



TROPICAL UPDATE

5 PM EDT

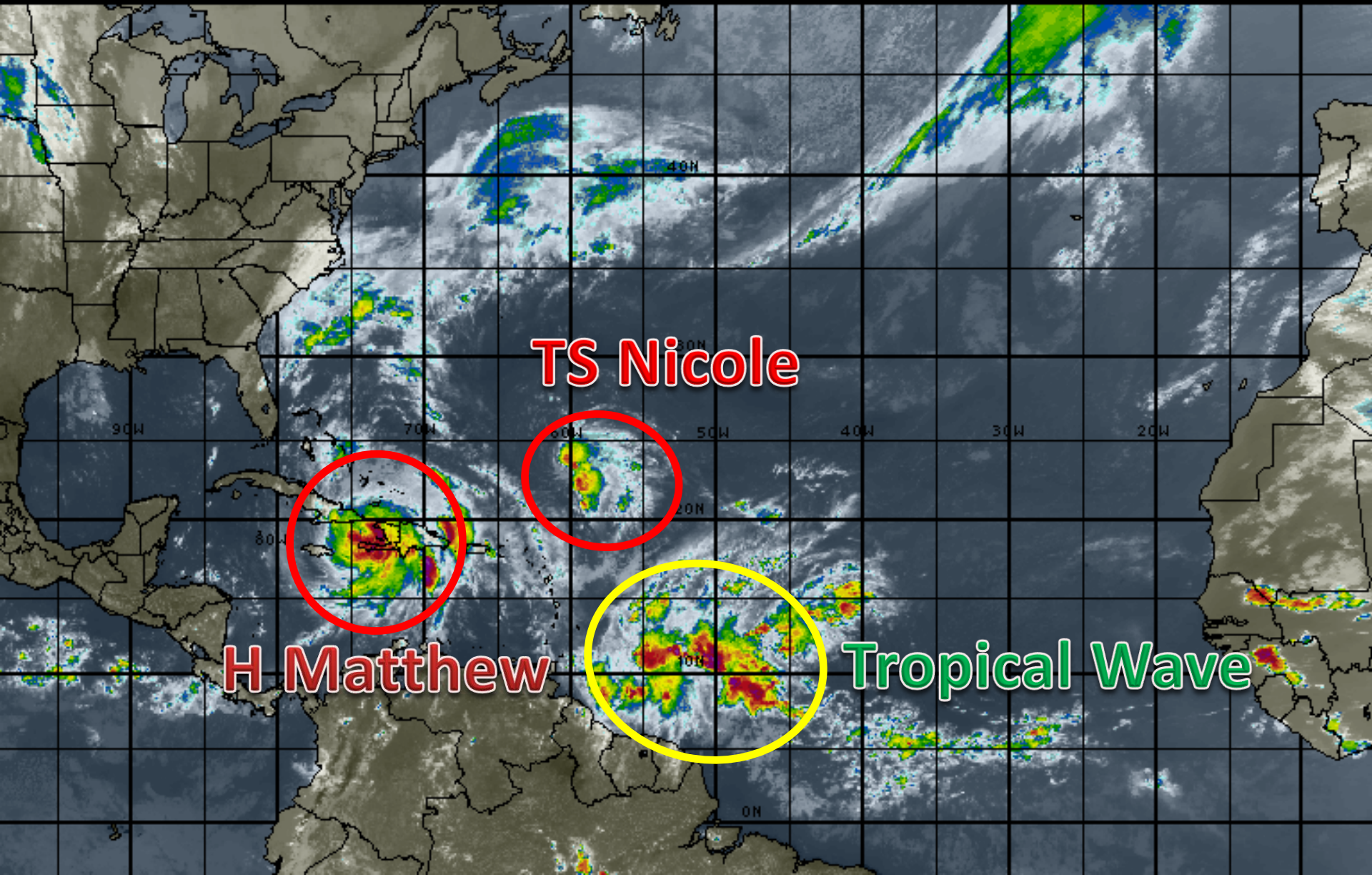
Tuesday, October 4, 2016

**Major Hurricane Matthew and
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

18:00 04-OCT-2016 GMT Copyright © 1998-2016 WSI Corporation <http://www.wsi.com>



Hurricane Matthew

2 PM EDT Tue Oct 04 2016

Position 19.4 N 74.3 W

Maximum Winds 145 mph

Gusts 170 mph

Movement N at 10 mph

Minimum Pressure 949 mb (28.01 inches)

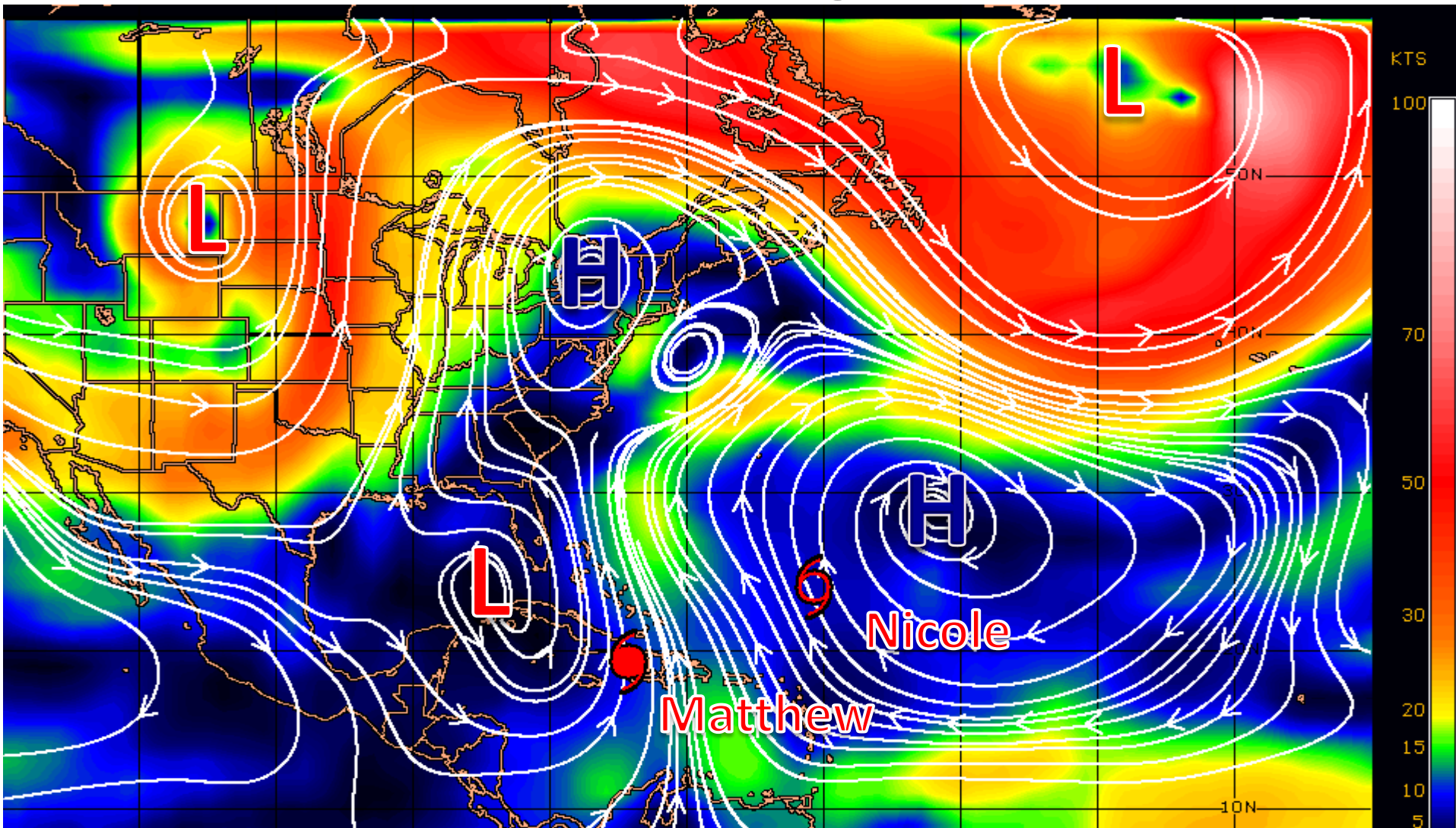
Blue Marble basemap imagery courtesy NASA

Satellite 7:37 PM UTC

3:37 PM EDT



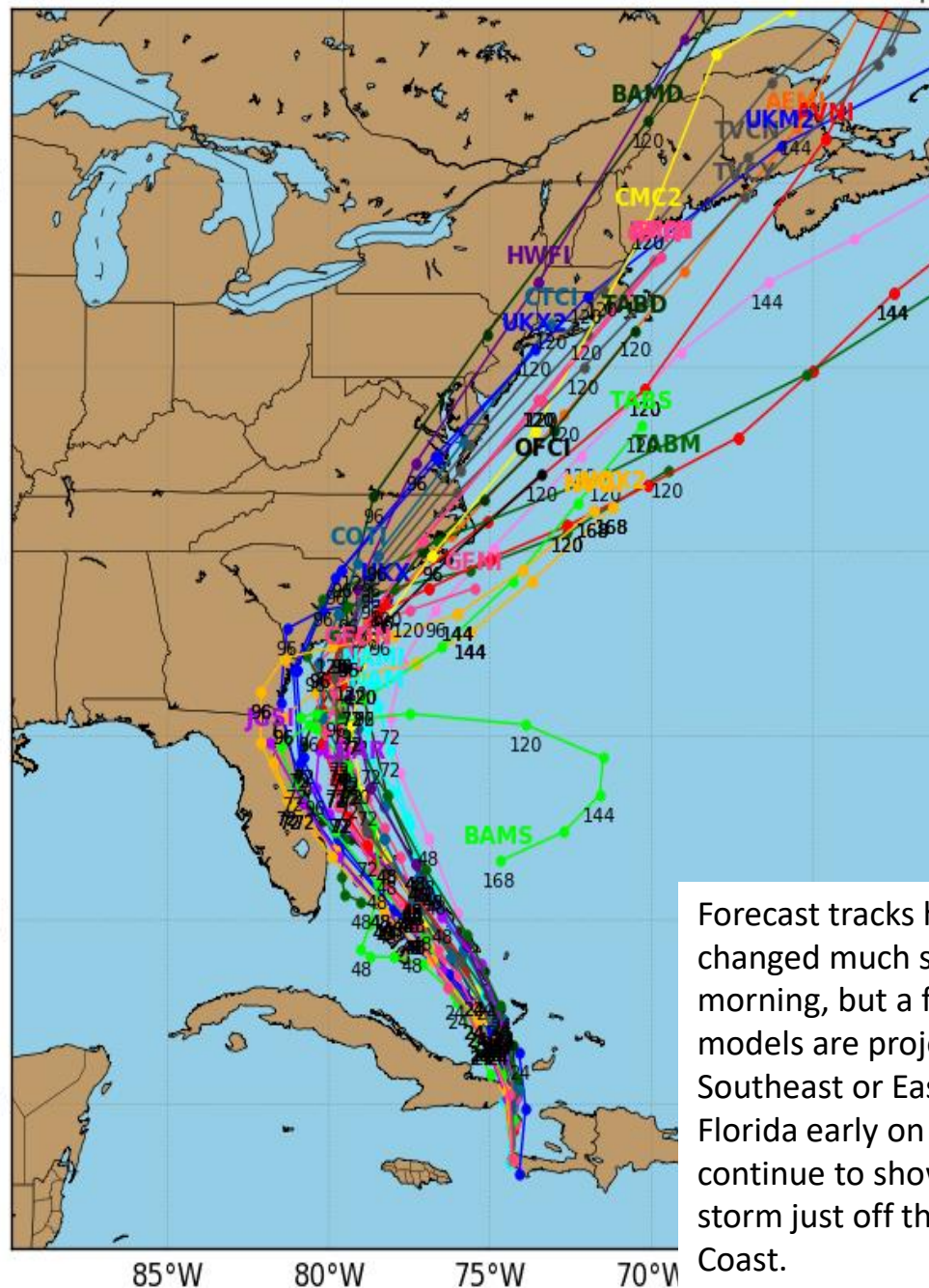
Current Steering Currents



Matthew is being steered north between a high pressure system over the central Atlantic and low pressure over the eastern Gulf of Mexico. Another high pressure ridge is over New England and forecast to build south, causing Matthew to take a NW movement before another low pressure system in the Plains moves to the Eastern U.S. and steers Matthew north to northeast this weekend.

Initialized at 12z Oct 04 2016

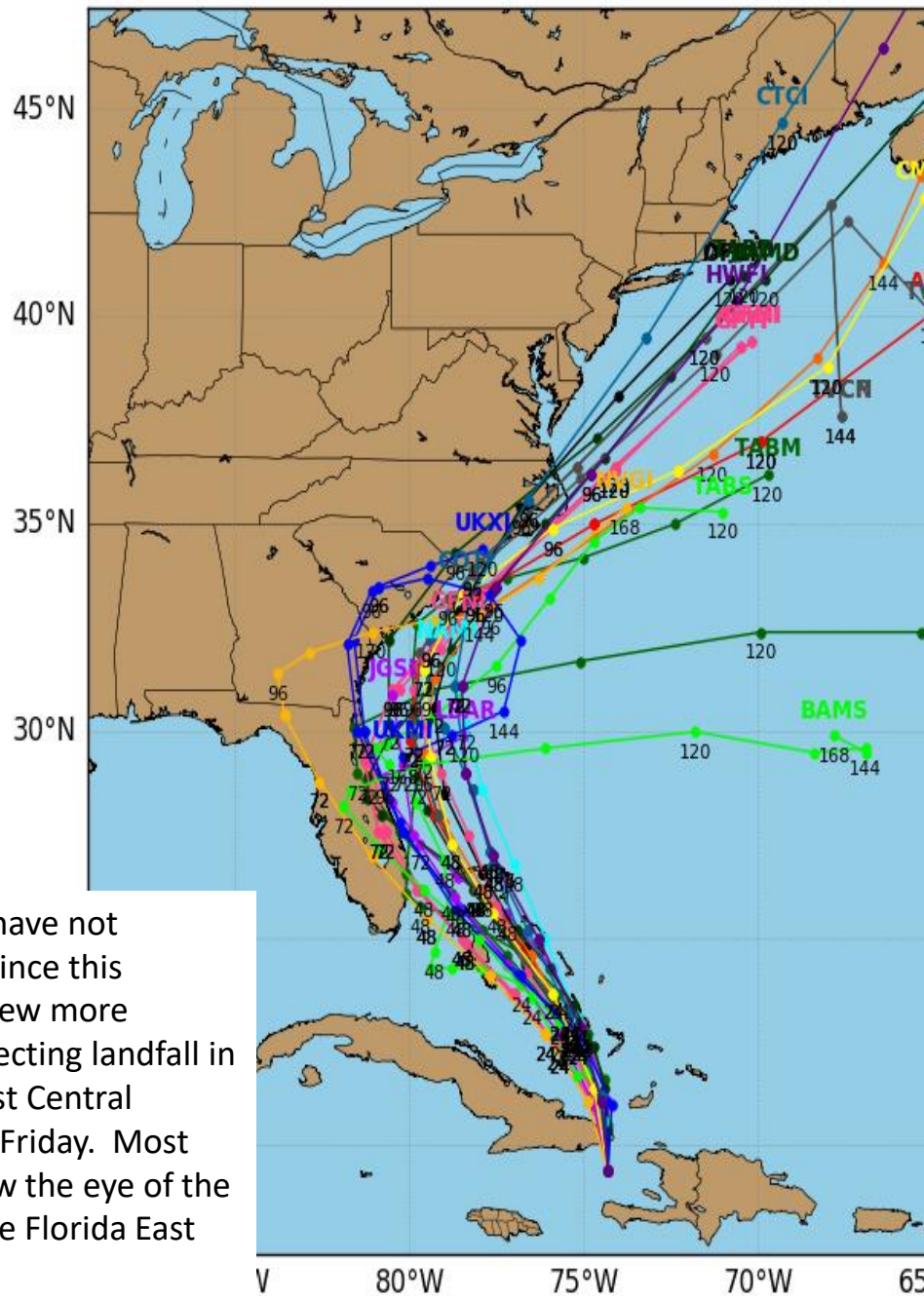
Levi Cowan - trop

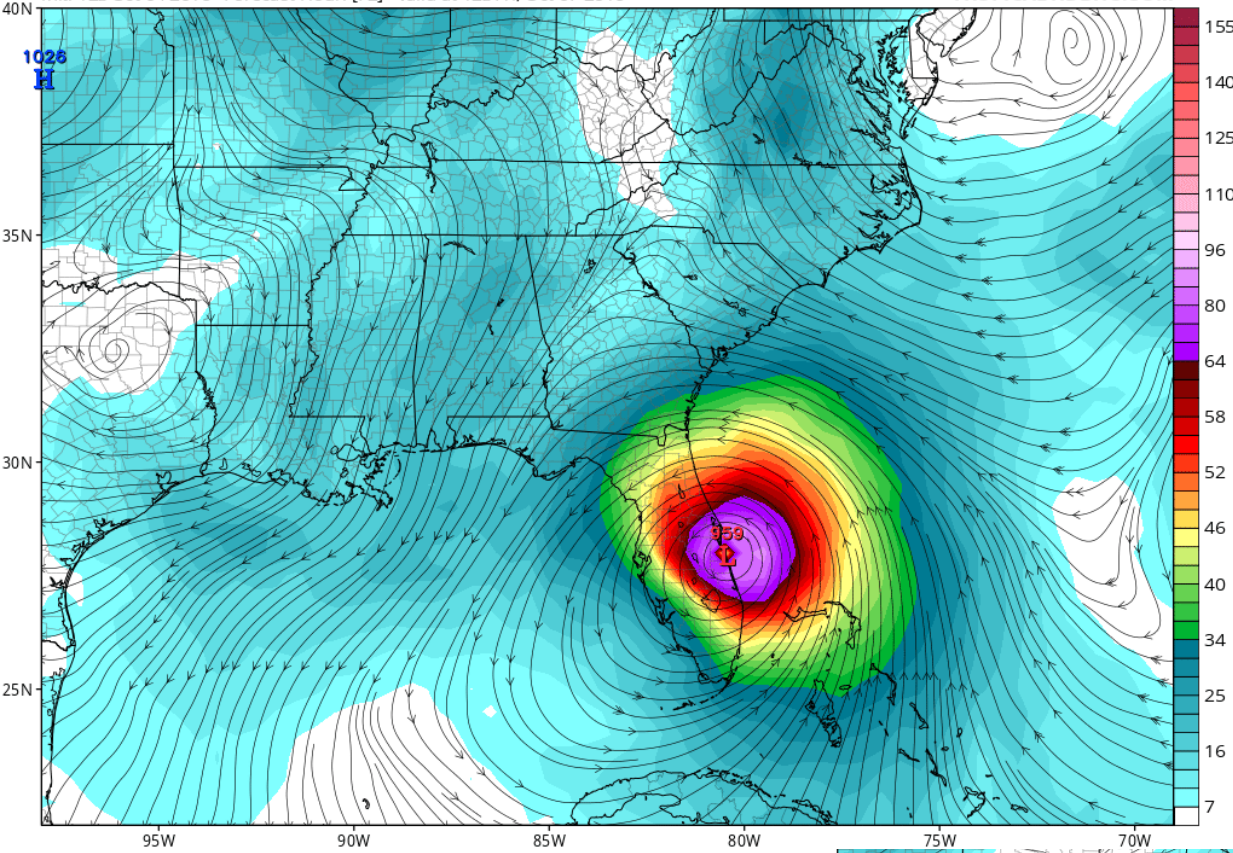


Forecast tracks have not changed much since this morning, but a few more models are projecting landfall in Southeast or East Central Florida early on Friday. Most continue to show the eye of the storm just off the Florida East Coast.

Initialized at 18z Oct 04 2016

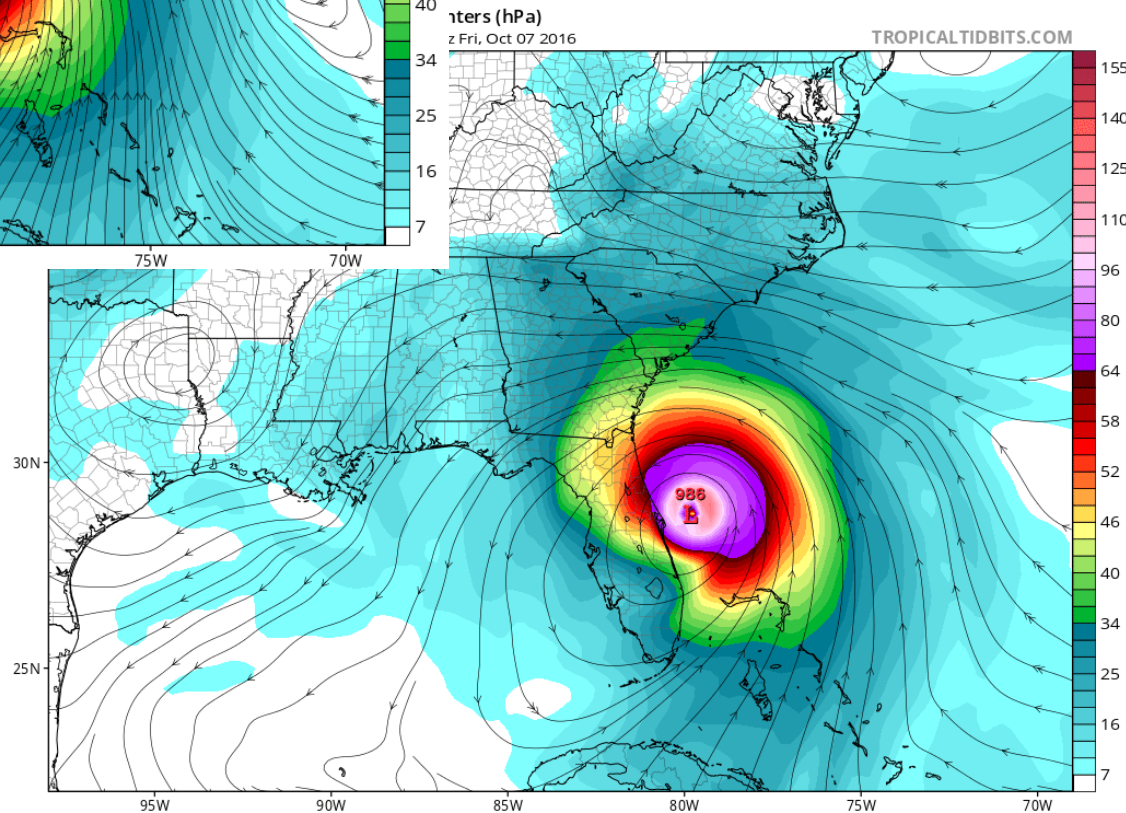
Levi Cowan -



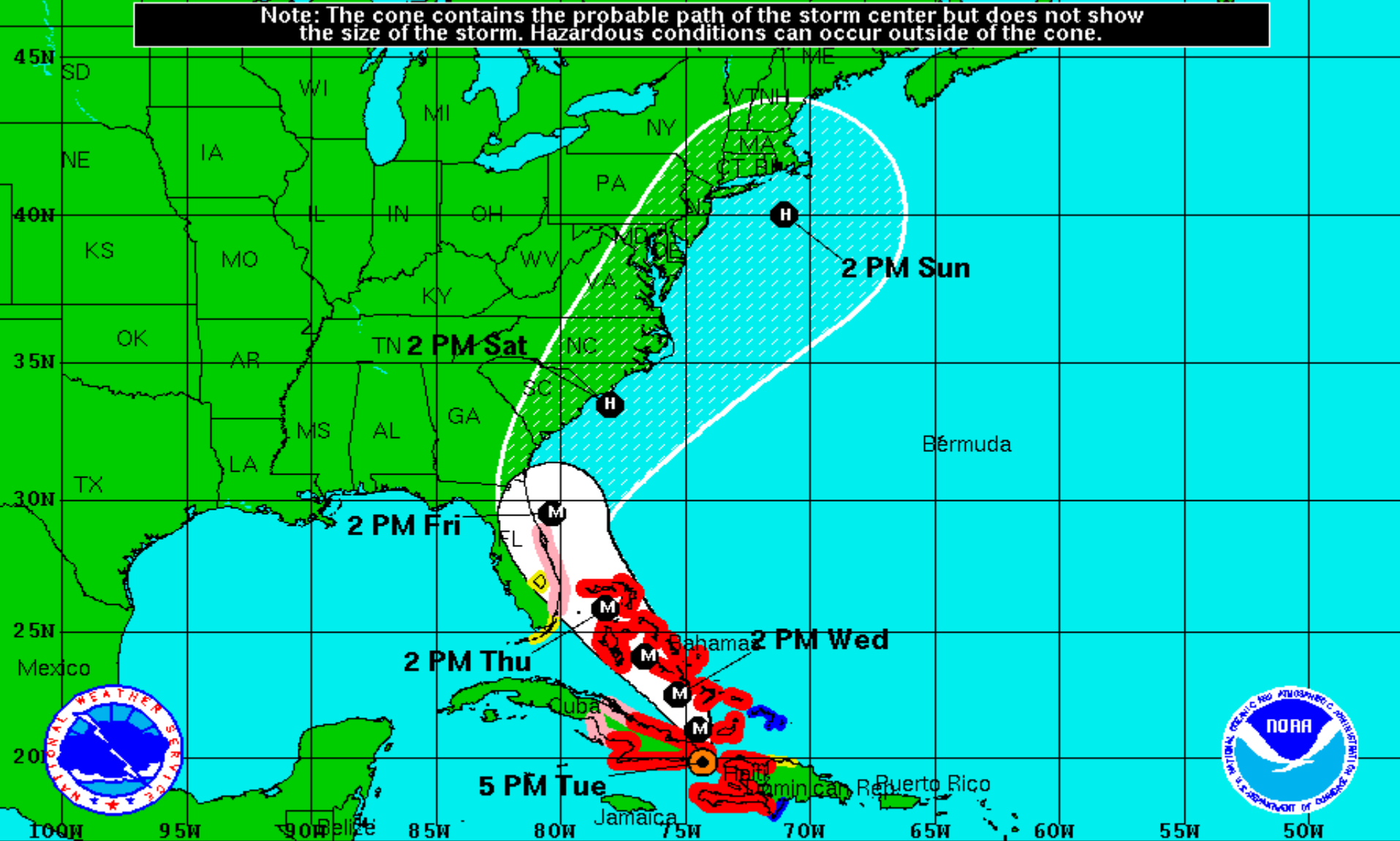


Euro vs.
GFS –
8am
Friday

- The latest European model run also shows a Florida landfall while the GFS American models has the hurricane core just off the Space Coast Friday at 8am



Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.



Hurricane Matthew

Tuesday October 4, 2016

5 PM EDT Advisory 27

NWS National Hurricane Center

Current Information:

Center Location 19.8 N 74.3 W

Max Sustained Wind 140 mph

Movement N at 9 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



HURRICANE MATTHEW

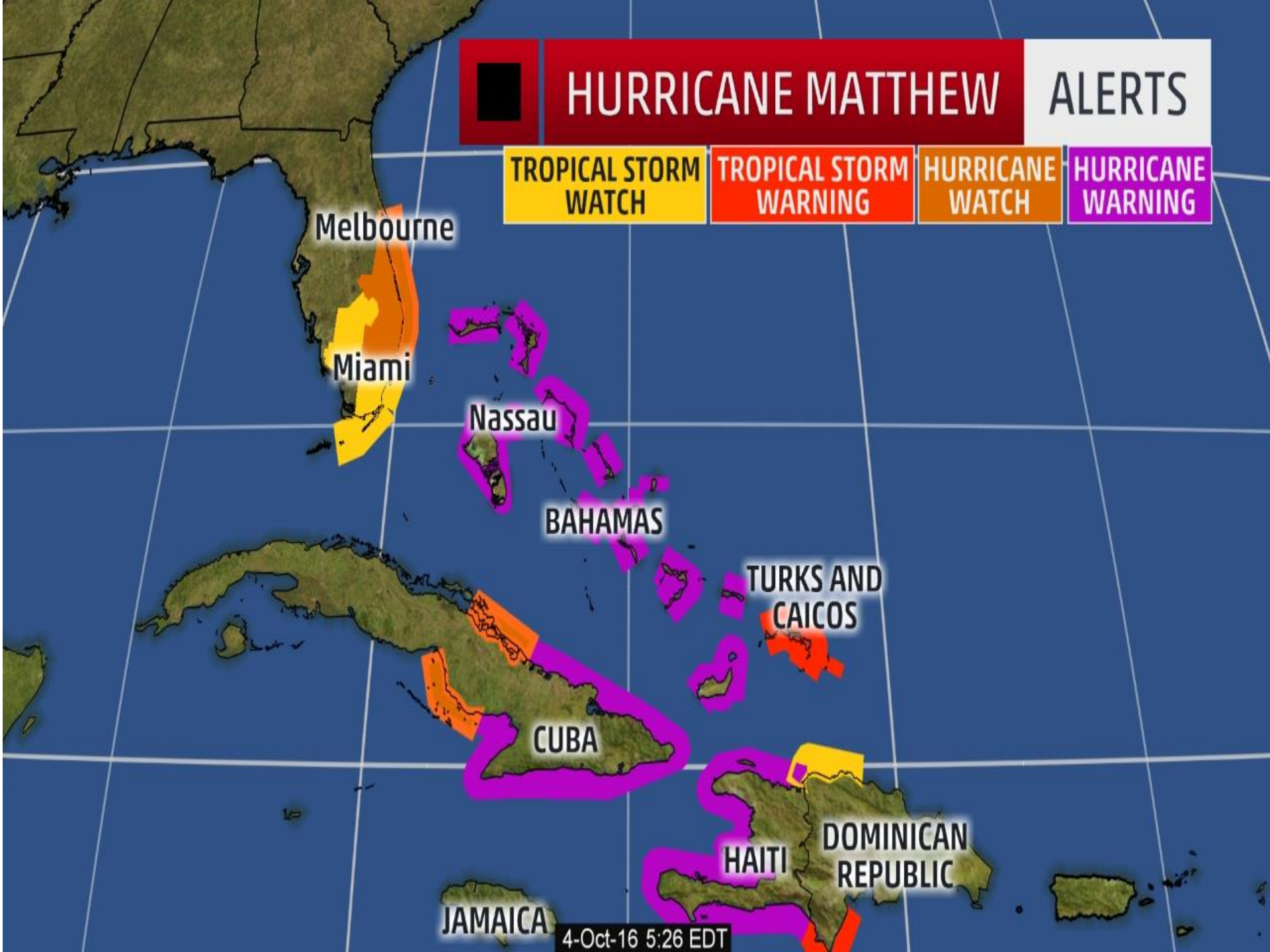
ALERTS

TROPICAL STORM
WATCH

TROPICAL STORM
WARNING

HURRICANE
WATCH

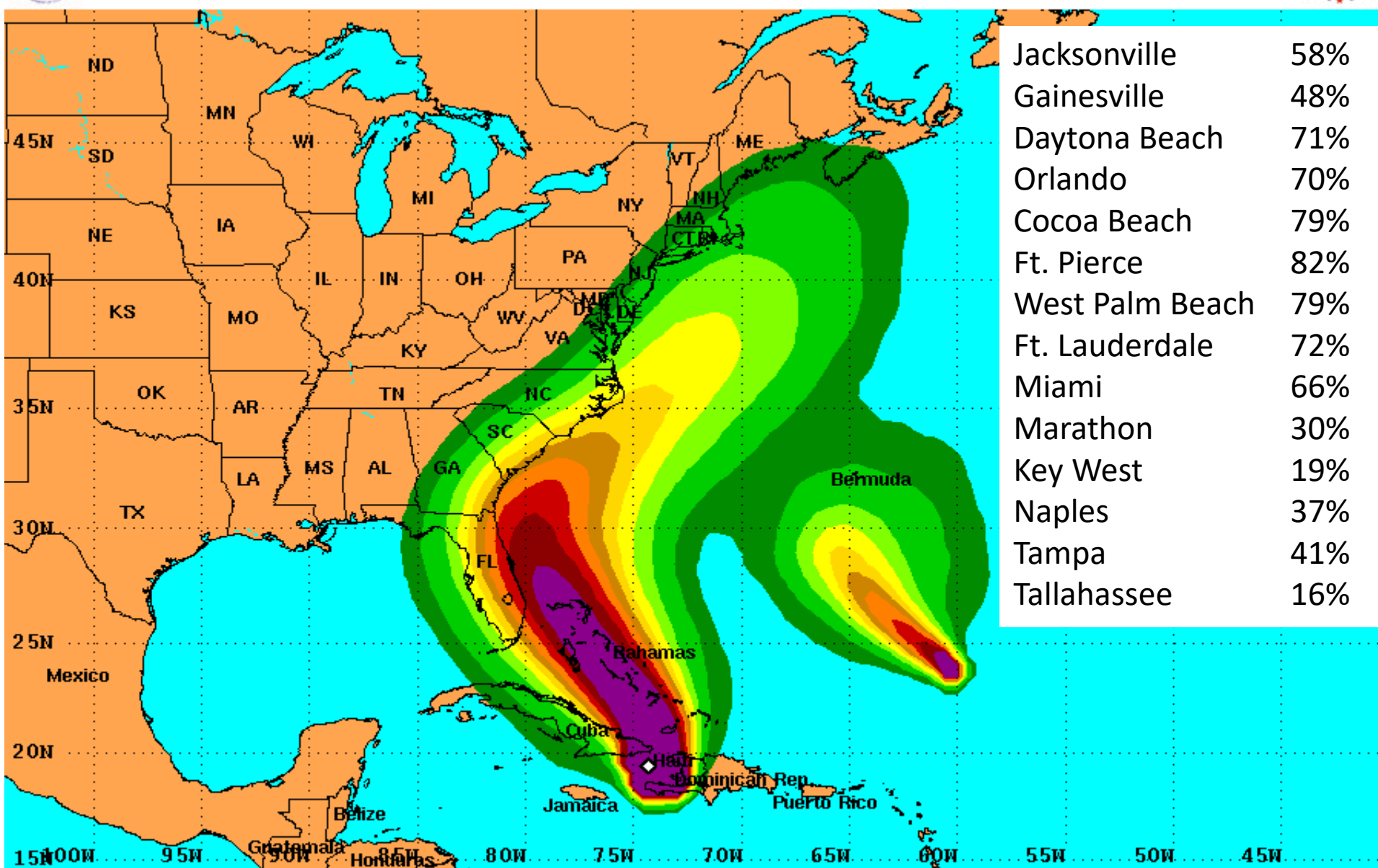
HURRICANE
WARNING





Tropical Storm Force Wind Speed Probabilities

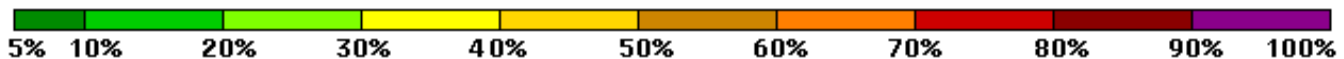
For the 120 hours (5 days) from 2 PM EDT Tue Oct 4 to 2 PM EDT Sun Oct 9



Jacksonville	58%
Gainesville	48%
Daytona Beach	71%
Orlando	70%
Cocoa Beach	79%
Ft. Pierce	82%
West Palm Beach	79%
Ft. Lauderdale	72%
Miami	66%
Marathon	30%
Key West	19%
Naples	37%
Tampa	41%
Tallahassee	16%

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

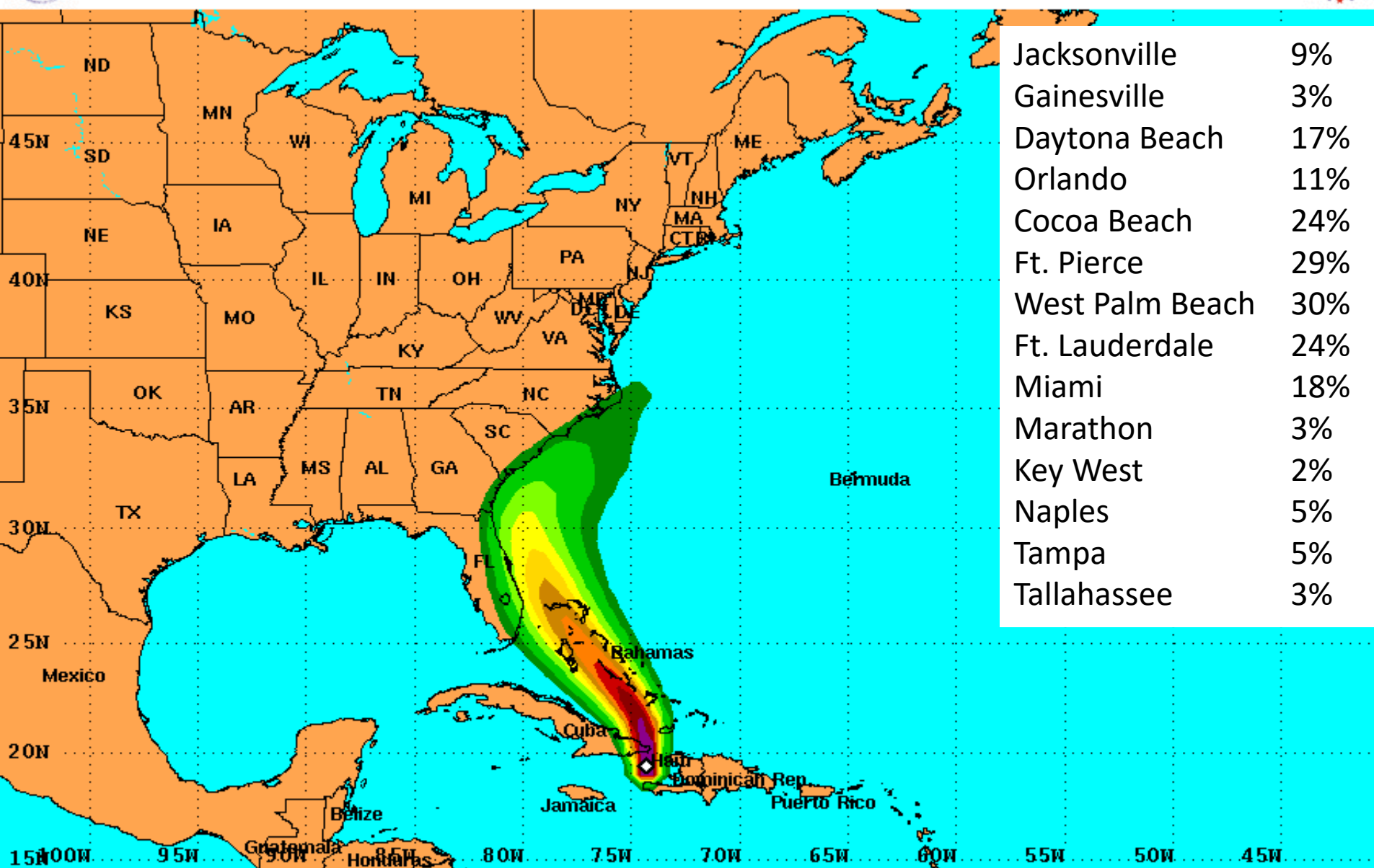
◇ indicates HURRICANE MATTHEW center location at 2 PM EDT Tue Oct 4 2016 (Forecast/Advisory #27)





Hurricane Force Wind Speed Probabilities

For the 120 hours (5 days) from 2 PM EDT Tue Oct 4 to 2 PM EDT Sun Oct 9



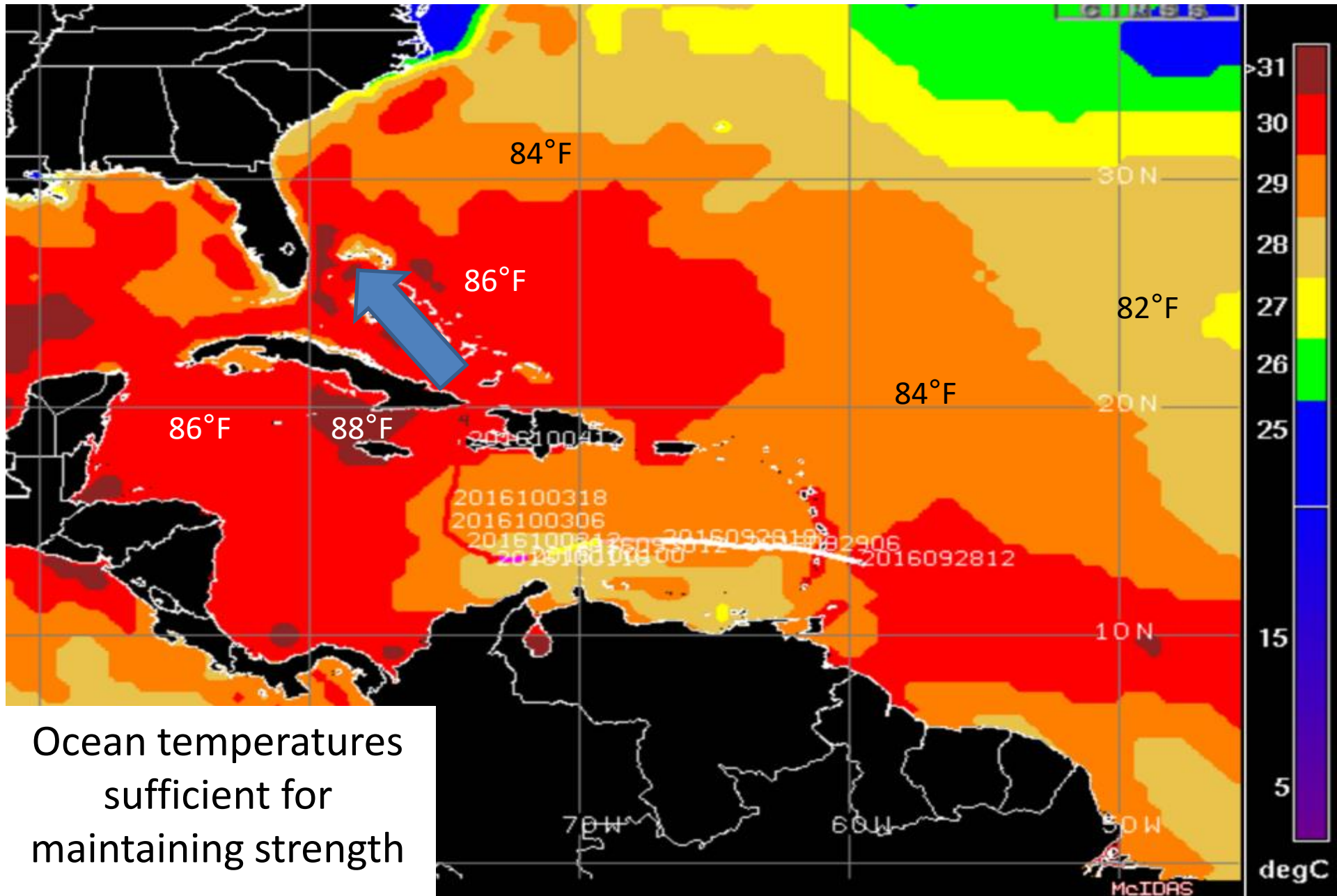
Jacksonville	9%
Gainesville	3%
Daytona Beach	17%
Orlando	11%
Cocoa Beach	24%
Ft. Pierce	29%
West Palm Beach	30%
Ft. Lauderdale	24%
Miami	18%
Marathon	3%
Key West	2%
Naples	5%
Tampa	5%
Tallahassee	3%

Probability of hurricane force surface winds (1-minute average ≥ 74 mph) from all tropical cyclones

◇ indicates HURRICANE MATTHEW center location at 2 PM EDT Tue Oct 4 2016 (Forecast/Advisory #27)



Sea Surface Temperatures



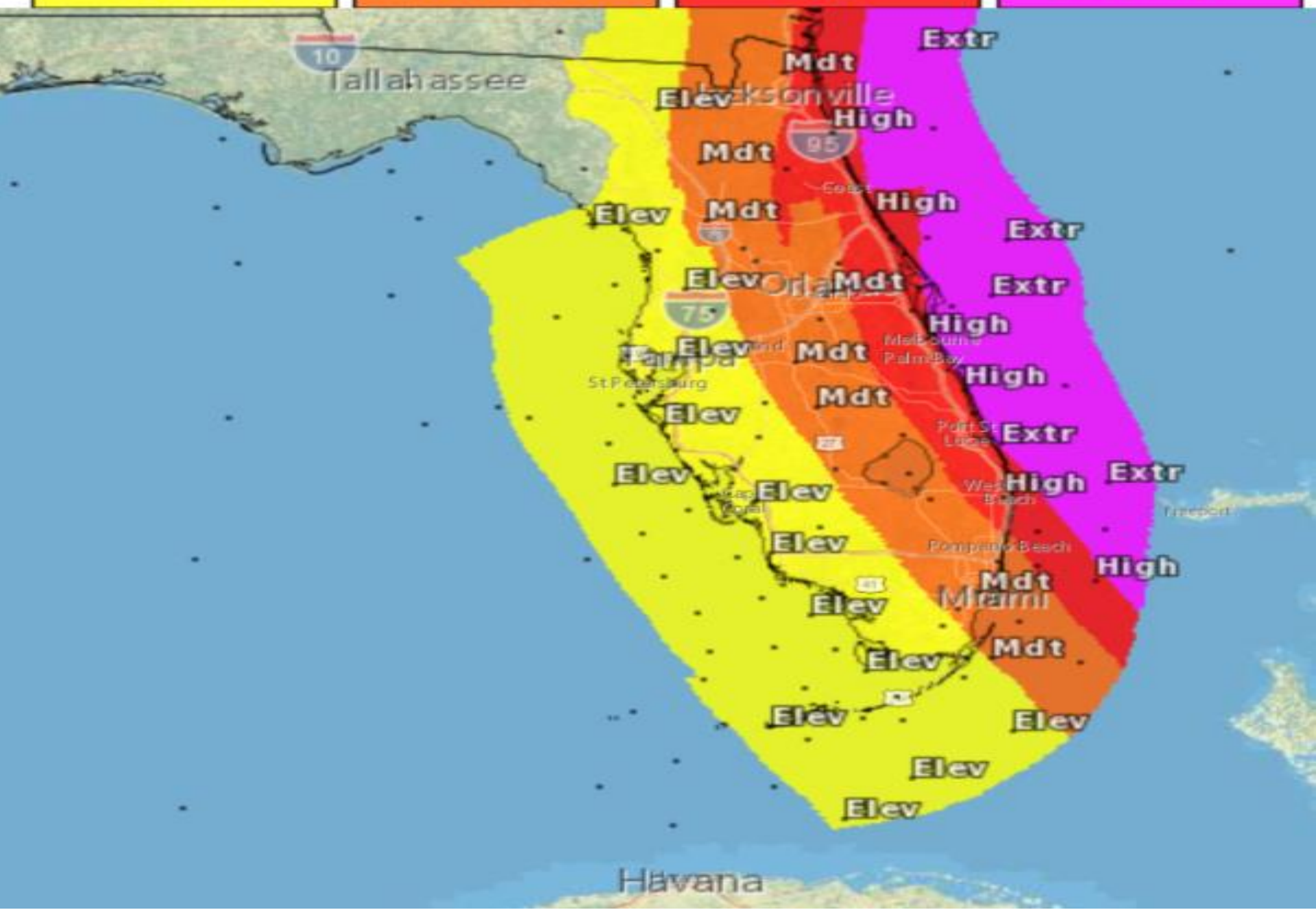
Ocean temperatures
sufficient for
maintaining strength

Elevated

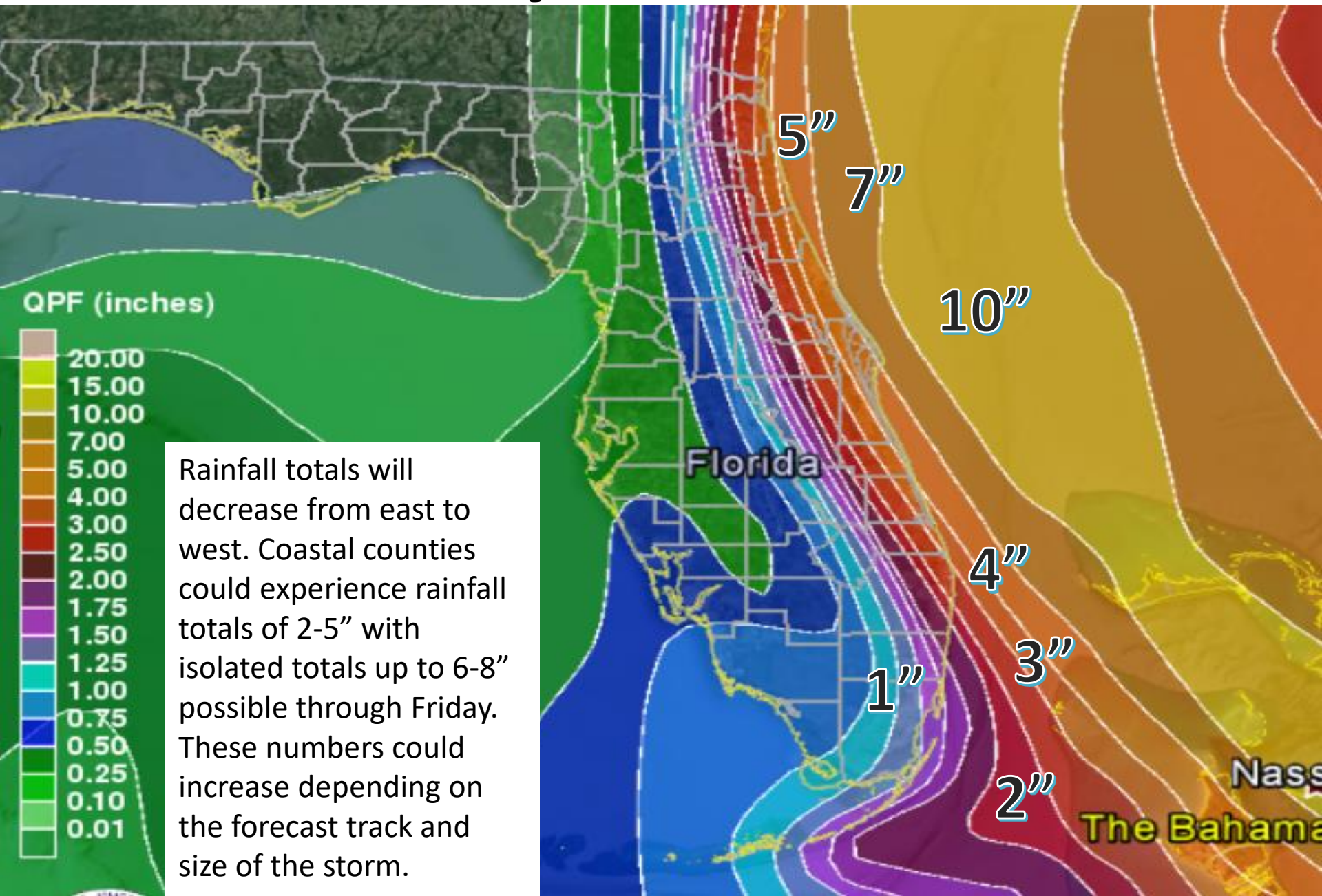
Moderate

High

Extreme



Next 5 Day Forecast Rainfall

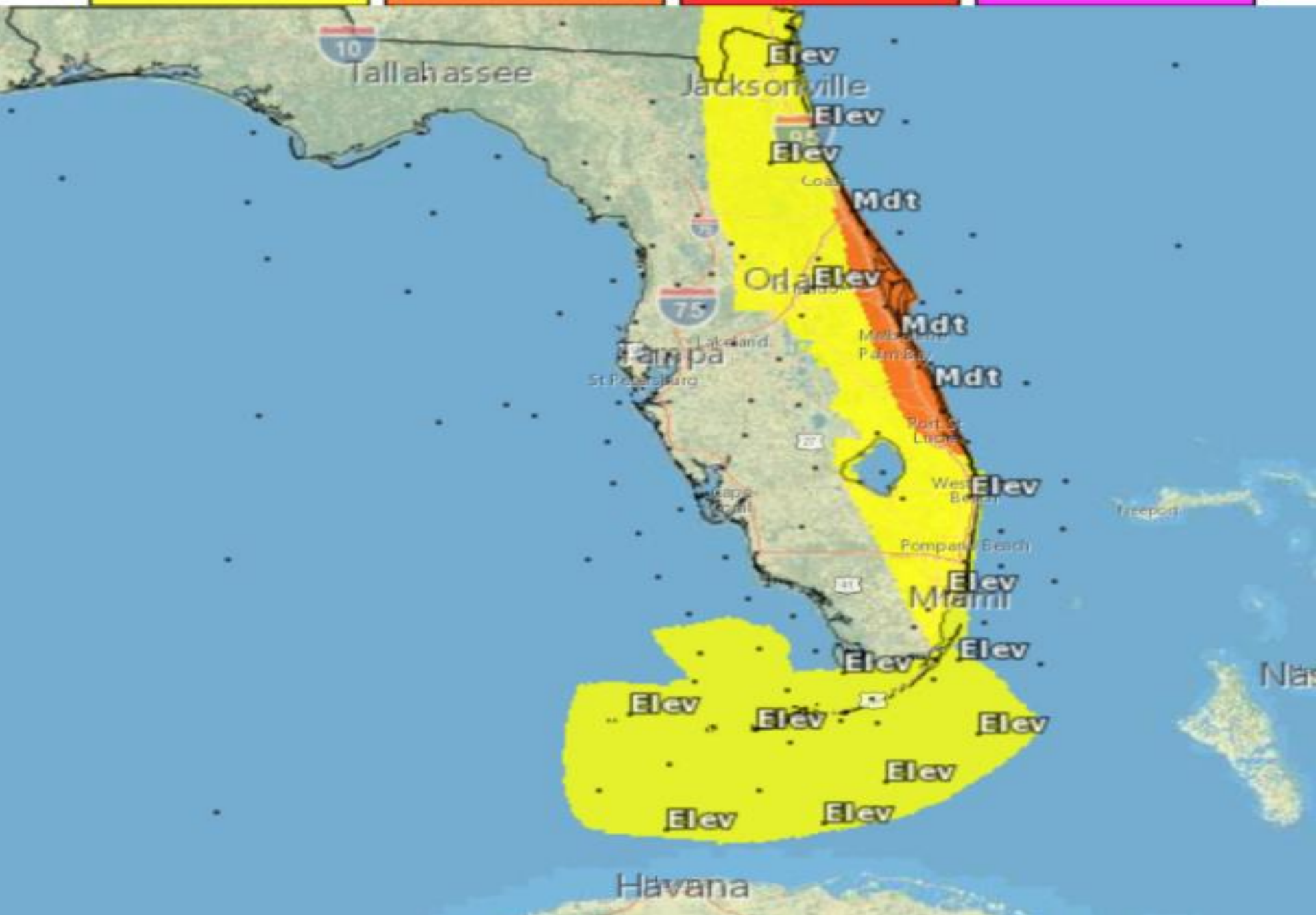


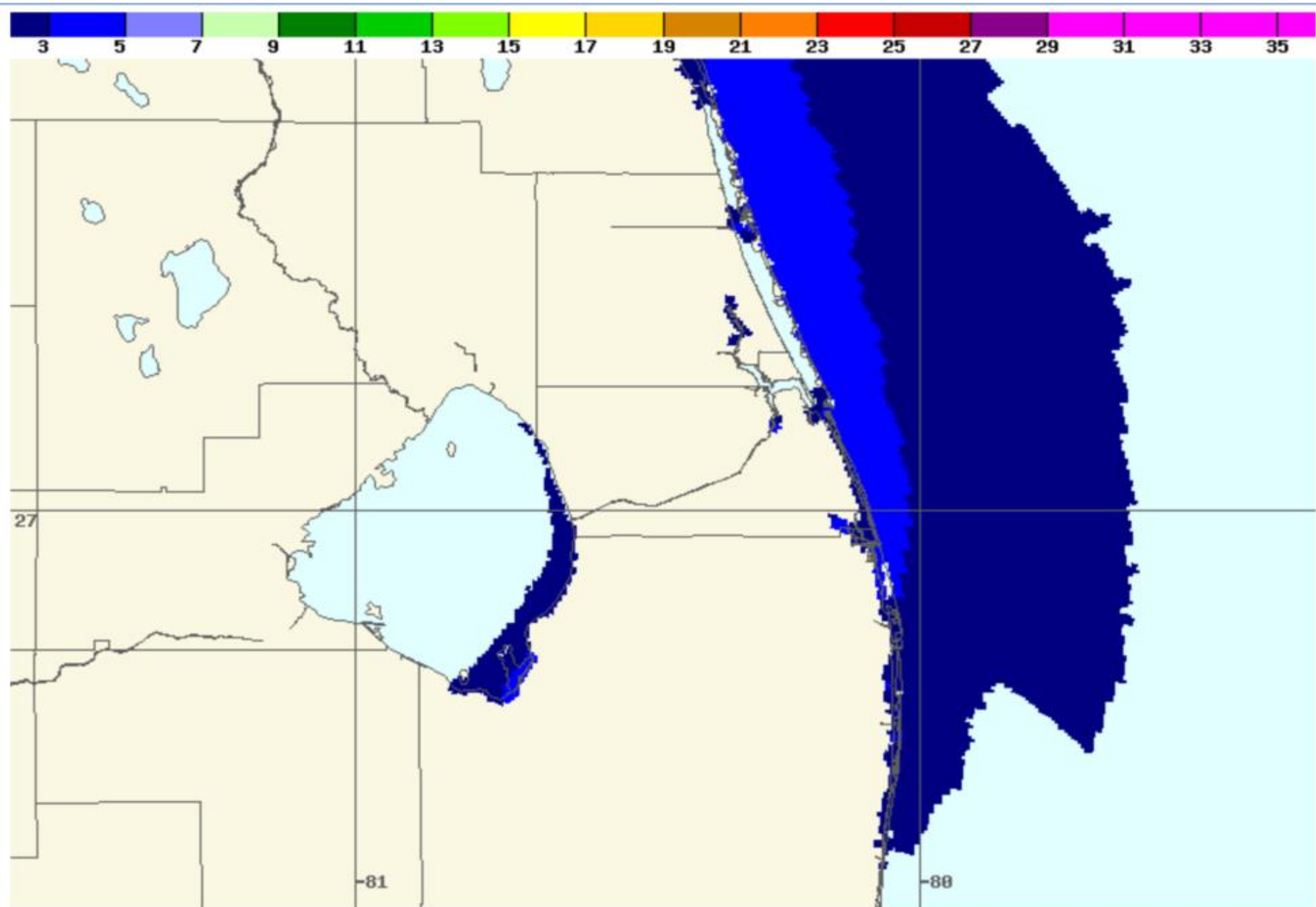
Elevated

Moderate

High

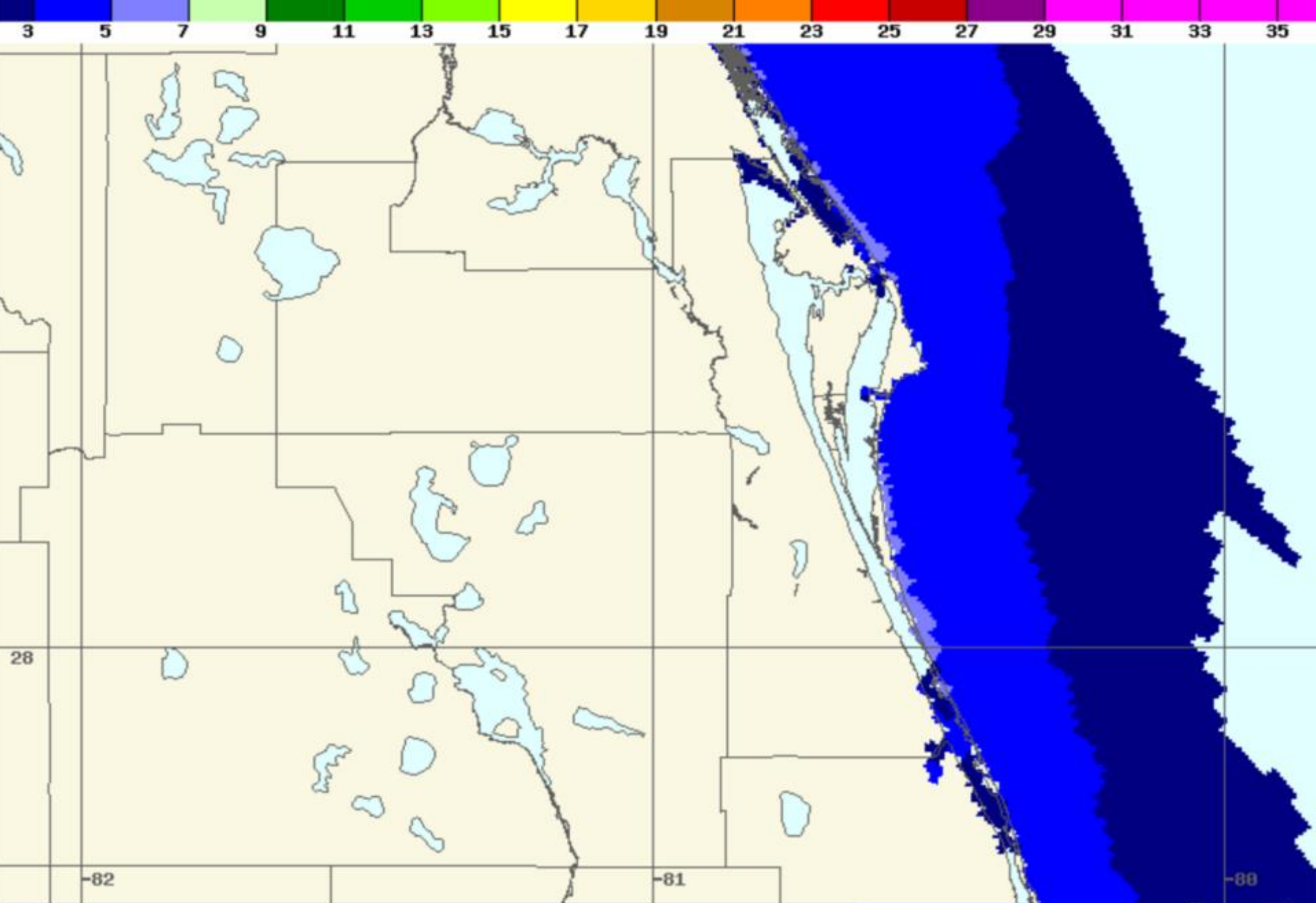
Extreme





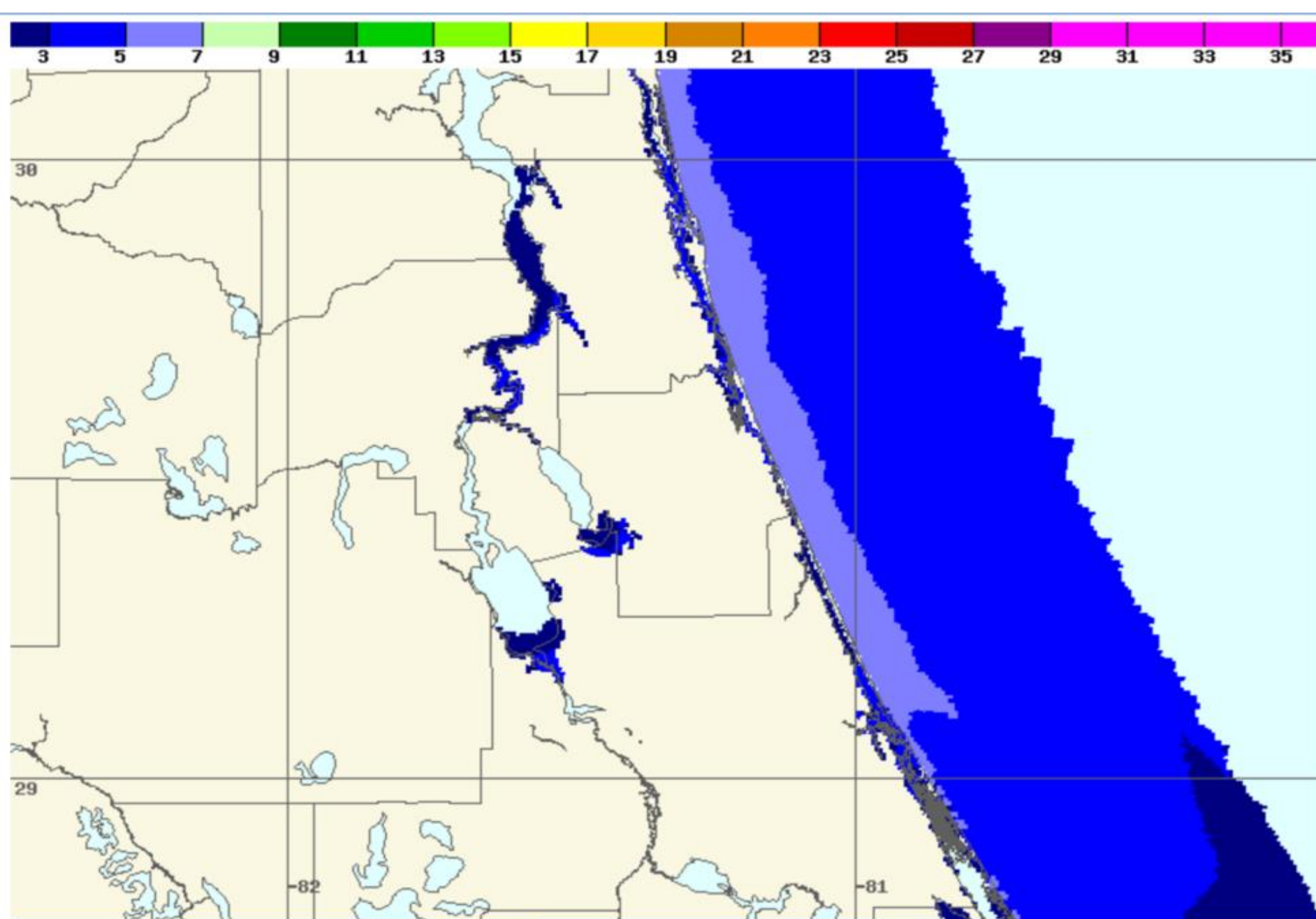
Hurricane Matthew(2016) Advisory 27: Storm surge (with tide) heights in feet above ground level with a 1 in 10 chance of being exceeded. EXPERIMENTAL Data valid from Oct 04, 01 PM EST to Oct 07, 07 PM EST





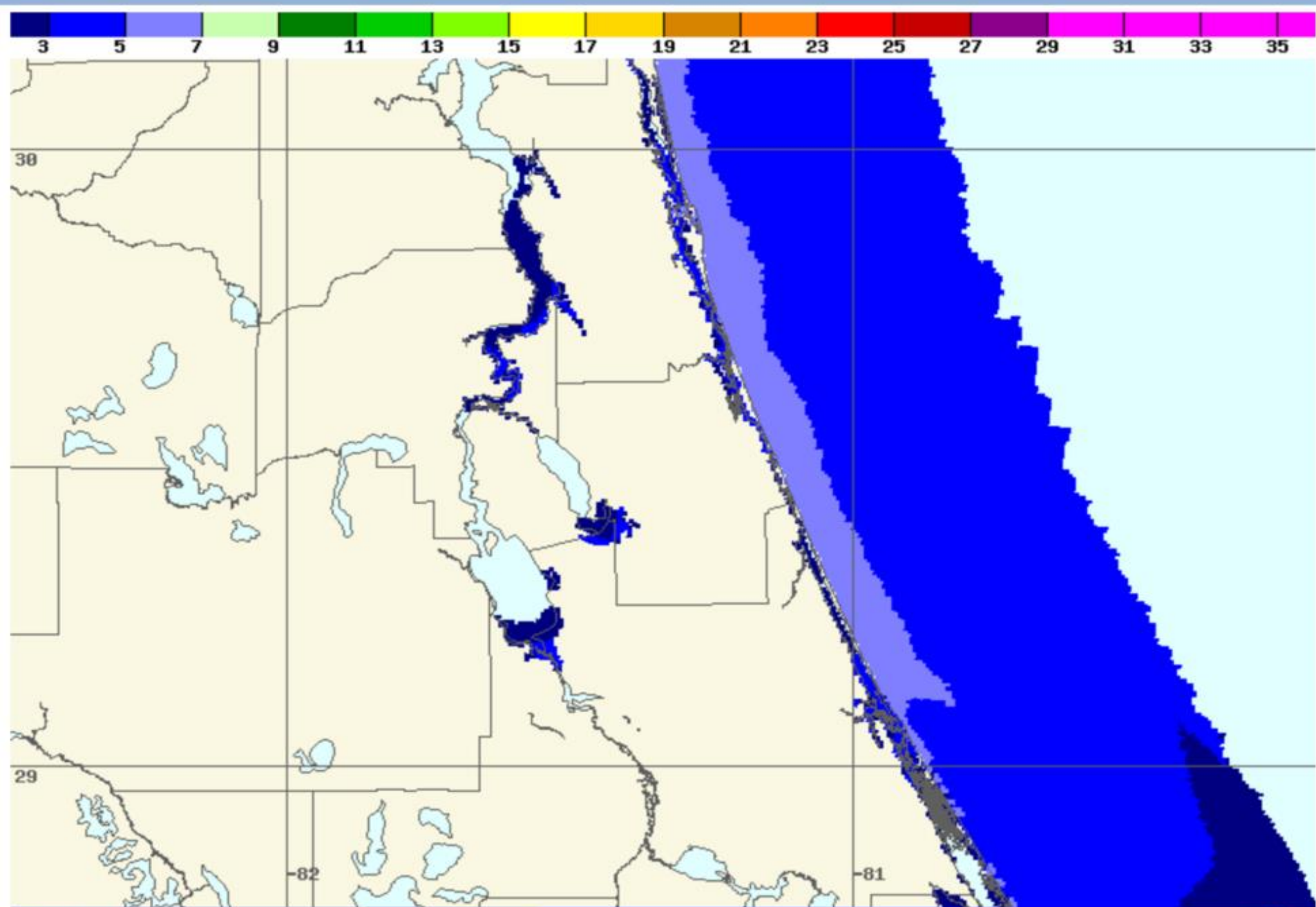
Hurricane Matthew(2016) Advisory 27: Storm surge (with tide) heights in feet above ground level with a 1 in 10 chance of being exceeded. EXPERIMENTAL Data valid from Oct 04, 01 PM EST to Oct 07, 07 PM EST





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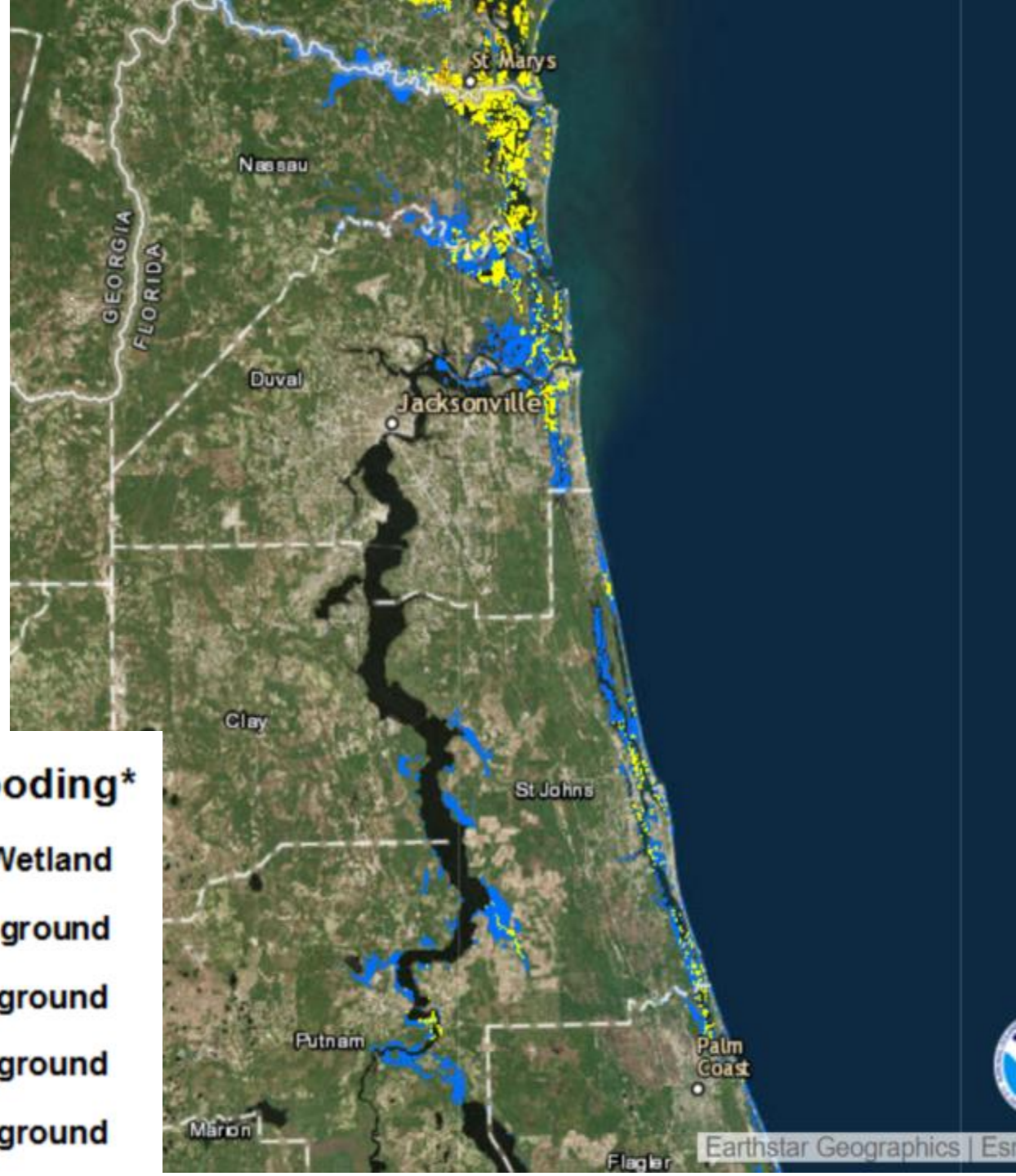
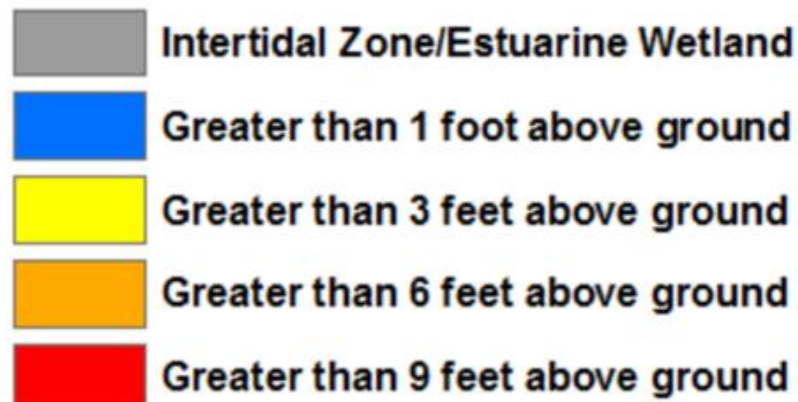




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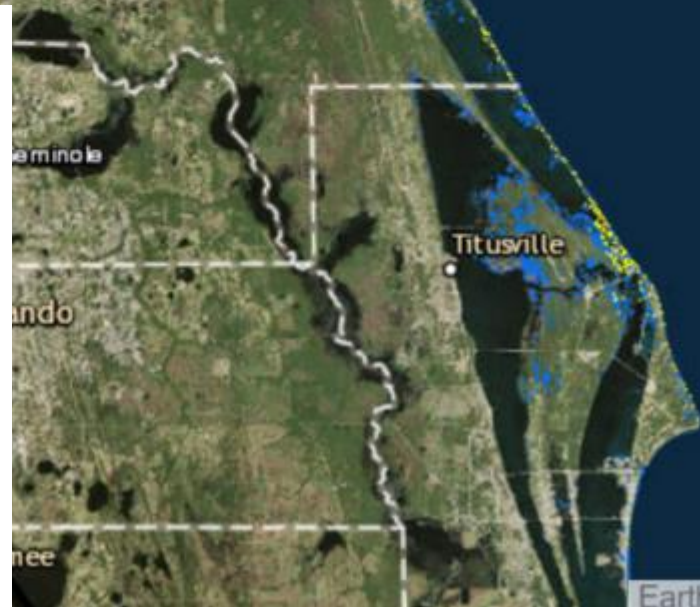
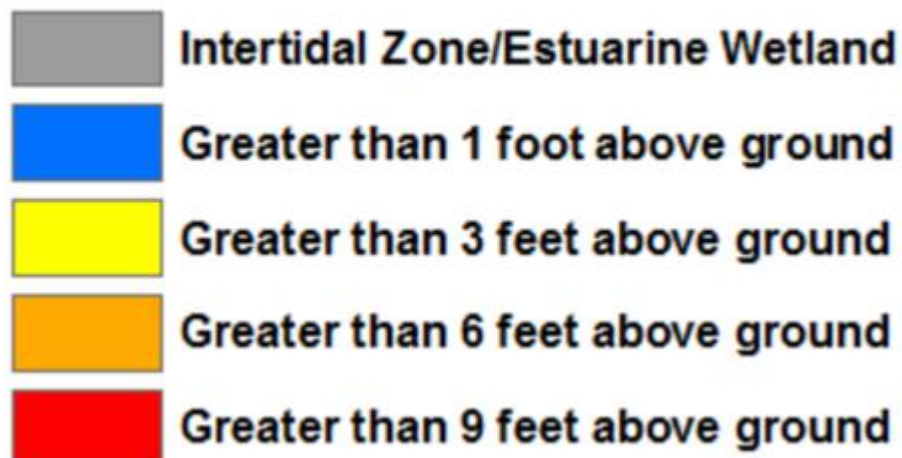


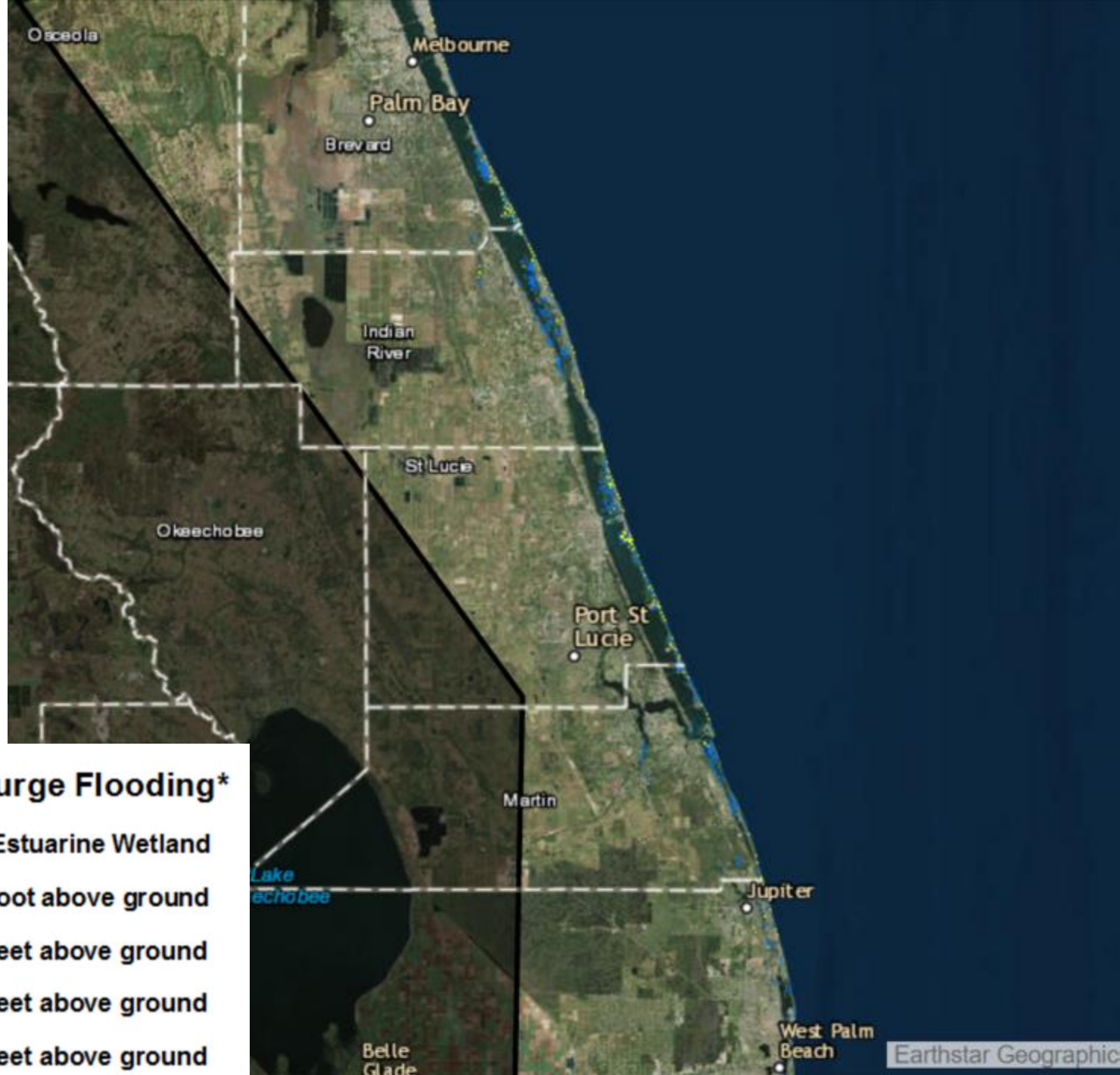
Potential Storm Surge Flooding*





Potential Storm Surge Flooding*

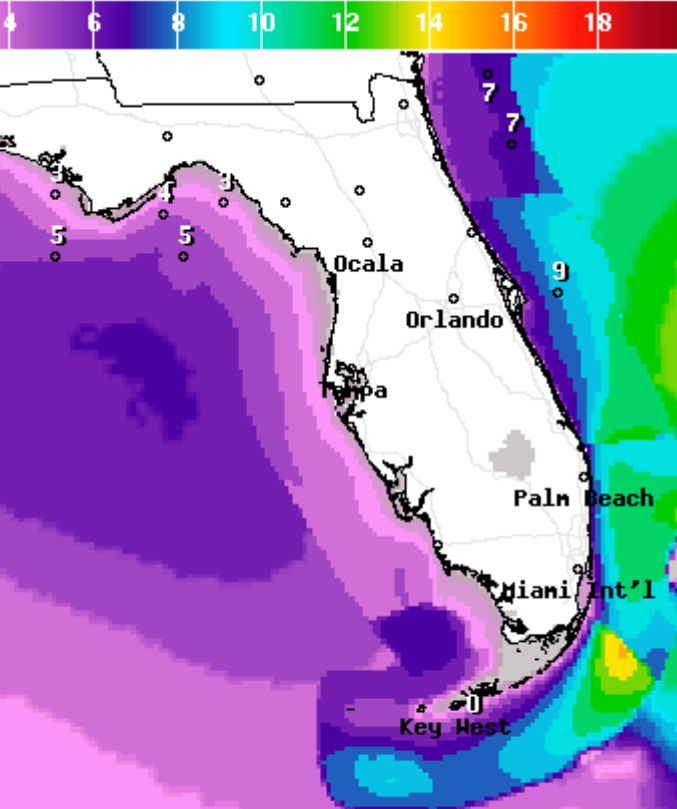




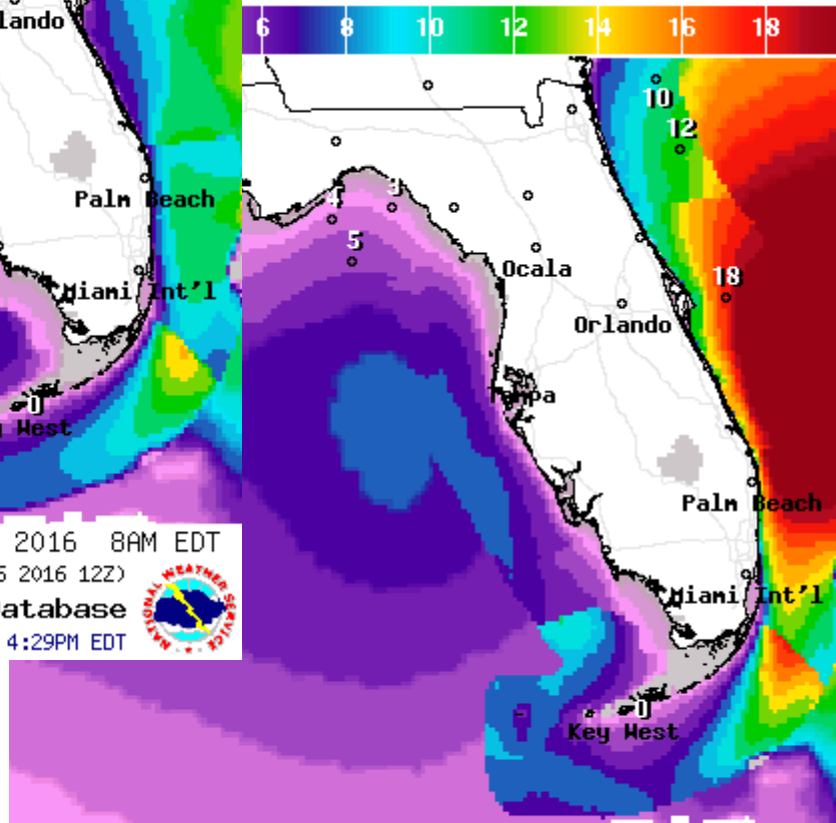
Potential Storm Surge Flooding*

- 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

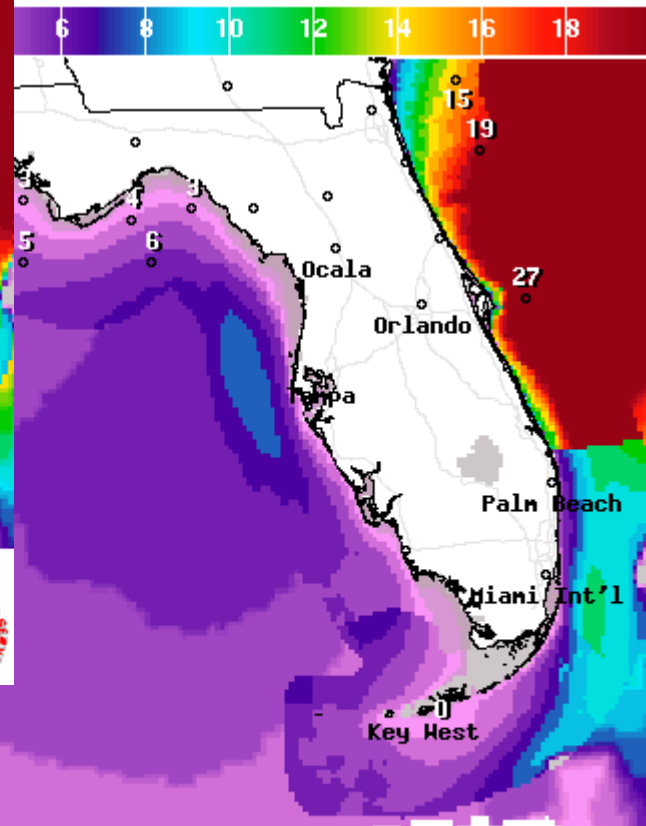
Forecast Wave Heights



Wave Height(ft) Ending Thu Oct 06 2016 8AM EDT
(Thu Oct 06 2016 12Z)
National Digital Forecast Database
20z issuance Graphic created-Oct 04 4:29PM EDT



Wave Height(ft) Ending Thu Oct 06 2016 8PM EDT
(Fri Oct 07 2016 00Z)
National Digital Forecast Database
20z issuance Graphic created-Oct 04 4:30PM EDT



Wave Height(ft) Ending Fri Oct 07 2016 8AM EDT

Tropical Storm Nicole

11 AM EDT Tue Oct 04 2016

Position 23.8 N 60.4 W

Maximum Winds 50 mph

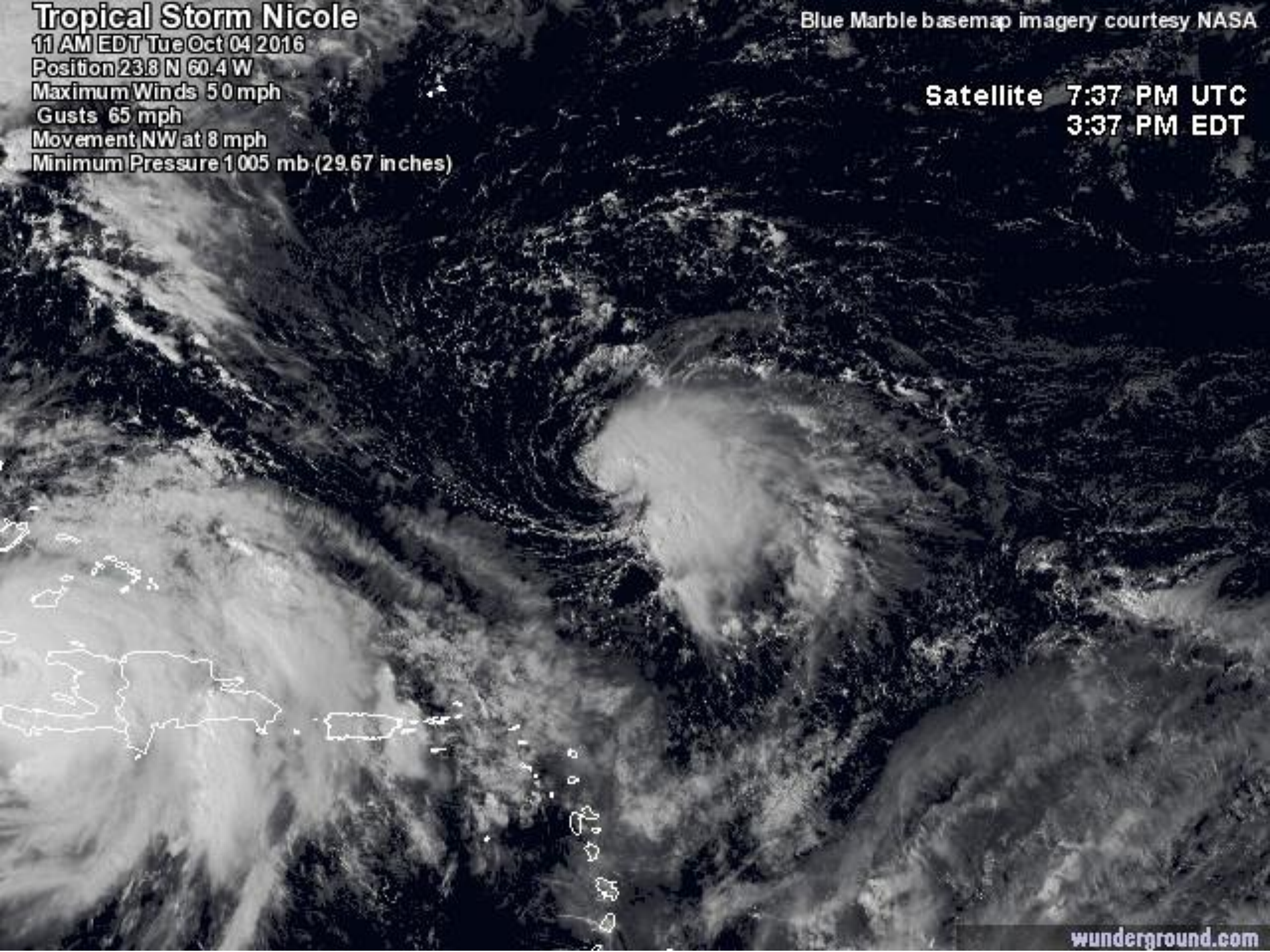
Gusts 65 mph

Movement NW at 8 mph

Minimum Pressure 1005 mb (29.67 inches)

Blue Marble basemap imagery courtesy NASA

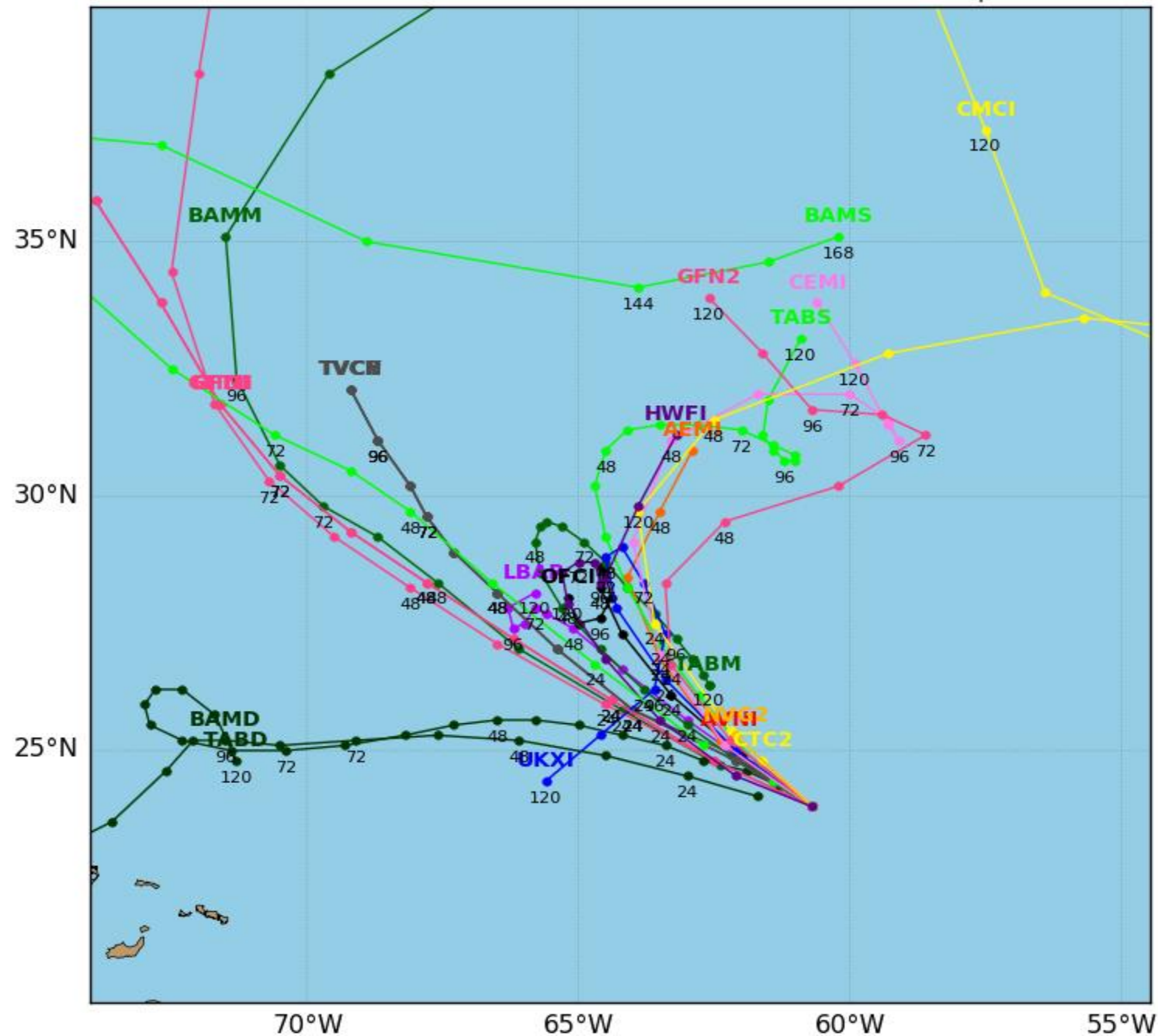
Satellite 7:37 PM UTC
3:37 PM EDT



Tropical Storm NICOLE Model Track Guidance

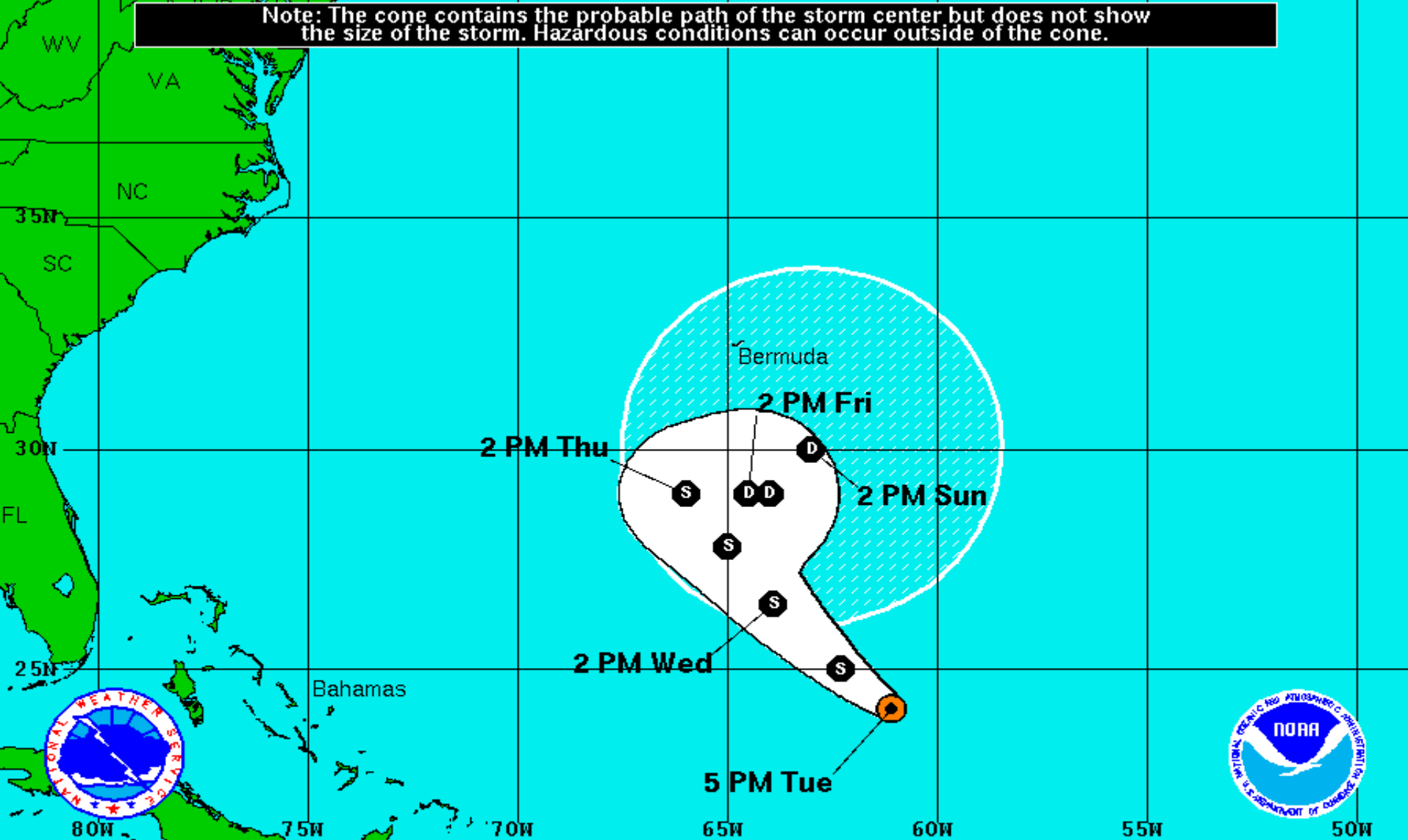
Initialized at 18z Oct 04 2016

Levi Cowan - tropicaltidbits.com






Models are not in good agreement, but most project a northwest movement for the next 3 days.

Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.





Tropical Storm Nicole
 Tuesday October 4, 2016
 5 PM EDT Advisory 2
 NWS National Hurricane Center

Current Information: 
 Center Location 24.1 N 61.1 W
 Max Sustained Wind 50 mph
 Movement NW at 9 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

Summary:

- At 5pm EDT Tuesday, Hurricane Matthew was located 30 miles south of the eastern tip of Cuba, or approximately 560 miles southeast of Miami, Florida.
- Maximum sustained winds are near 140 mph, a Category 4 on the Saffir-Simpson Hurricane Wind Scale.
- Some minor fluctuations in intensity are possible during the next 6-12 hours due to land interaction, but Matthew is expected to remain a powerful hurricane and could gain strength as it moves through the Bahamas.
- Matthew is moving toward the north near 9 mph, and this general motion is expected to continue tonight, followed by a turn toward the northwest on Wednesday.
- On the forecast track, the center of Matthew will move near or over portions of the southeastern and central Bahamas Wednesday, the northwestern Bahamas Wednesday night and approach the East Coast of Florida on Thursday.
- It is important not to focus on the center line of the forecast cone. Only a slight deviation in the track could significantly increase the impacts felt in Florida and a direct landfall in Florida cannot be ruled out. In addition, areas outside of the cone of error could also experience impacts from this storm.
- Matthew remains a large storm, with tropical storm force winds extending out to 175 miles from the circulation in the northwest quadrant (140 miles on the northwest side) and hurricane force winds extending 45 miles from the center.
- Elsewhere, Invest 98L became Tropical Storm Nicole at 11am EDT Tuesday.
- T.S. Nicole is located about 510 miles northeast of San Juan, Puerto Rico, and moving northwest at 9 mph with maximum sustained winds near 50mph.
- Little change in strength is forecast for the next day or so, followed by gradual weakening as it moves northwest.
- In addition, a tropical wave located several hundred miles east of the Windward Islands is producing a large area of disorganized showers and thunderstorms.
- Development, if any, of this system is expected to be slow to occur while the wave moves westward at 10 to 15 mph.
- The National Hurricane Center is predicting a 20% (low) chance of development within the next 5 days.

Florida Outlook:

- Tropical Storm Nicole does not pose a threat to Florida.
- **Hurricane Watch** in effect for Broward, Palm Beach, Martin, St. Lucie, Indian River, Okeechobee and Brevard Counties.
- **Tropical Storm Watch** issued for Miami-Dade, Upper Keys (north of Craig Key), Collier, Hendry, and Glades Counties.
- Much of the eastern Florida Peninsula are within the 3-day average error cone.
- Regardless of track, Matthew is a very large storm and it has the potential to generate gusty winds and rough seas along the East Coast of Florida, along with minor coastal flooding, beach erosion, and dangerous rip currents.
- Any additional impacts are dependent on the future track and size of the storm, which still remains somewhat uncertain at this time.
- Areas along the east coast of Florida (north of Miami to Jacksonville and inland to Orlando) have a greater than 50% chance of seeing tropical storm force winds sometime within the next 4 days.
- Tropical storm force winds could arrive Thursday morning across Southeast Florida and spread from south to north across East Central Florida through the day on Thursday and into Northeast Florida overnight Thursday into Friday morning.
- The current forecast is for 3-6" of rain near the I-95 corridor with isolated totals of 10" possible, but is highly dependent on the track of the storm.
- Storm surge values of 1-3' is possible along the Southeast Florida coast, with storm surge heights of 3-6 feet possible from northern Palm Beach County through Nassau County. A few areas could experience higher values depending on the proximity of the core of the hurricane relative to the coast.
- Isolated tornadoes are possible Thursday and Friday.

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



TROPICAL UPDATE

Created by:

Amy Godsey, Chief State Meteorologist
amy.godsey@em.myflorida.com

State Meteorological Support Unit
Florida Division of Emergency
Management

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