low pressure has developed in the Gulf of Mexico. Some slow development is possible as it moves towards the west. The National Hurricane Center is predicting a 20% (low) chance of becoming a tropical depression with the next 5 days.

Florida Outlook:

- The Treasure and Space Coast are in the 3-day forecast cone, with Central Florida, Northeast Florida, and the eastern Florida Big Bend remaining in the 5-day forecast cone.
- There are no watches or warnings in effect related to Dorian, but tropical storm, hurricane, and surge watches could be issued later today.
- The track has shifted east overnight, with an East Coast runner more likely. However, error at days 4 and 5 average 155 and 205 miles, respectively. Additional changes in the track remain possible.
- Life-threatening storm surge and devastating hurricane-force winds are still possible along portions of the Florida east coast by the early to middle part of next week, but since Dorian is forecast to slow down and turn northward near the coast, it is too soon to determine when or where the highest surge and winds will occur.
- Damaging winds, flash flooding, river flooding, storm surge, and isolated tornadoes are all possible with Dorian.
- Tropical storm force winds could arrive as early as Sunday morning, but will likely arrive Sunday night along the Treasure Coast and into the remainder of the Central & Northeast Florida Monday & Tuesday.
- Due to the slow movement of Dorian, widespread rainfall of 6-12" is expected across the East Coast, with locally higher amounts. This will cause both immediate flash flooding issues along with post-landfall river/creek flooding.
- Minor coastal flooding from the ongoing King Tides will continue along the Florida East Coast with tides running 1-2' above normal this weekend.
- The rip current risk will be dangerously high for the holiday weekend at all Atlantic beaches.
- Neither system being monitored for development poses a threat to Florida.

The next tropics packet will be issued Saturday afternoon. For the latest information on the tropics, please visit the National Hurricane Center website at 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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