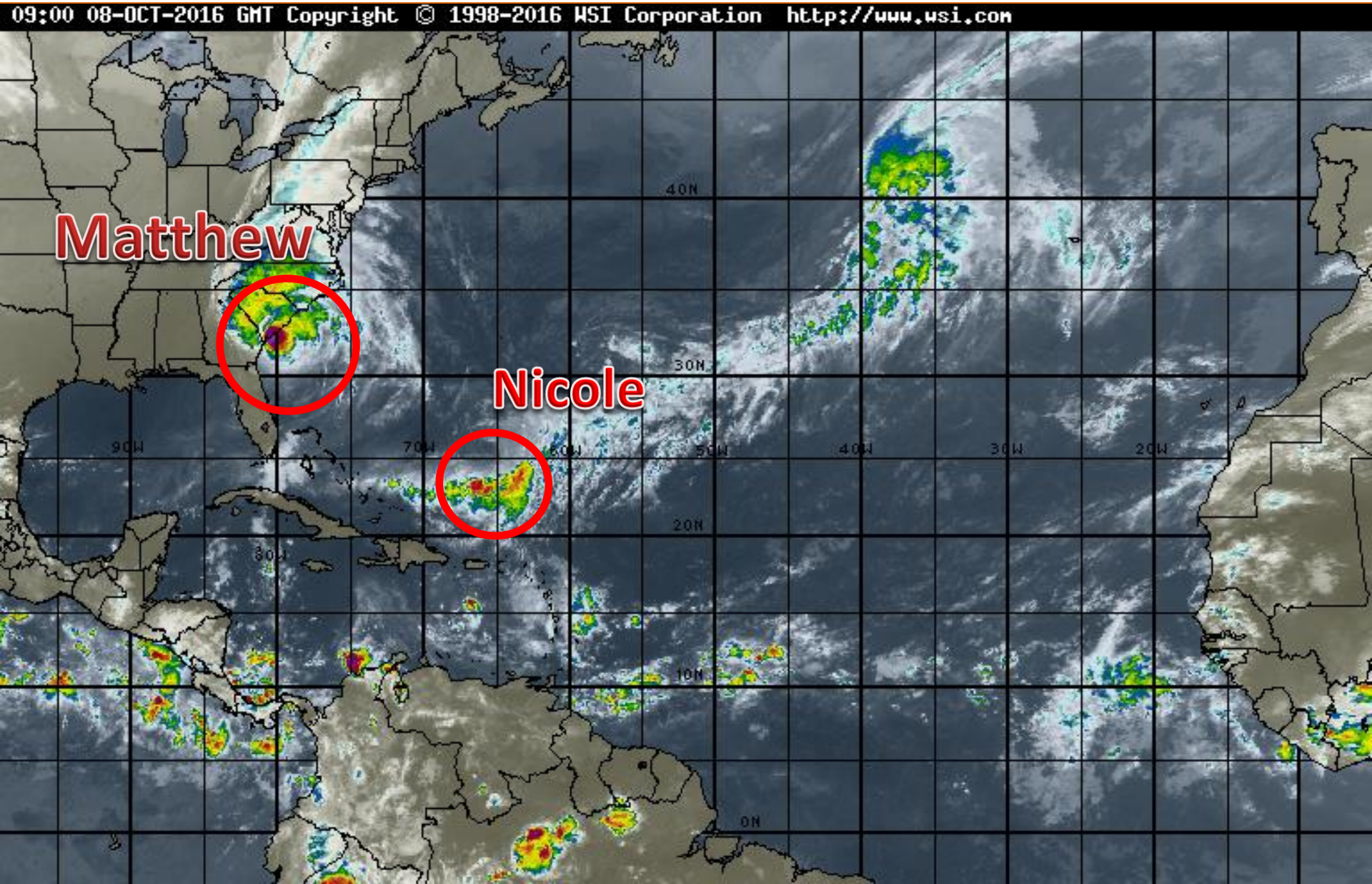
TROPICAL UPDATE

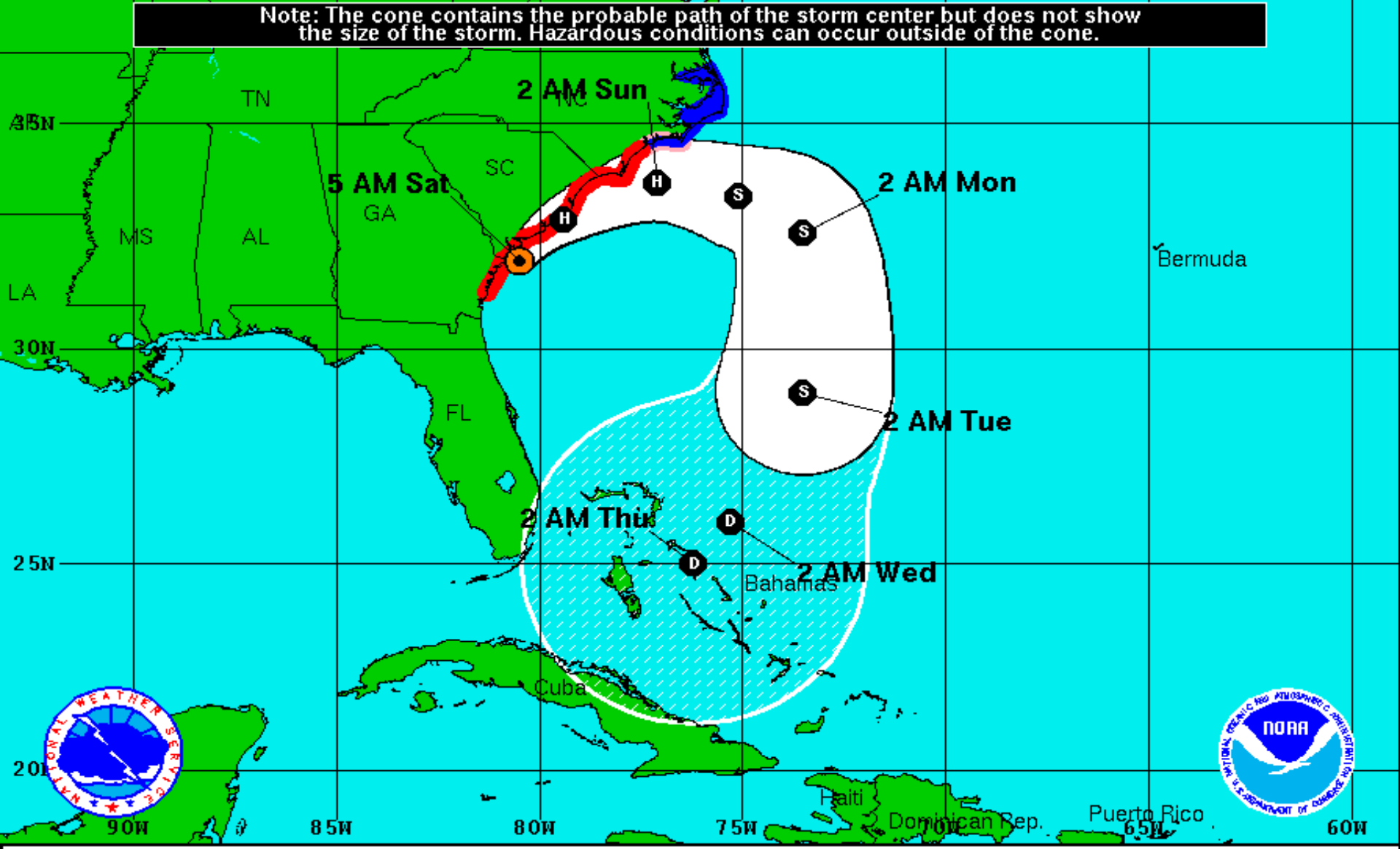
6 AM EDT
Saturday, October 8, 2016
Hurricane Matthew &
Tropical Storm Nicole

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.nhc.noaa.gov.

Atlantic Basin Satellite Image




Hurricane Matthew
5 AM EDT Sat-Oct 08 2016
Position 32.0 N 80.5 W
Maximum Winds 105 mph
Gusts 125 mph
Movement NNE at 11 mph
Minimum Pressure 955 mb (28.19 inches)
Blue Marble basemap imagery courtesy NASA
Satellite 10:17 AM UTC
6:17 AM EDT
wunderground.com



Hurricane Matthew
Saturday October 8, 2016
5 AM EDT Advisory 41
NWS National Hurricane Center

Current Information:
Center Location 32.0 N 80.5 W
Max Sustained Wind 105 mph
Movement NNE at 12 mph

Forecast Positions:
Tropical Cyclone Post-Tropical
Sustained Winds: D < 39 mph
S 39-73 mph H 74-110 mph M > 110mph

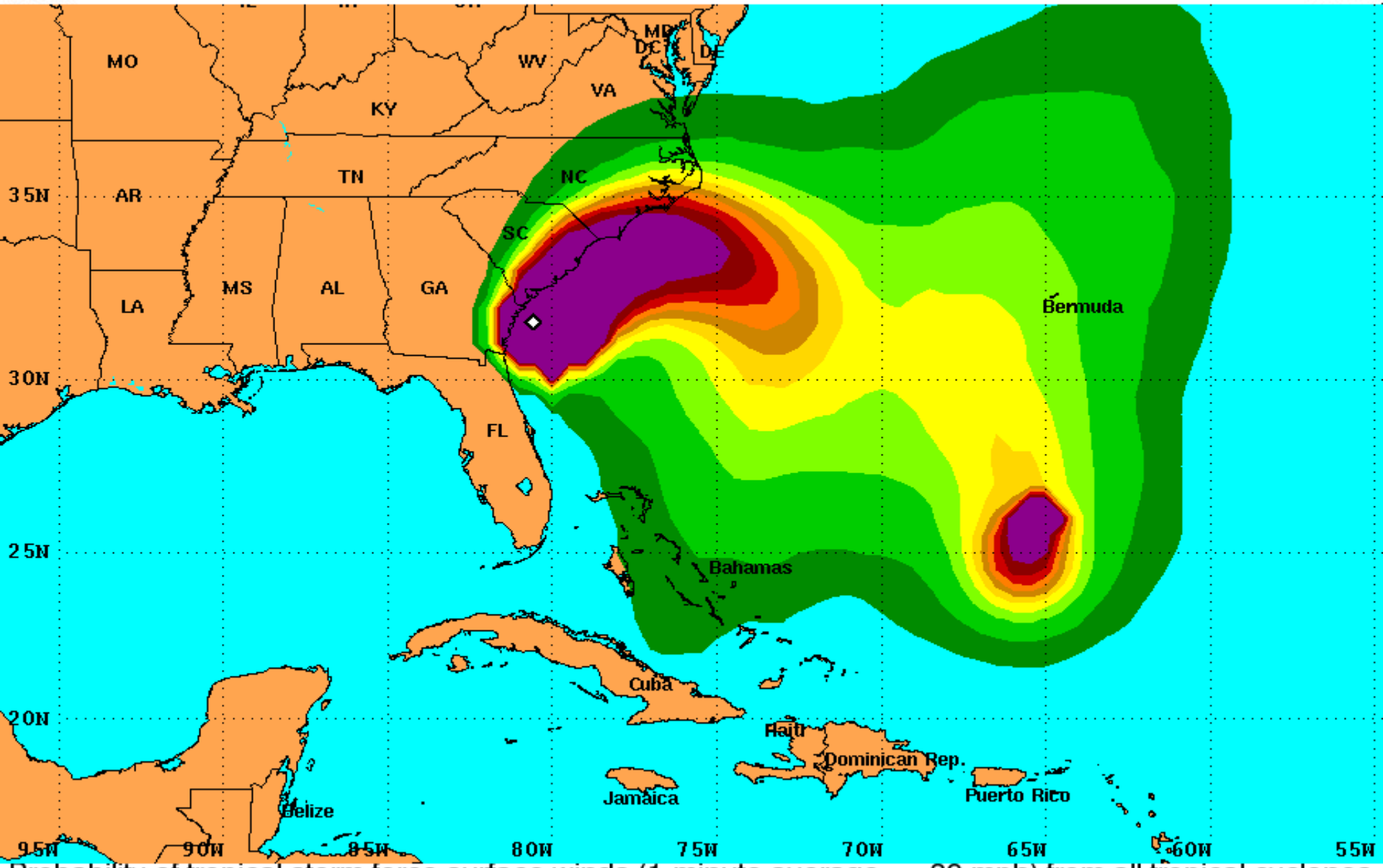
Potential Track Area:
Day 1-3 Day 4-5

Watches:
Hurricane Trop.Storm

Warnings:
Hurricane Trop.Storm

Tropical Storm Force Wind Speed Probabilities

For the 120 hours (5 days) from 2 AM EDT Sat Oct 8 to 2 AM EDT Thu Oct 13

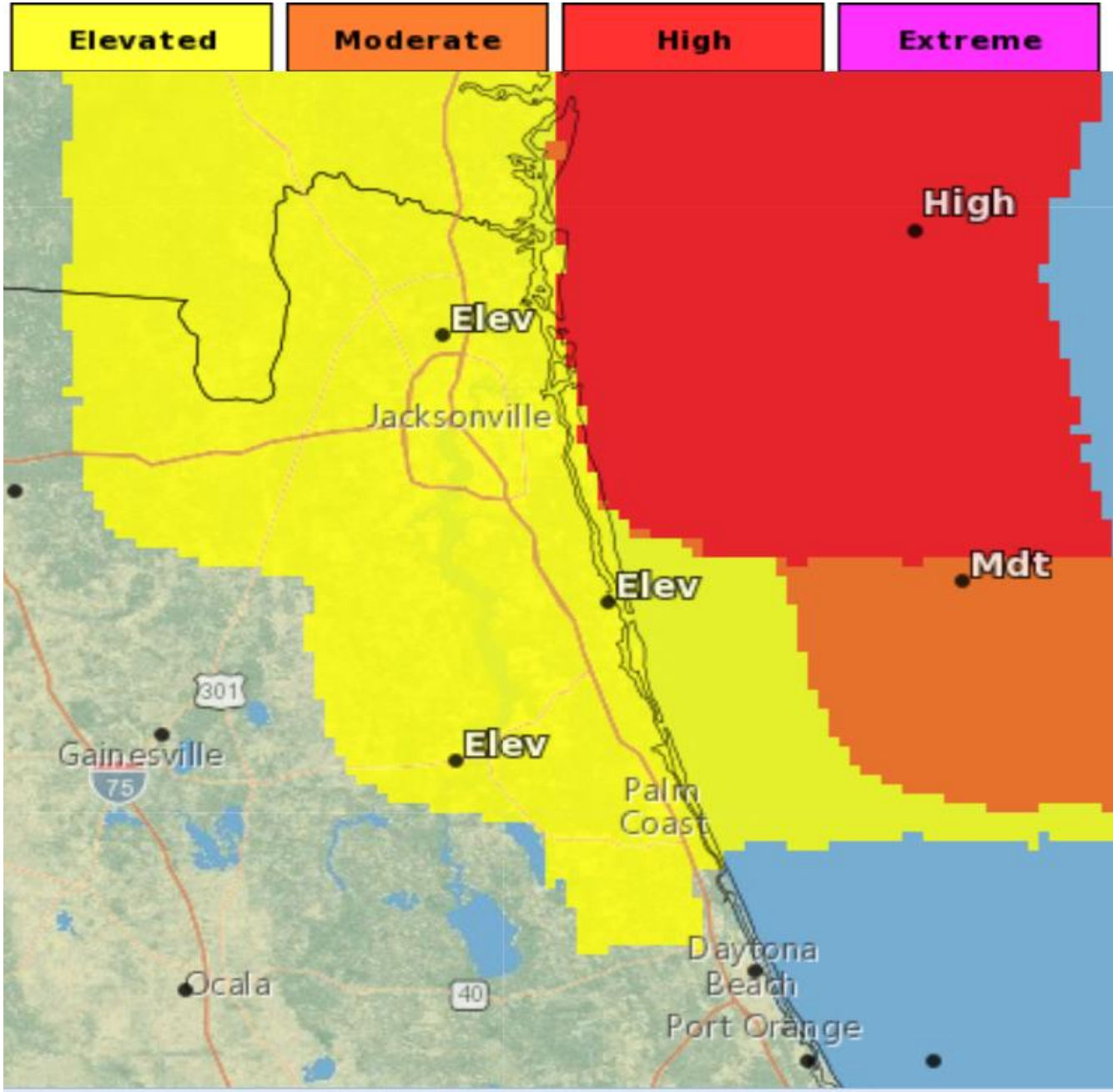


Probability of tropical storm force surface winds (1-minute average >= 39 mph) from all tropical cyclones

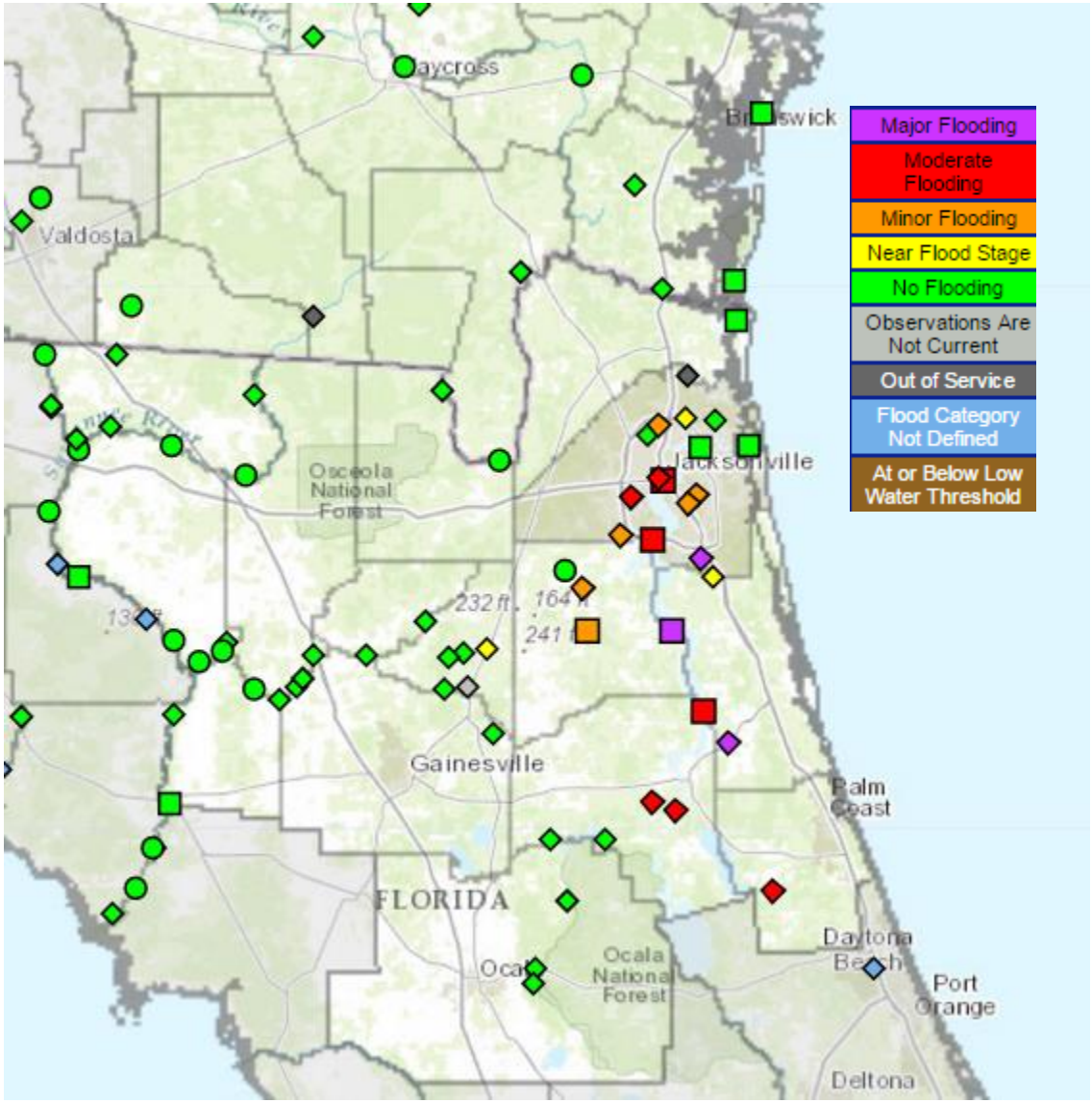
◇ indicates HURRICANE MATTHEW center location at 2 AM EDT Sat Oct 8 2016 (Forecast/Advisory #41)

5% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

- Elevated - The potential for winds 39 mph - 58 mph.
- Moderate – the potential for winds 58 mph - 74 mph.
- High - potential for winds 74 mph - 111 mph.
- Extreme - the potential for winds greater than 111 mph.



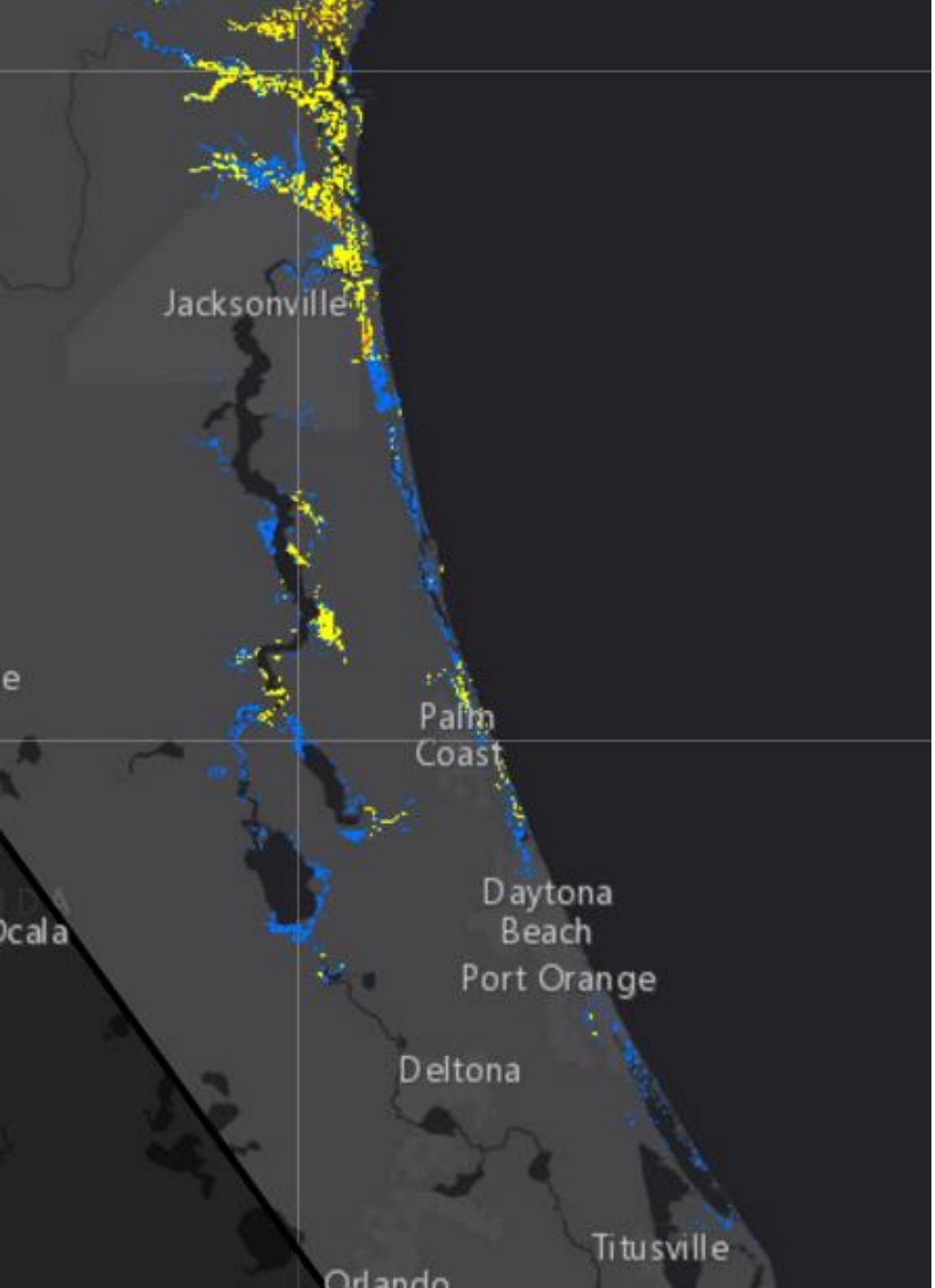
River Flooding in Northeast Florida



The St. Johns River, along with many estuaries, creeks, and smaller rivers in Duval, St. Johns, Clay, Putnam, and Flagler Counties are in moderate or major flood stage due to the rainfall and storm surge from Hurricane Matthew.

Most of these rivers are extremely tidal and their levels fluctuate constantly with high and low tides.

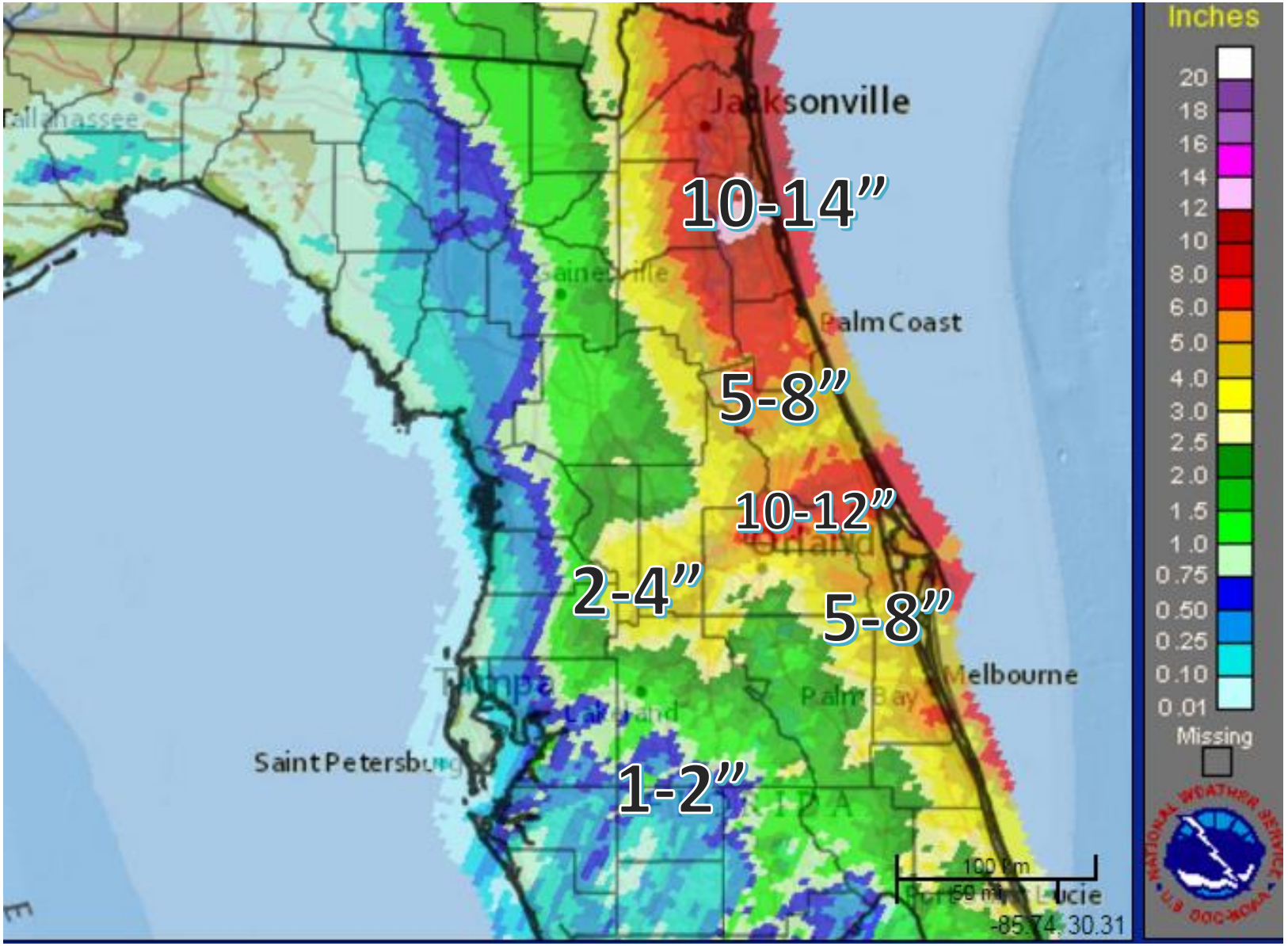
Main concerns are for the St. Johns River at: Buckman Bridge, at Racy Point, and Buffalo Bluff. Also for the Jullington Creek at Old Saint Augustine Road, Dunns Creek near Satsuma, Deep Creek at Spuds, and the larger rivers in the Jacksonville downtown/suburbs area.



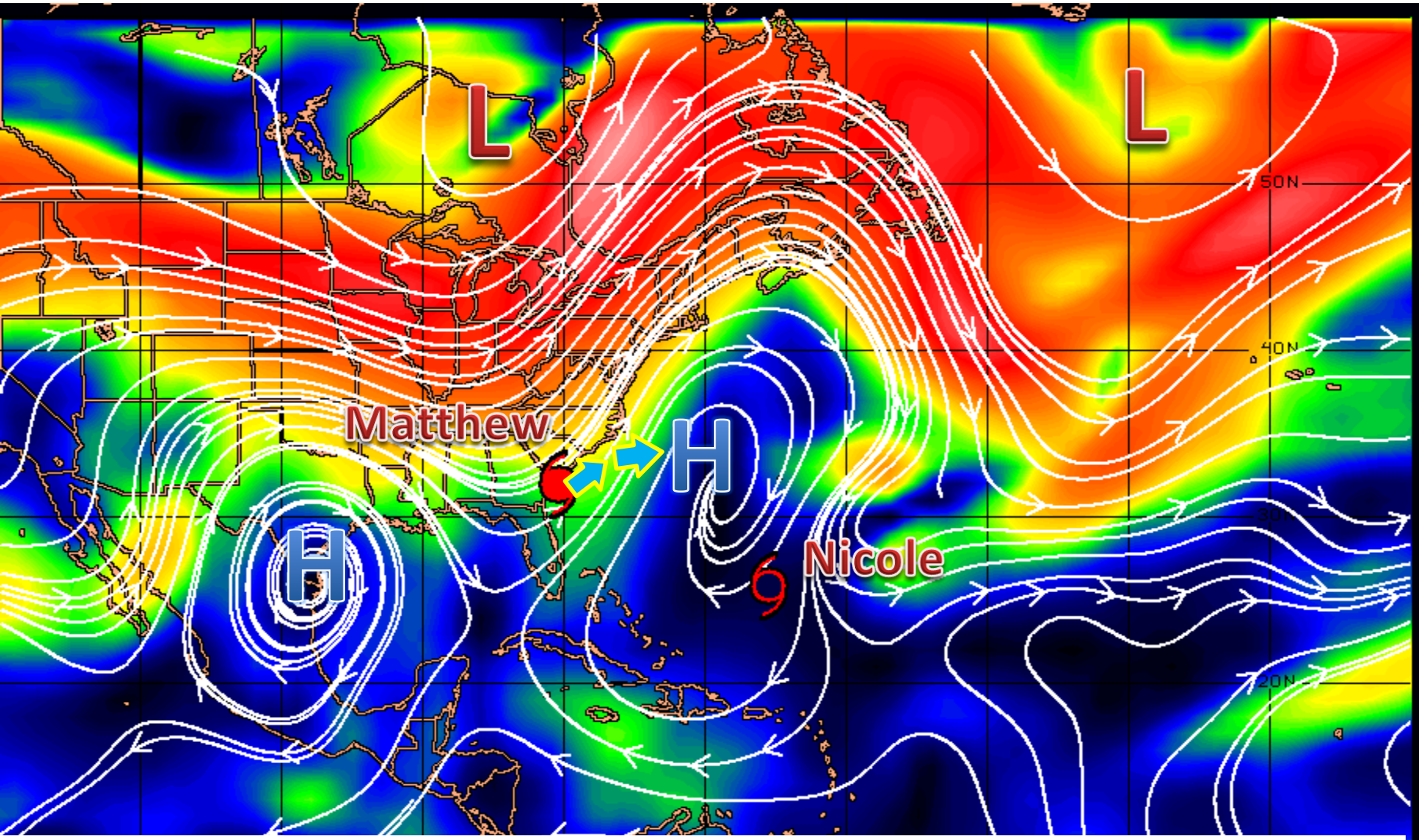
Potential Storm Surge Flooding*

- Intertidal Zone/Estuarine Wetland
- Greater than 1 foot above ground
- Greater than 3 feet above ground
- Greater than 6 feet above ground
- Greater than 9 feet above ground

Hurricane Matthew Estimated Rainfall

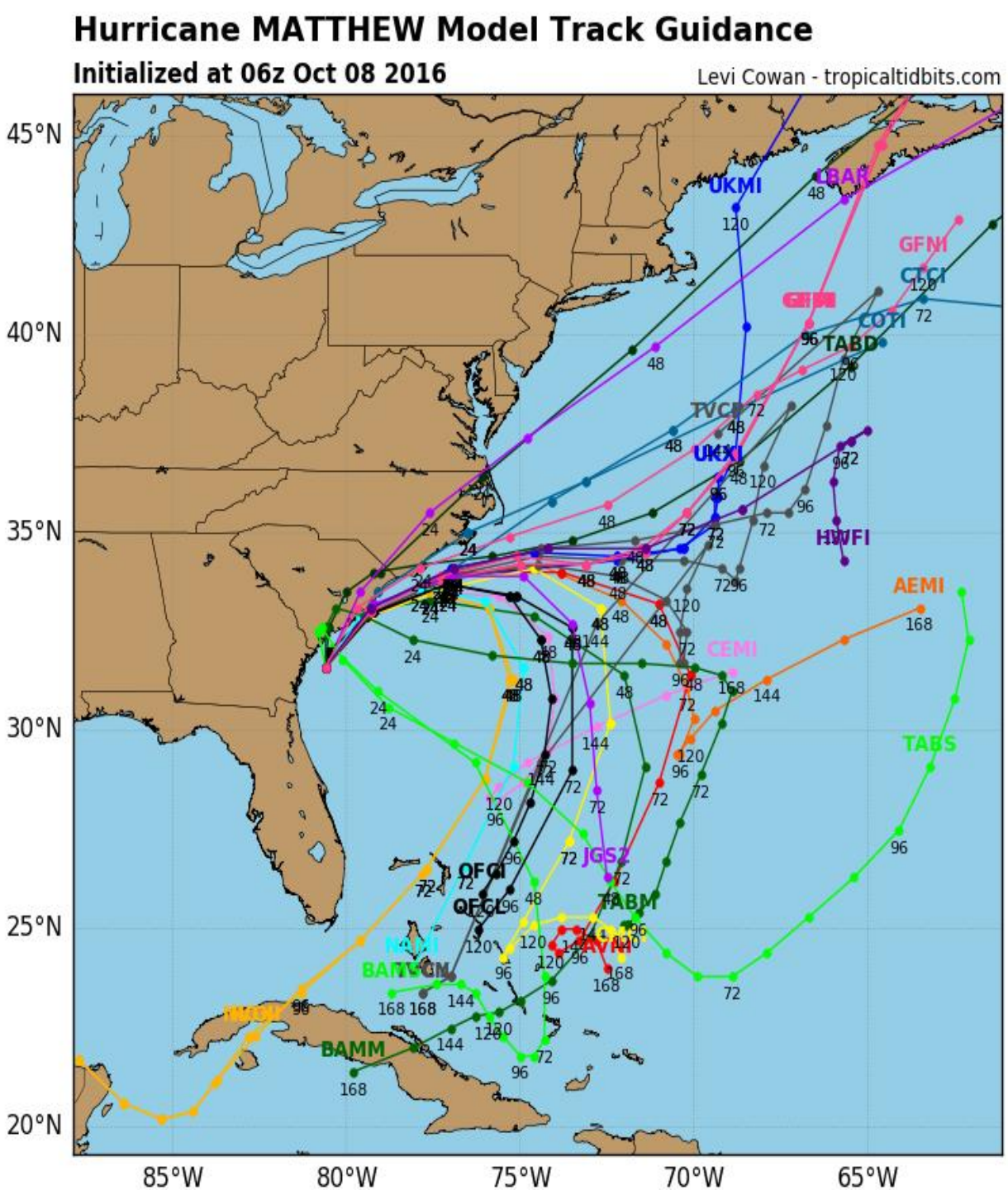


Steering Currents



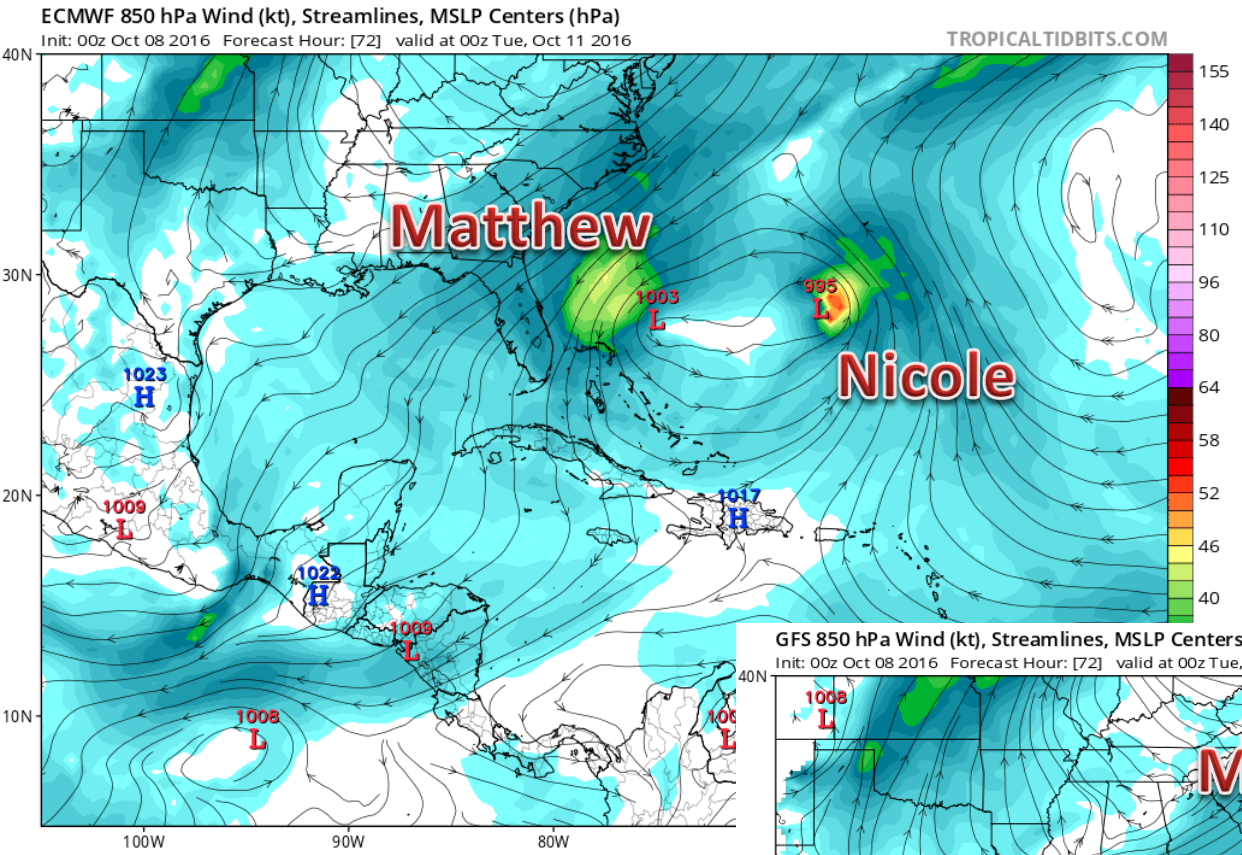
Matthew is currently being steered to the north by high pressure to its east. This same area of high pressure is expected to cause Matthew to turn northeast and then east-northeast today and tomorrow. After that, Matthew will be blocked by both the high pressure and Nicole, meaning that Matthew will move east away from the Carolina Coastline before turning south, then southwest and will be near the Bahamas towards the beginning of next week.

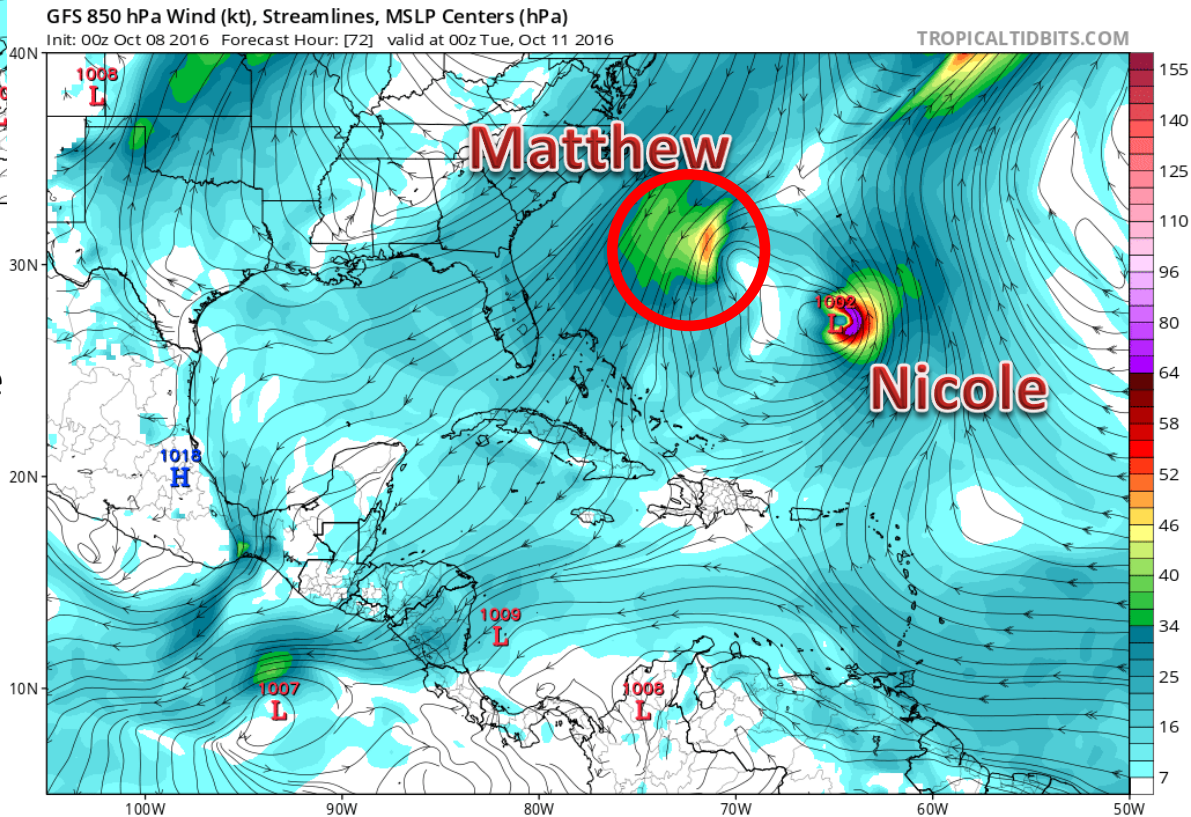
CIMSS ENV STEERING PRODUCT: 250-850 HPA LAYER (FOR TC MSLP RANGE: 940-949 HPA) 0900 UTC 08OCT16



Models are in good agreement on Matthew's track over the next 24-48 hours, taking it near the coast of Georgia and South Carolina. Beyond 48 hours, the models indicate Matthew will make a loop back toward the Bahamas and possibly Florida. Still, some models do track Matthew towards the northeast and out to sea. Matthew's track will need to be watched closely over the next few days, and the storms final path will be determined by its interaction with the high pressure to its north, and Tropical Storm Nicole to its east.

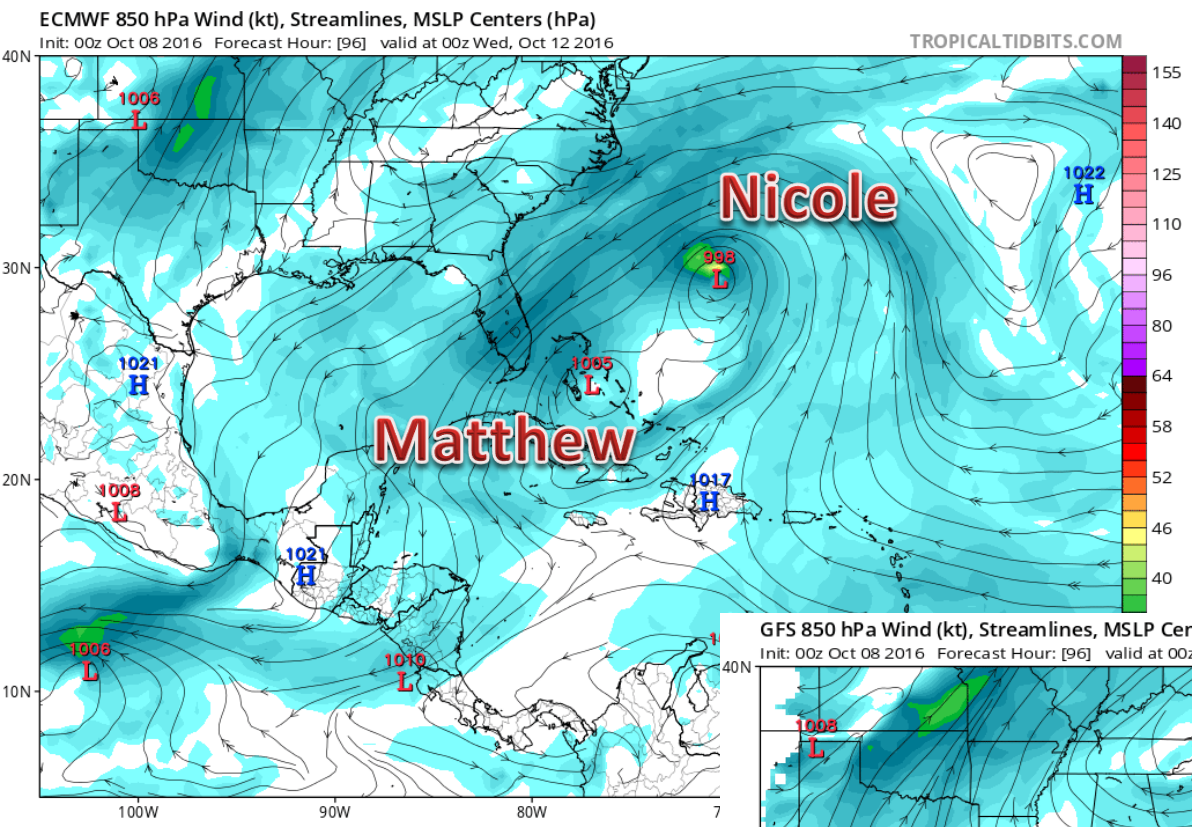
Euro vs. GFS – 8pm Monday

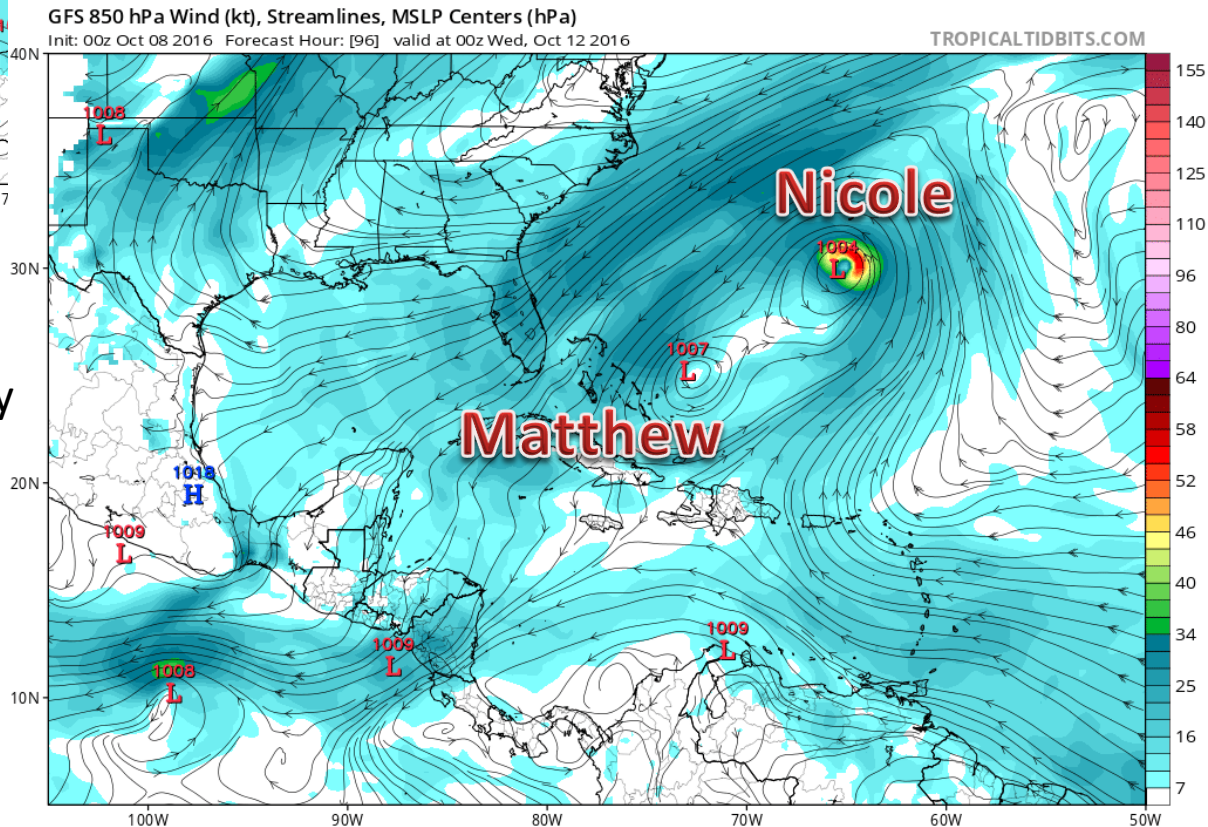




Looking at the forecast models for next week, there is a lot of disagreement on Matthew's future track. The European model has Matthew moving towards Bahamas as a tropical storm. However, the GFS is forecasting Matthew to dissipate into a tropical wave before it even reaches the Bahamas.

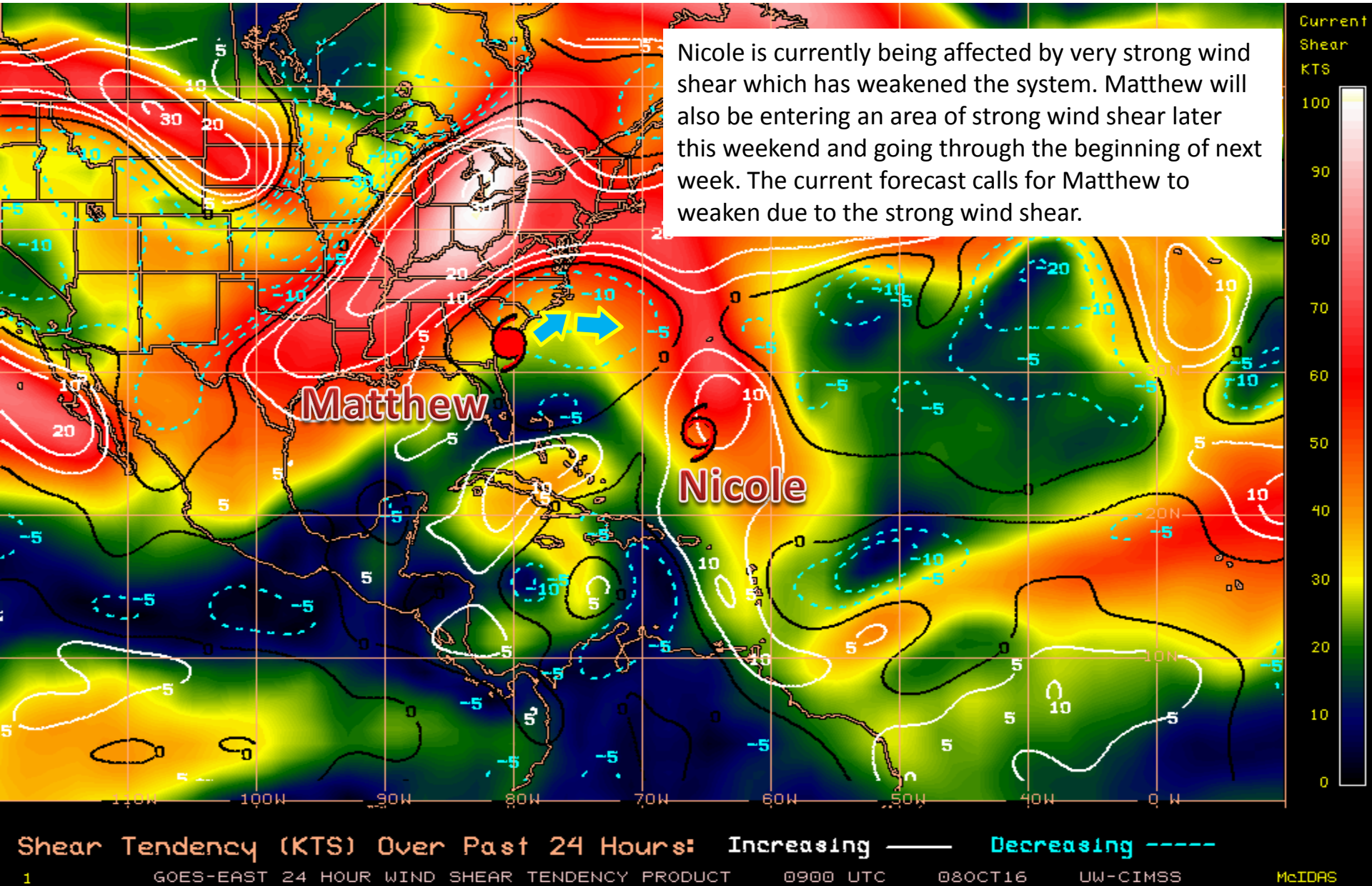
Euro vs. GFS – 8pm Tuesday

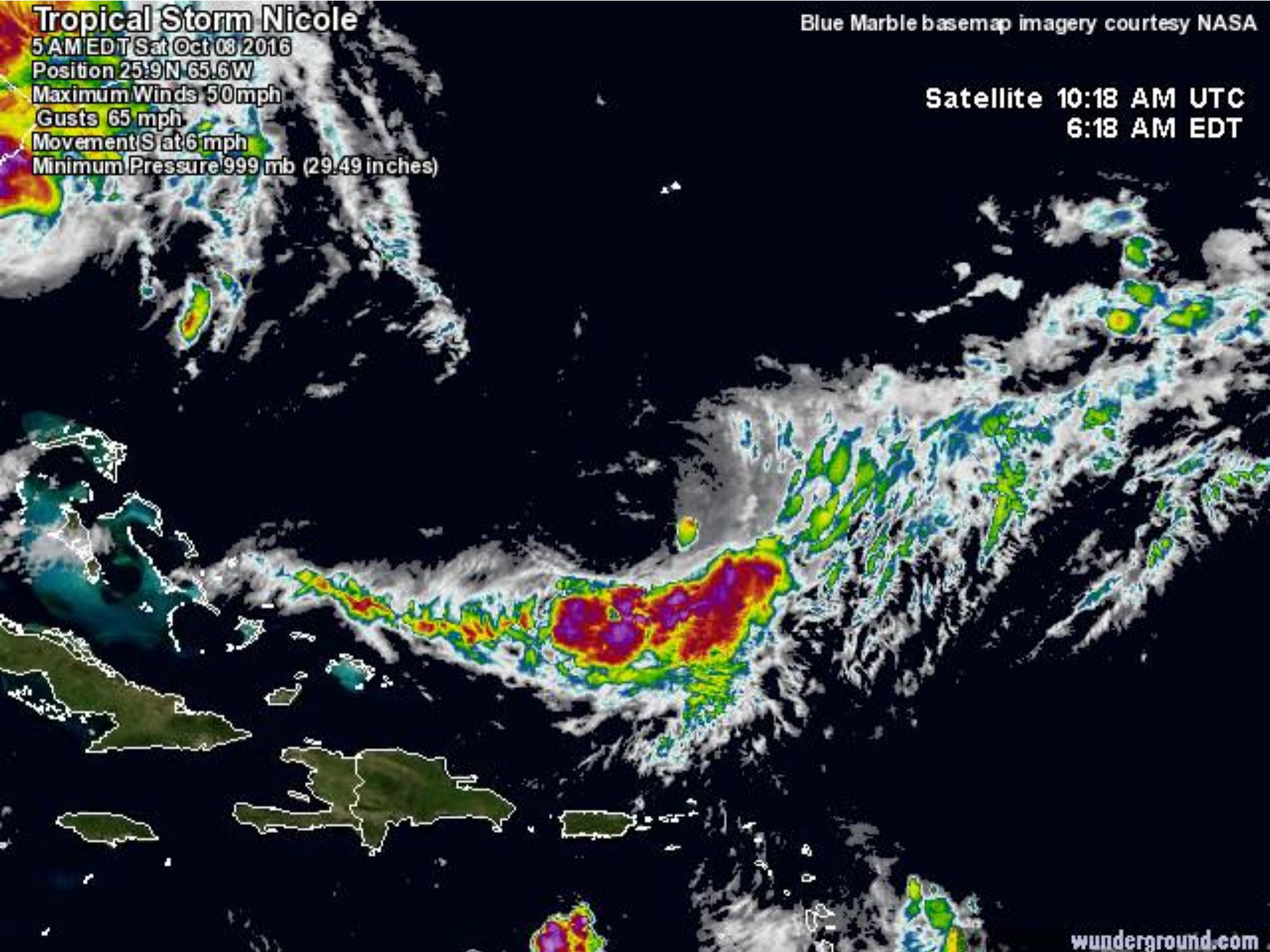


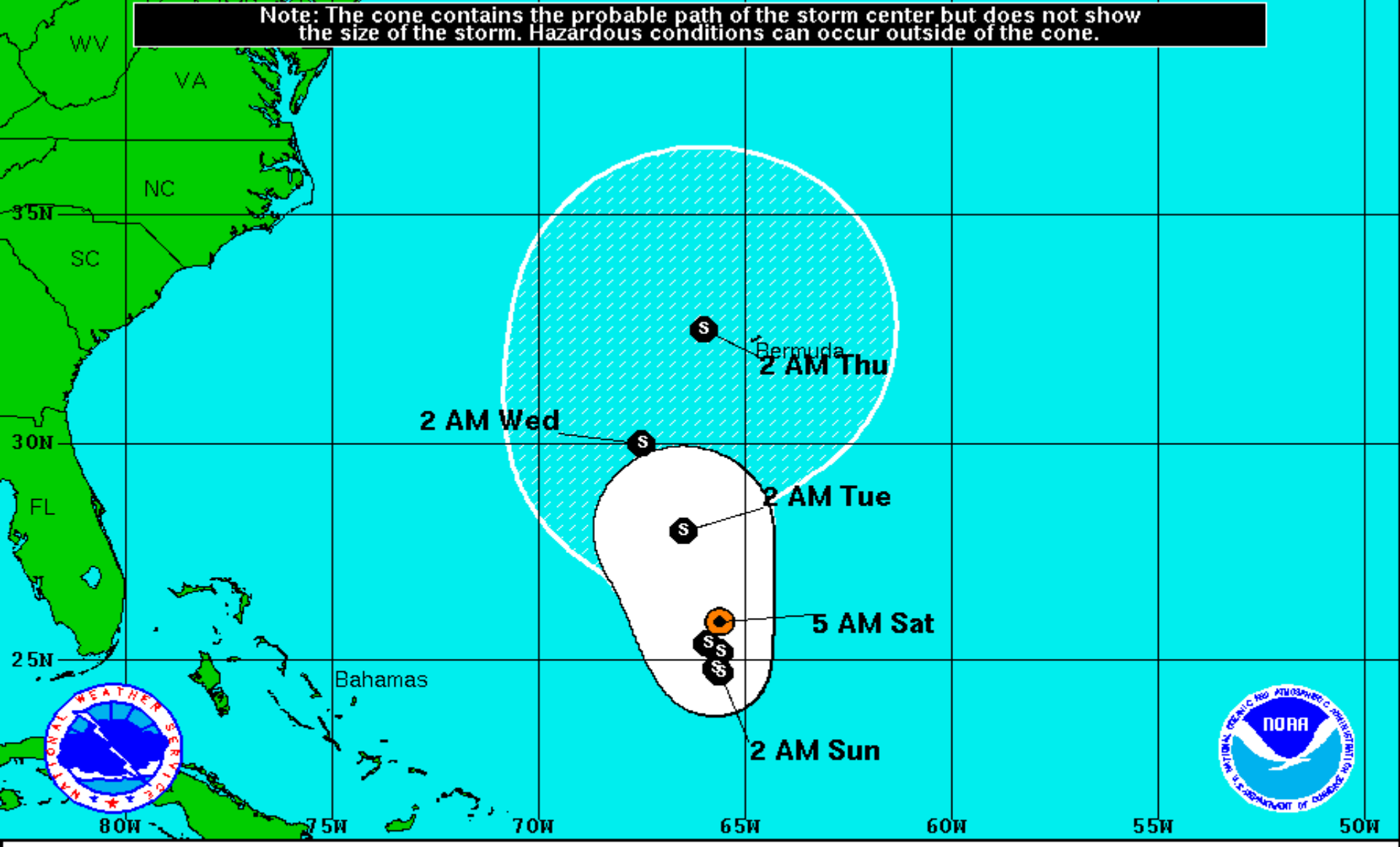


The picture is still not clear on Tuesday. Both models have slightly better defined systems than the day before, but the GFS has Matthew east of the Bahamas, while the European has Matthew over the northwestern Bahamas.

Current Wind Shear (shaded) and Shear Tendency (contours)




Tropical Storm Nicole
5 AM EDT Sat Oct 08 2016
Position 25.9 N 65.6 W
Maximum Winds 50 mph
Gusts 65 mph
Movement S at 6 mph
Minimum Pressure 999 mb (29.49 inches)
Blue Marble basemap imagery courtesy NASA
Satellite 10:18 AM UTC
6:18 AM EDT
wunderground.com



Tropical Storm Nicole
Saturday October 8, 2016
5 AM EDT Advisory 17
NWS National Hurricane Center

Current Information:
Center Location 25.9 N 65.6 W
Max Sustained Wind 50 mph
Movement S at 7 mph

Forecast Positions:
Tropical Cyclone Post-Tropical
Sustained Winds: D < 39 mph
S 39-73 mph H 74-110 mph M > 110mph

Potential Track Area:
Day 1-3 Day 4-5

Watches:
Hurricane Trop.Storm

Warnings:
Hurricane Trop.Storm

Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida

Tropical Cyclone Formation Potential for the Five-Day Period Ending at 2:00 am EDT Thu Oct 13 2016

Chance of Cyclone Formation in Five Days: Low < 40% Medium 40-60% High > 60%

X indicates current disturbance location; shading indicates potential formation area.

Tropical Summary:

- At 5am EDT, Hurricane Matthew is located approximately 85 miles east northeast of Fernandina Beach.
- Maximum sustained winds are currently 105 mph with higher gusts, making Matthew a Category 2 hurricane on the Saffir-Simpson scale.
- Matthew remains a large storm, with tropical storm force winds extending 185 miles from the center, and hurricane force winds extending 45 miles from the center.
- Matthew is moving toward the north-northeast near 12 mph, and this general motion is expected to continue this morning. A turn toward the northeast is expected today as the storm approaches South Carolina.
- There is uncertainty in the forecast track for Matthew beyond 48 hours. The official forecast calls for Matthew to turn southeast and then southwest, taking Matthew back toward the Bahamas as a weakening tropical storm or tropical depression.
- The latest model track guidance favor this scenario, but this could certainly change over the next few days. Some of the models bring Matthew close to Florida, while others keep the storm far away from Florida.
- At 5am EDT, Tropical Storm Nicole is located is approximately located 445 miles south of Bermuda. Nicole is moving towards the south at 7 mph. A slow southward motion is expected to continue today and tonight, but Nicole is then forecast to stall or meander Sunday and Monday night. Maximum winds are at 50 mph.

Florida Outlook:

- Matthew's large wind field will continue to generate tropical storm force gusts in the coastal waters of the First Coast. There may also be some tropical storm gusts inland. Rough seas will continue, along with coastal flooding, beach erosion, and dangerous rip currents.
- Main river flooding concerns are for the St. Johns River at: Buckman Bridge, at Racy Point, and Buffalo Bluff. Also for the Jullington Creek at Old Saint Augustine Road, Dunns Creek near Satsuma, Deep Creek at Spuds, and the larger rivers in the Jacksonville downtown/suburbs area.
- Swells generated by Matthew will continue to affect portions of the east coast of Florida during the next few days. This will also likely lead to additional coastal flooding in some areas.
- Hurricane Nicole does not pose a threat to Florida.

Another briefing packet will be issued on Saturday afternoon. For more information on this system, please visit the NHC website at www.nhc.noaa.gov

TROPICAL UPDATE

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