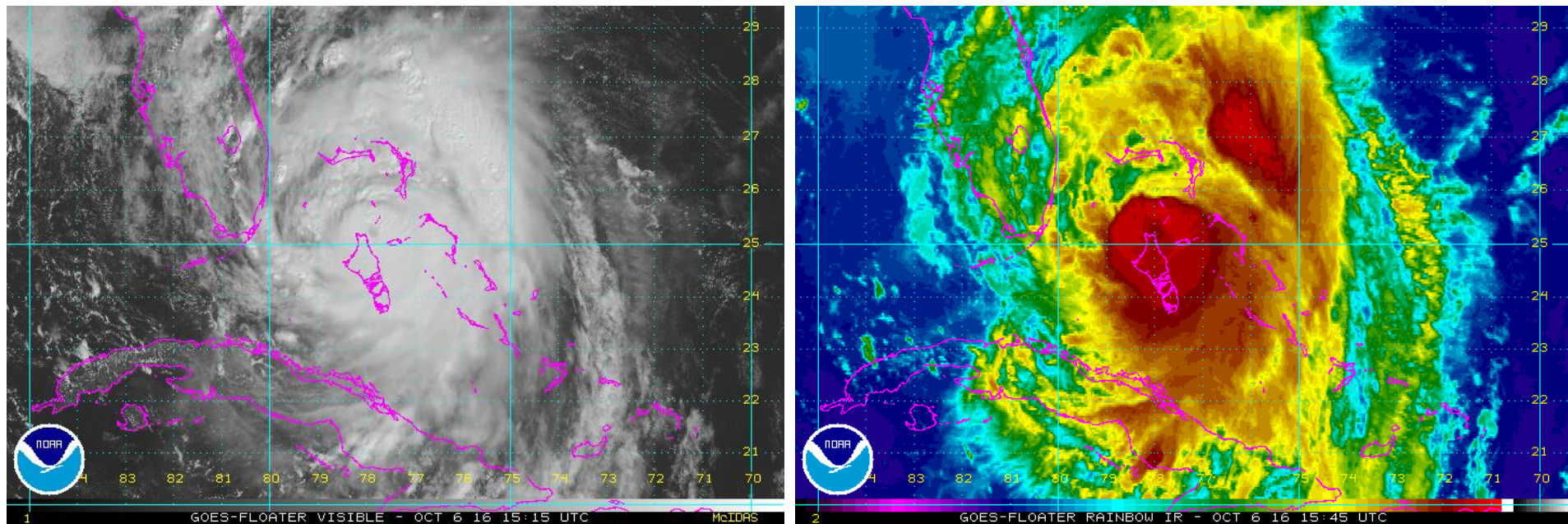


# Hurricane Matthew Threats and Impacts Briefing for Eastern NC

October 6<sup>th</sup>, 2016



National Weather Service  
Newport/Morehead City, NC

*Date/Time Created: 10/6/2016, Noon EDT*

# Hurricane Matthew Key Points

- **Changes since last update:**
  - Added more detail to the heavy rain/flooding and wind sections with graphics added.
- The latest National Hurricane Center forecast has not changed much since yesterday afternoon, ***but confidence remains low in the exact forecast track. It is still within the margin of error for the storm to pass closer to the coast which would increase the impacts across coastal areas and inland.***
- The potential ***for tropical storm force winds is primarily along the immediate southern coast.***
- The potential for ***heavy rainfall and flash flooding is taking center stage as one of the primary and most dangerous threats from Matthew.***
- ***We urge continued vigilance and preparations for the potential for Matthew to track much closer to the coast and bring more significant impacts across the area.***
- Continue to monitor the forecast for future changes. ***Have a disaster preparedness kit ready, and plans for what you would do if asked to evacuate.***

# Hurricane Matthew Key Points

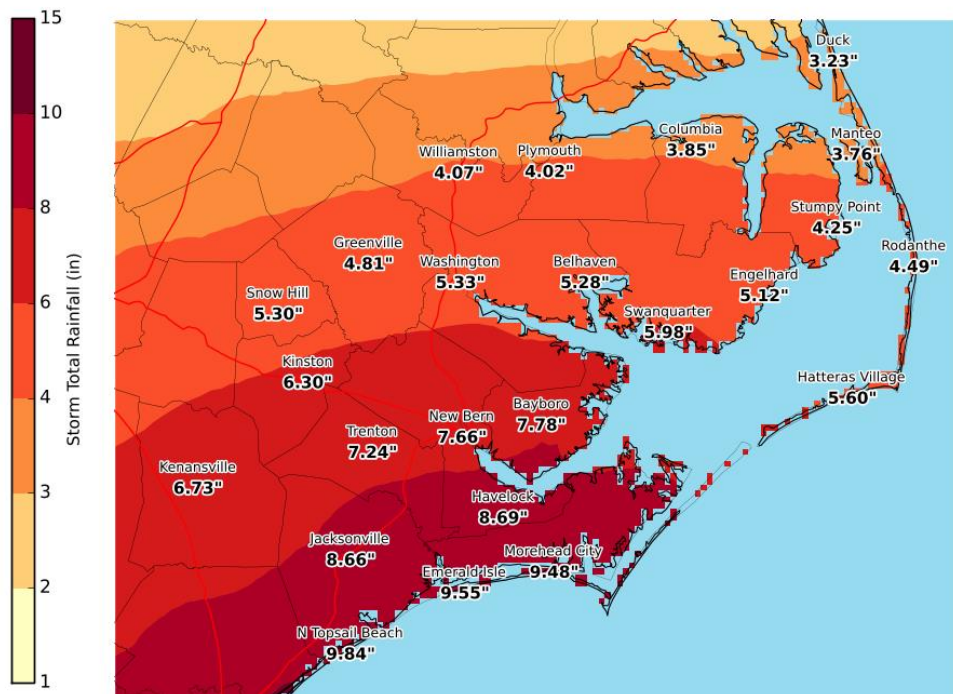
- Based on the latest forecast, the most likely impacts on Eastern NC will be:
  - ***Minor to isolated moderate storm surge and ocean side wave run-up issues resulting in minor to moderate erosion and isolated areas of over wash.***
  - ***Heavy rainfall and flash flooding***
  - ***The potential for tropical storm force winds along the southern coast.***
  - ***Extremely dangerous conditions for boaters.***
  - ***High risk of powerful rip currents***
- ***Closely monitor the forecast for Matthew in the coming days. Be alert to additional forecast track changes that could increase the danger to our area.***
- ***Be prepared to take action to protect yourself and your property if needed.***

***Evacuate if asked to do so!***

# Hurricane Matthew Details

## Heavy Rains/Flash Flooding/River Flooding Impacts

**Hurricane Matthew Total Rainfall**  
Valid: 10/06/2016 08:00 AM - 10/09/2016 08:00 PM EDT



National Weather Service  
Newport/Morehead City North Carolina  
10/06/2016 11:41 AM EDT

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- At this time we are forecasting **4 to 10 inches of rainfall with locally higher amounts possible** across Eastern NC, highest across the southern coast.
- Given already high water levels, **rainfall will have a difficult time draining in coastal areas, making the potential for rainfall flooding higher, possibly combining with storm surge to create higher inundation along coastal areas.**
- Heavy rainfall could **arrive beginning Friday Night well ahead of the winds.** Given how wet conditions have been, it won't take much to cause flooding issues, and flash flooding will be possible in heavy rain bands.
- River flooding would depend on storm totals and how far upstream heavy rains fall. Monitor the river forecast in the hours and days after the storm.

**Always Remember - "Turn Around,  
Don't Drown!"**

# Hurricane Matthew Details

## Storm Surge/High Surf

- Storm surge impacts will mostly be minor, although a few areas could approach moderate impacts. Water levels across a large portion of the area have been running at least a foot to as much as 2 feet above normal, so ***it will not take much to push additional water onto land in low lying areas, creating widespread minor nuisance type flooding.***
- The primary threat for ***1 to 3 feet above ground, or 2 to 5 feet above normal*** will be ***mostly in areas adjacent to the Southern Pamlico Sound and along the Neuse and Pamlico Rivers. This could include portions of Southern Hatteras Island and Ocracoke.*** These numbers will be refined as the storm gets closer.
- Ocean front locations can still experience high surf and breaking waves resulting in minor erosion and isolated ocean over-wash. The southern Crystal Coast could have some of the worst erosion. ***North Topsail Beach will be especially vulnerable to erosion and some ocean front surge flooding. The combination of isolated dune breaches, over wash, and sound side flooding could cause mostly isolated inundation issues on portions of Highway 12 on the Outer Banks and Ocracoke.***
- There will be a prolonged period of moderate northeast flow into next week that may keep water levels above normal across the southern Pamlico and Outer Banks.

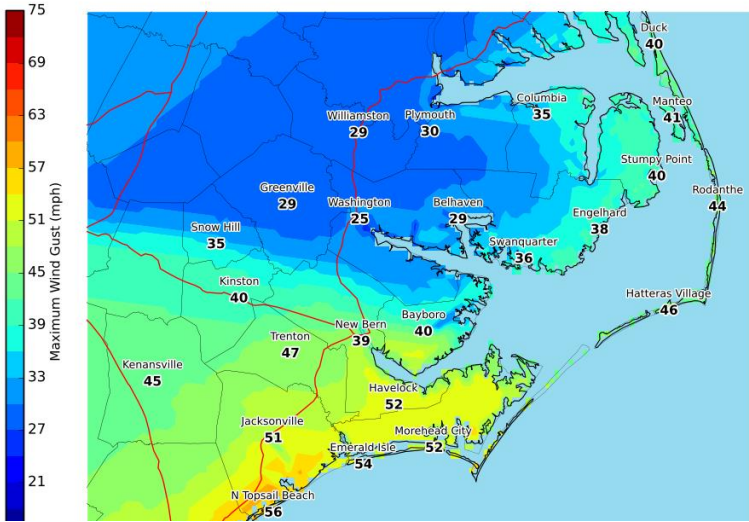


# Hurricane Matthew Details

## Wind Impacts

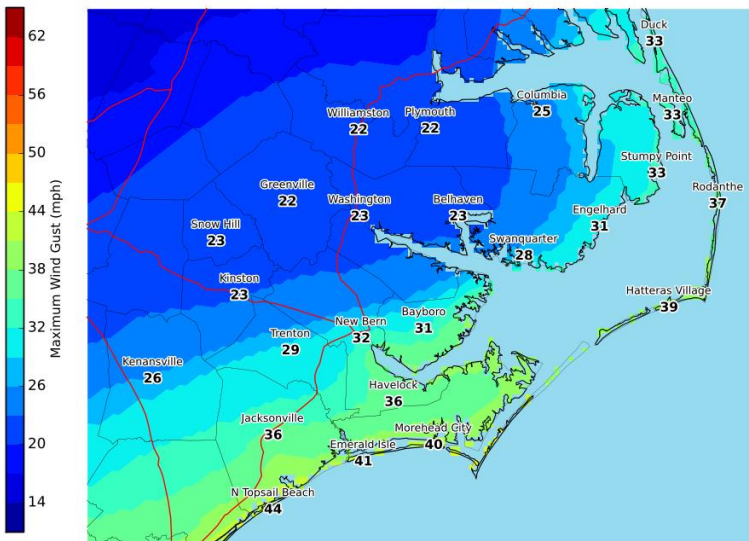
### Hurricane Matthew Max Wind Gust

Valid: 10/08/2016 08:00 AM - 10/10/2016 02:00 AM EDT



### Hurricane Matthew Max Wind

Valid: 10/08/2016 08:00 AM - 10/10/2016 02:00 AM EDT



- Even with the track offshore, there will be a tight pressure gradient with tropical storm force winds potentially extending well away from the storm center.
- Based on the latest track, we are forecasting the potential for ***sustained tropical storm force winds along and just inland from the southern coast.***
- ***Winds of 35 to 45 mph with gusts 50 to 55 mph are possible across portions of Onslow and Carteret Counties.***
- ***Across Ocracoke and Outer Banks Dare County sustained winds around 35 mph will be possible, with gusts 45 to 50 mph.***
- ***Elsewhere winds will be 20 to 30 mph with a few gusts of 35 to 45 mph possible.***
- With the current track, ***timing of the strongest winds would likely be beginning Late Saturday Afternoon through the day on Sunday.***
- The very saturated ground will increase the potential for downed trees, even with wind gusts in the 40 to 50 mph range, increasing the ***potential for scattered power outages.***



National Weather Service  
Newport/Morehead City North Carolina  
10/06/2016 11:36 AM EDT

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# Hurricane Matthew Details

## Additional Impacts

- **Tornadoes**

- With the offshore forecast track, the threat of tornadoes is very low. The forecast for Matthew would have to shift significantly back to the west to increase the threat of tornadoes.
- This is still an opportunity to remind you that it is important to ***have multiple ways to receive warnings, especially at night.*** NOAA Weather Radio is an excellent resource to be alerted to tornado warnings, as well as newer cell phones that are Weather Emergency Alert capable.
- If a tornado warning is issued ***take action immediately to take shelter*** in the most interior room of a solid structure that has no windows. ***Mobile Homes offer no protection from a tornado.*** Seek shelter in a more substantial shelter.

- **Marine (Coastal Waters) Threats**

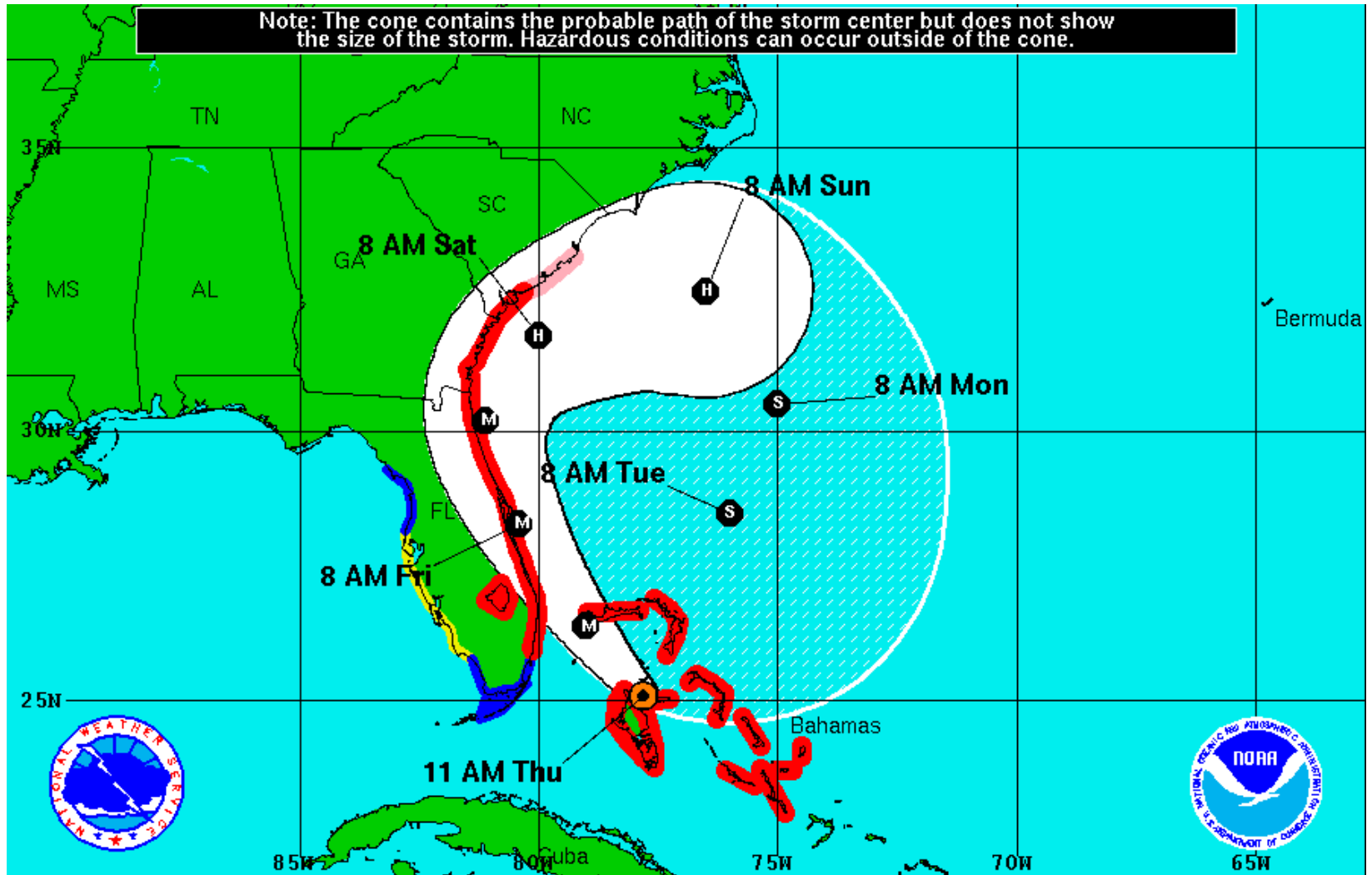
- There is already a small craft advisory in effect for strong northeast winds and seas of 7 to 10 feet in the near term.
- Conditions on the waters will deteriorate rapidly later in the week as Matthew approaches. ***Seas will build to 10 to 15 feet in the coastal waters and 20 feet or greater in the western offshore waters.***
- ***Boaters are urged to stay in port, and be prepared to secure their vessels to deal with the potential water level rises associated with storm surge.***

- **Rip Currents**

- ***There is a high threat of rip currents across the entire area, and very rough surf.***
- Beach-goers should exercise caution and ***it is recommended to avoid swimming as surf conditions deteriorate, or at a minimum swim near life guards.***

# Hurricane Matthew Forecast Track

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

Thursday October 6, 2016

11 AM EDT Advisory 34

NWS National Hurricane Center

## Current Information:

Center Location 25.1 N 77.8 W

Max Sustained Wind 140 mph

Movement NW at 14 mph

## Forecast Positions:

● Tropical Cyclone ○ Post-Tropical

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:

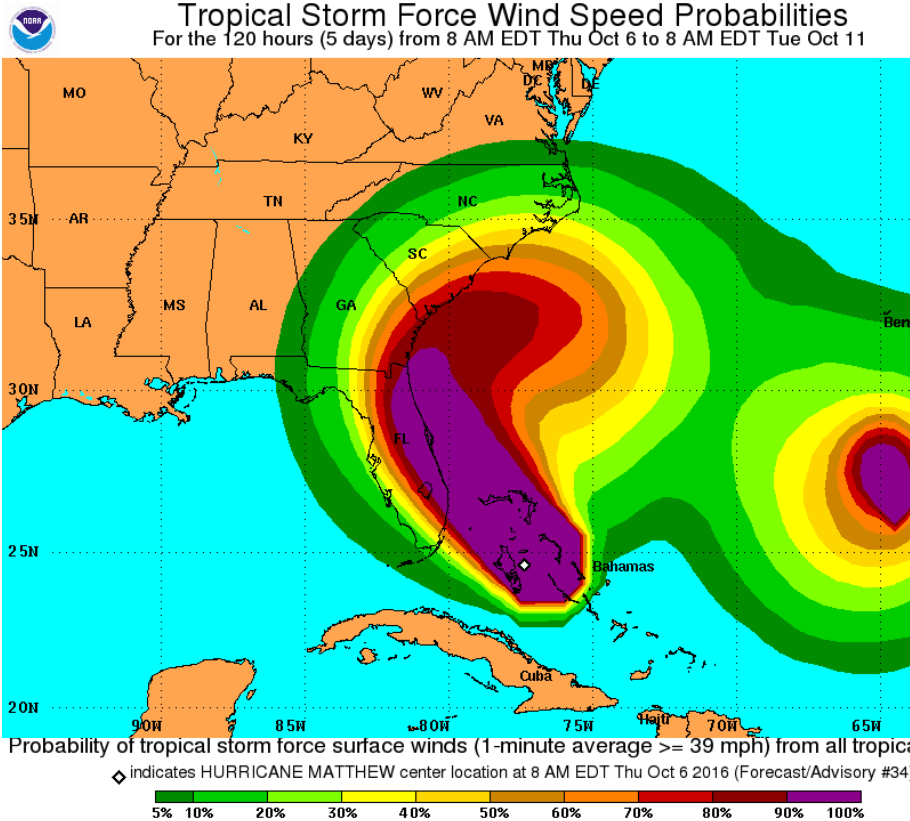
Hurricane Trop.Storm

## Warnings:

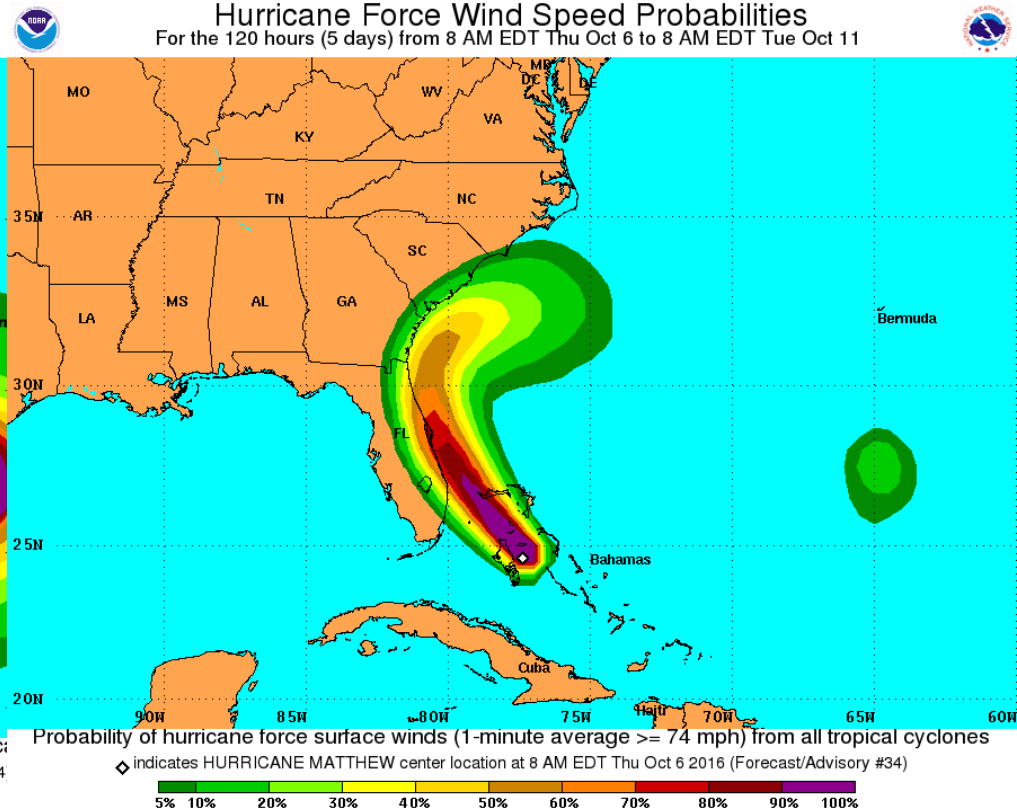
Hurricane Trop.Storm



# Hurricane Matthew Wind Speed Probabilities



Probability of tropical storm  
force winds.



Probability of hurricane force  
winds.

There has not been much change with probabilities with this update.

# Summary of Key Points

- There was little change with the latest National Hurricane Center Forecast track with this update. However, confidence is low in the exact forecast track at this point given models continue having trouble remaining consistent. ***We urge residents to remain prepared and vigilant for future forecast changes.***
- The most likely impacts on the area are now:
  - ***Minor to isolated moderate storm surge and ocean side wave run-up issues resulting in minor to moderate erosion and isolated areas of over wash.***
  - ***Heavy rainfall and flash flooding***
  - ***The potential for tropical storm force winds along the southern coast.***
  - ***Extremely dangerous conditions for boaters.***
  - ***High risk of powerful rip currents***
- ***Do not focus on either the category of the storm or exact center forecast track*** to evaluate your potential impacts.
- ***Remain prepared with a disaster response plan and survival kit.***
- If you are in a vulnerable area, ***make a plan now for where you would go in an evacuation.***
- ***Closely monitor the forecast*** for Matthew in the coming days and ***be prepared to take action to protect your life and property!***

***Evacuate if asked to do so!***

For updates call the forecaster on Duty  
(252) 223-5122 x5

References:

[NWS Newport/Morehead City Webpage](#)

[WPC Rainfall Forecasts \(QPF\)](#)

[National Hurricane Center](#)

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