



# TROPICAL UPDATE



11:00 AM EST

Saturday, November 7, 2020

Tropical Storm Eta

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).



# Tropical Storm Eta

10 AM ET Friday: Florida Threats & Changes Since Last Packet

	MINIMAL	Low	MODERATE	HIGH	EXTREME
WINDS					
STORM SURGE					
FLASH FLOODING					
TORNADOES					
	Low	MODERATE	HIGH		
RIP CURRENTS					



## Overview/Recent Changes:

Eta has become a tropical storm once again with additional strengthening expected through Sunday night. The track has shifted a bit farther north near and over the Keys and South Florida. Tropical Storm Watches and Warnings are in effect for a good portion of the southern Peninsula.

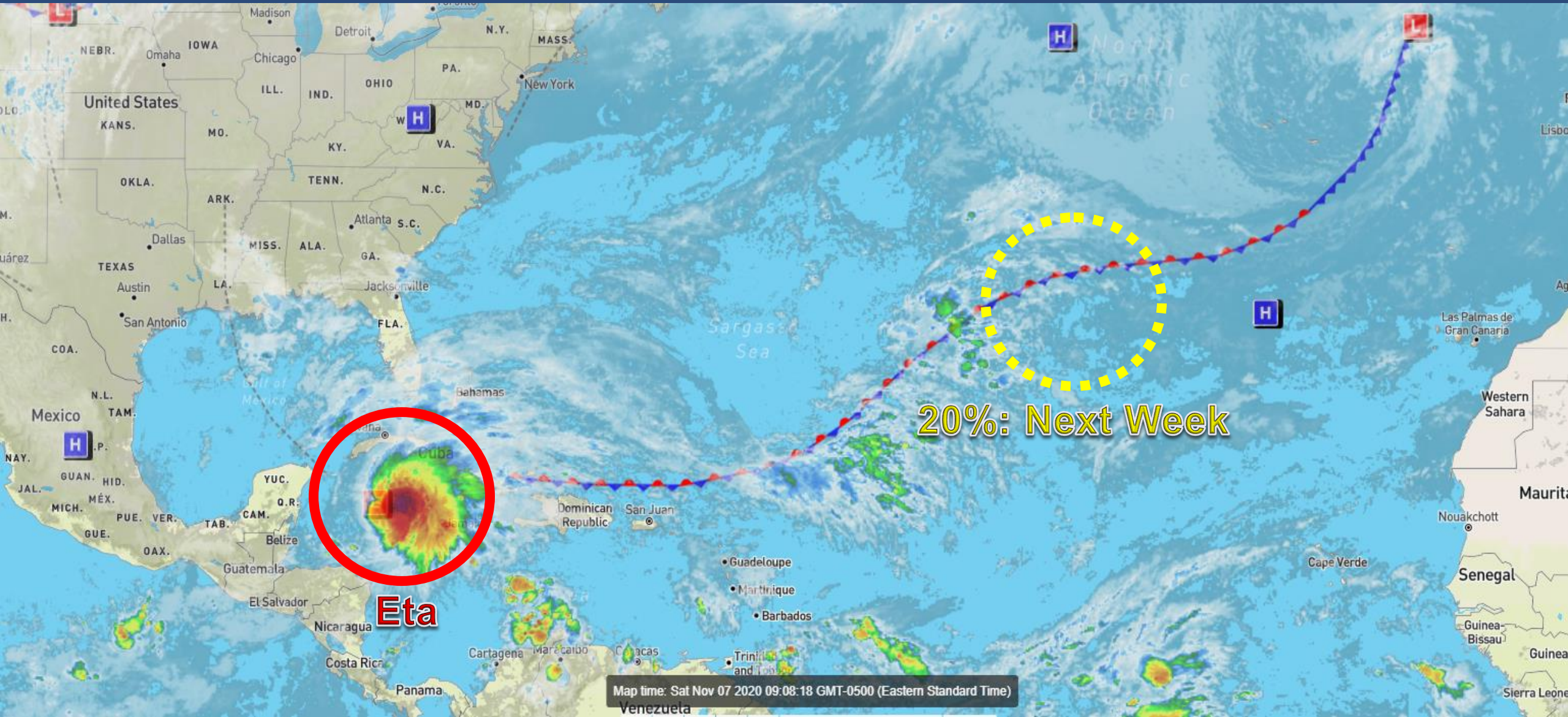
**\*\*\*Impacts will extend well away from the center\*\*\***





# Atlantic Basin Satellite Image

Chance of development:  None  Low  Medium  High





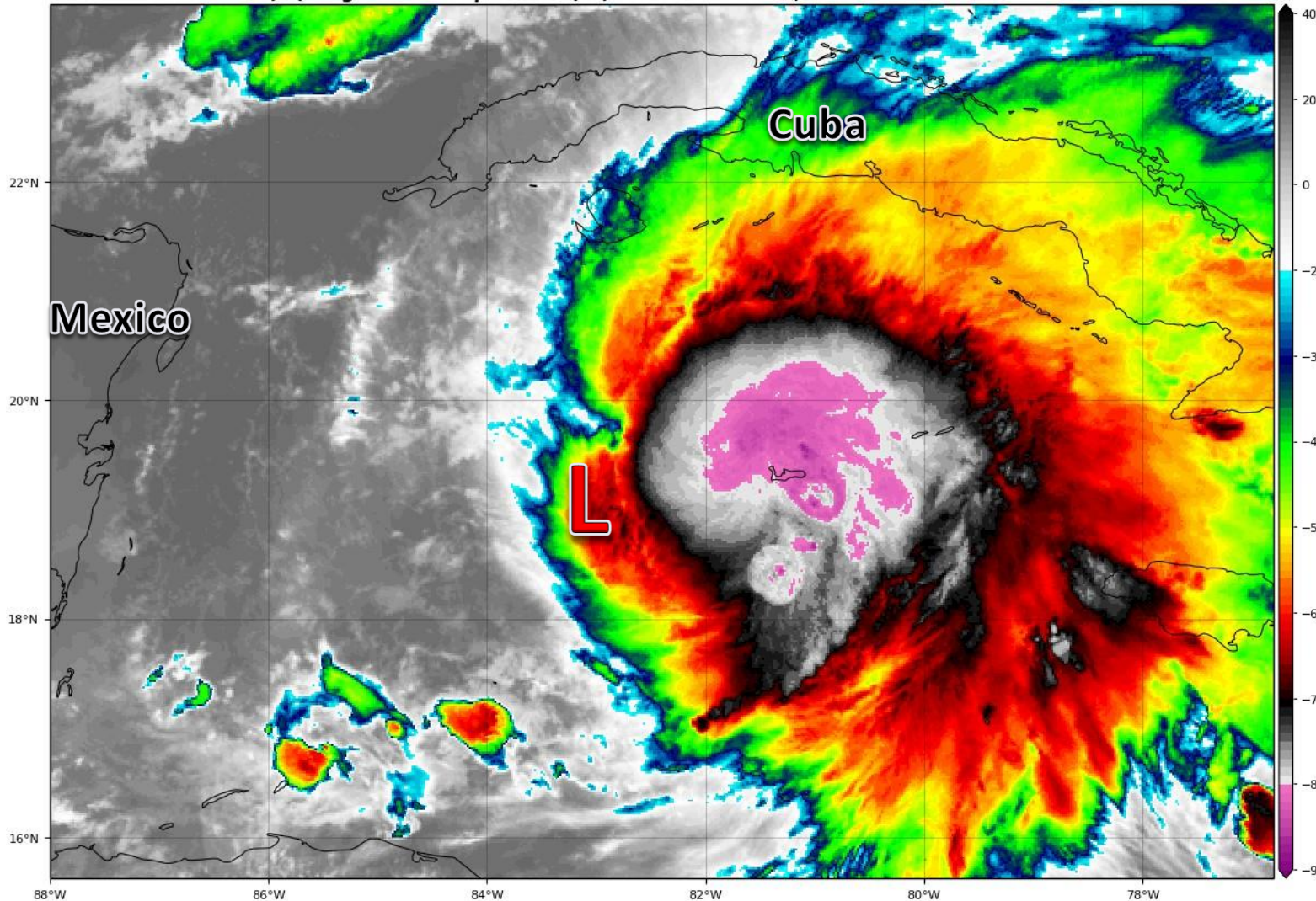


# Satellite Imagery

## Tropical Storm Eta – Western Caribbean

GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 14:02Z Nov 07, 2020

TROPICALTIDBITS.COM

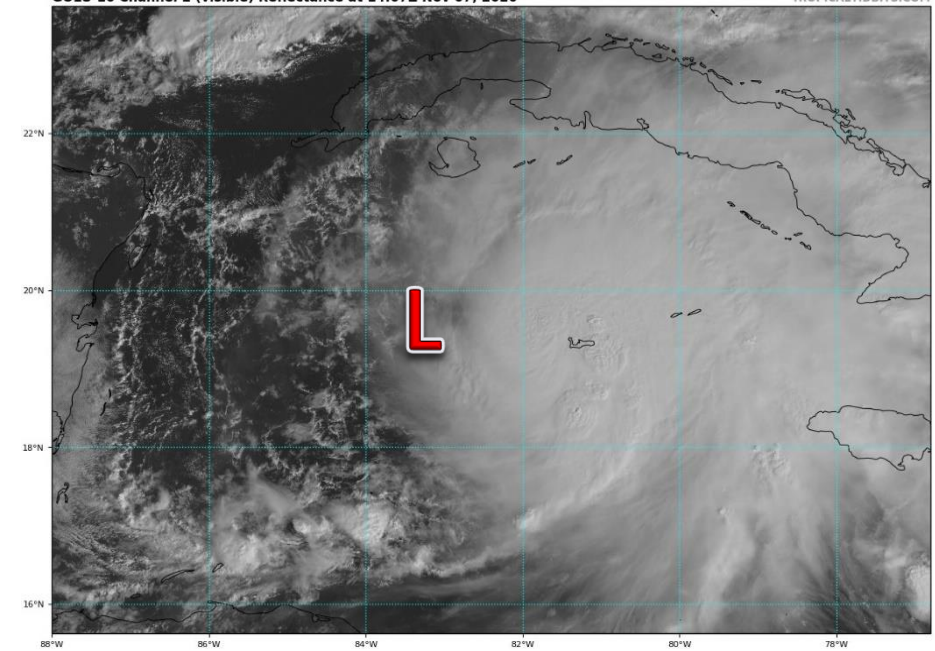


The center of Eta is displaced to the west of the thunderstorms as strong southwesterly shear pushes the storms off to the north and east.

Weak, disorganized systems like Eta could relocate their center underneath the thunderstorms. This could happen later today.

GOES-16 Channel 2 (visible) Reflectance at 14:07Z Nov 07, 2020

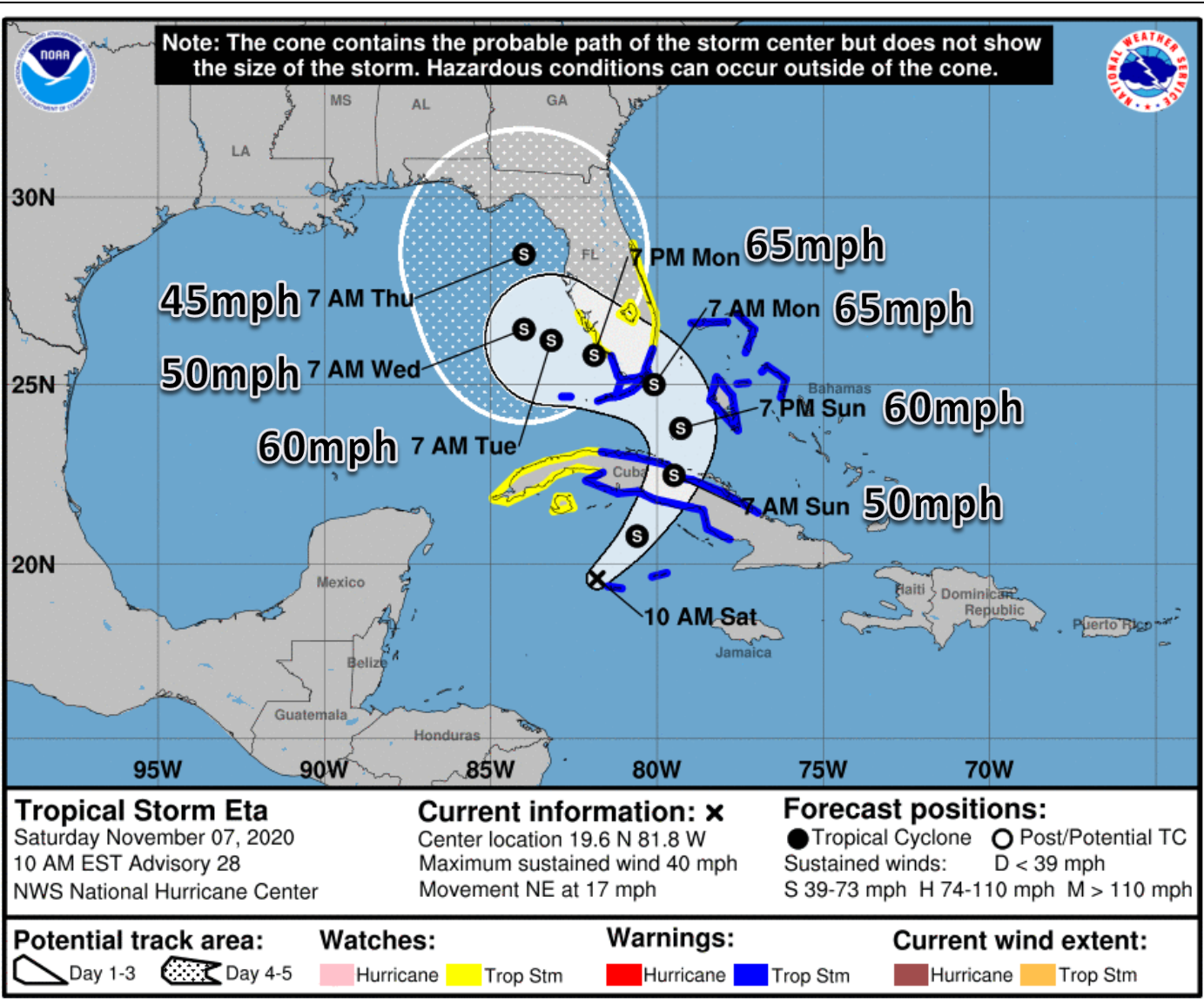
TROPICALTIDBITS.COM





# Official Forecast Track

## From the National Hurricane Center – Tropical Storm Eta



- The center of recently upgraded Tropical Storm Eta is located about 45 miles west-northwest of Grand Cayman, moving northeast at 17 mph.
- Maximum sustained winds are near 40 mph, and additional strengthening is forecast through Sunday night.
- Eta will move over Cuba tonight and early Sunday morning, then be near or over South Florida and the Keys by Monday morning.
- Eta will turn northward again in the eastern Gulf of Mexico early to mid next week and weaken as cooler waters and dry air impact the system.
- The forecast is still somewhat uncertain as Eta remains a disorganized system.
- **It's important to not focus too much on the cone as impacts will extend well outside of the cone.**





# Key Messages

From the National Hurricane Center



## Key Messages for Tropical Storm Eta

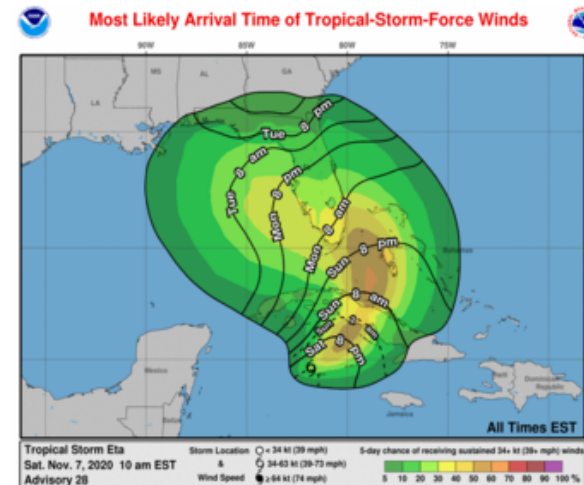
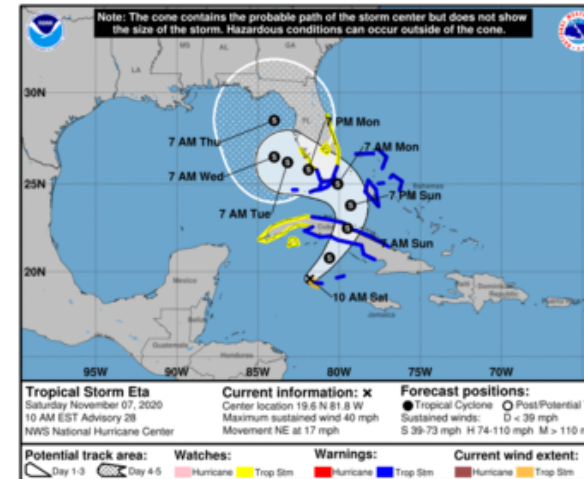
Advisory 28: 10:00 AM EST Sat Nov 07, 2020



1. Heavy rainfall will continue across the Cayman Islands, portions of Cuba and Jamaica, and will spread north into the Bahamas and southern Florida. This rain may result in significant, life-threatening flash flooding and river flooding in Cuba. Flash and urban flooding will also be possible for the Cayman Islands, Jamaica, the Bahamas and southern Florida.

2. Tropical storm conditions are expected today and Sunday in portions of the Cayman Islands, Cuba, and the northwestern Bahamas, where a Tropical Storm Warning is in effect.

3. Tropical storm conditions are expected by late Sunday in the Florida Keys and along portions of the southeast Florida coast, where a Tropical Storm Warning is in effect. Tropical storm conditions are possible elsewhere in portions of southern and central Florida beginning Sunday night, where a Tropical Storm Watch is in effect. Additional Tropical Storm Warnings will likely be needed later today.

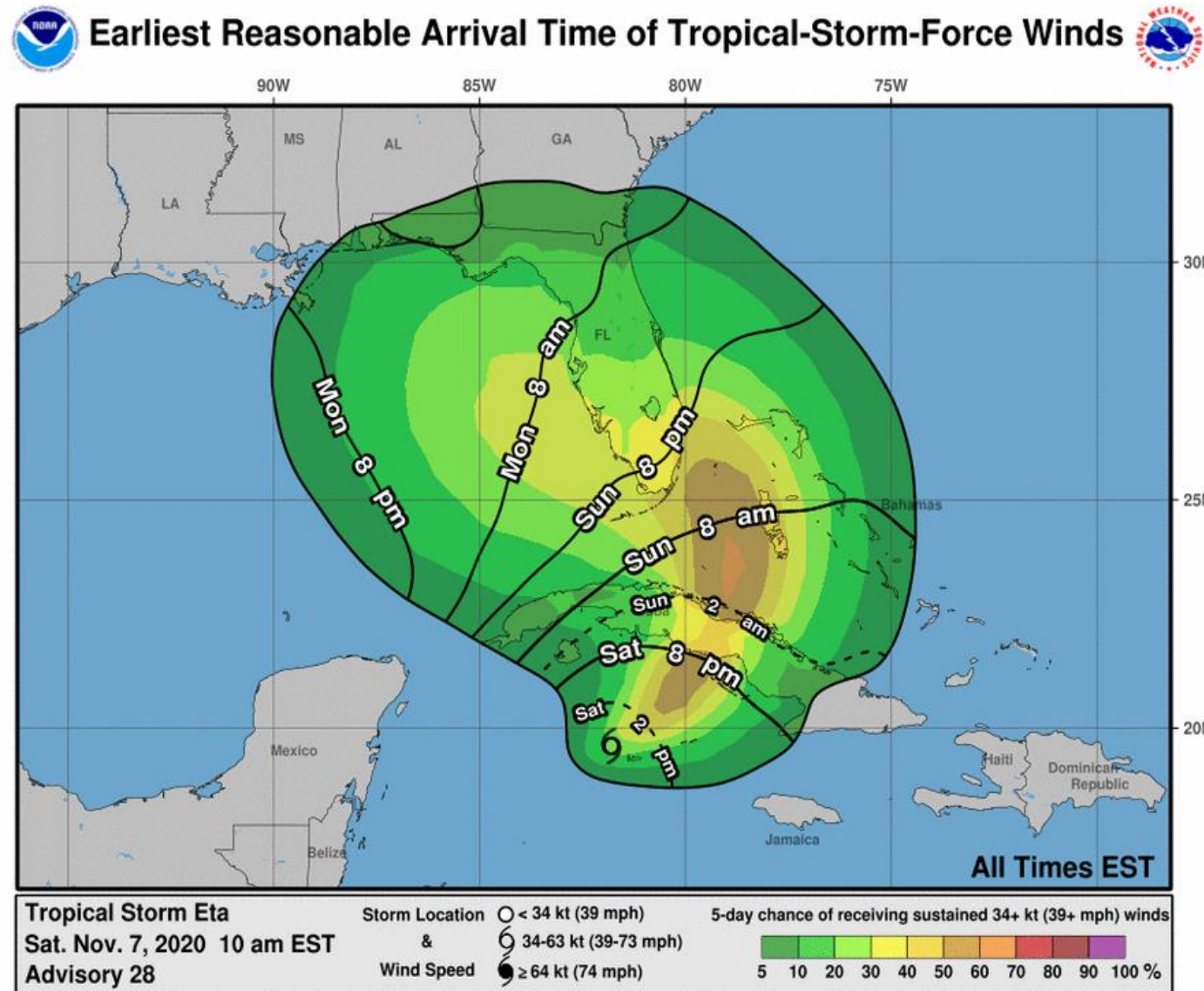


For more information go to [hurricanes.gov](https://hurricanes.gov)



# Time of Arrival & Wind Speed Probabilities

**EARLIEST REASONABLE** Time of Arrival of Tropical Storm Force Winds (>39 mph)



**Key West: 34% (-7)**

**Marathon: 42% (-3)**

**Miami: 41% (+15)**

**Ft. Lauderdale: 51% (+15)**

**West Palm Beach: 43% (+16)**

**Naples: 46% (+6)**

**Ft. Myers: 33% (+13)**

**Tampa: 32% (+12)**

**Orlando: 15% (+6)**

**Daytona Beach: 10%**

**Apalachicola: 18% (+7)**

**Panama City: 15% (+5)**

*\*The numbers in parenthesis show the change in probability since the last briefing packet.\**

Tropical Storm conditions could start as early as Sunday afternoon in the Keys and South Florida, but is more likely to begin late Sunday Night. If the tropical storm conditions were to occur along the West Coast or coastal Big Bend, they would begin Monday or Monday night.

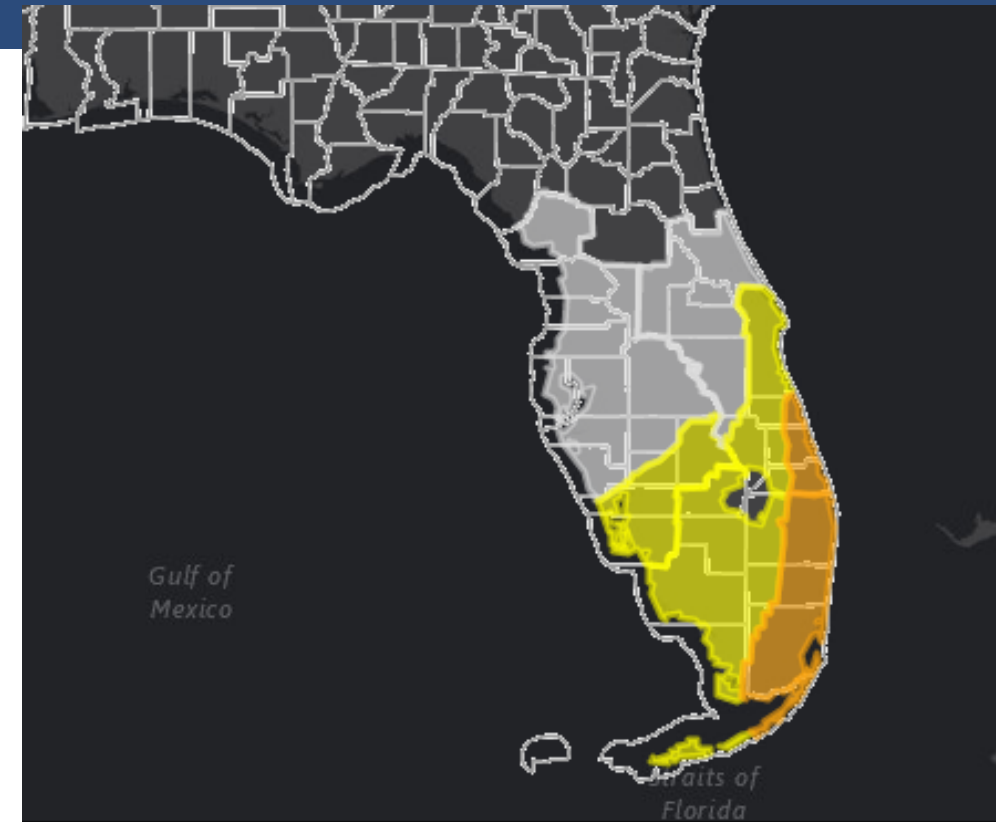


# Flood Threat Overview

## Tropical Storm Eta

The flood threat is greatest across the Treasure Coast, Southeast Florida, and the Middle and Upper Keys, but flooding cannot be ruled out in the rest of South Florida.

**Flood Watches are in effect for much of South Florida and the Treasure Coast.**



[\[Download KML\]](#)

[\[Download Image\]](#)

Flooding Rain Threat
Potential for extreme flooding rain
Potential for major flooding rain
Potential for moderate flooding rain
Potential for localized flooding rain
Little to no potential for flooding rain

[https://www.weather.gov/srh/tropical?  
office=mfl](https://www.weather.gov/srh/tropical?office=mfl)

Click on “Threats and Impacts” Tab





# Flood Watches

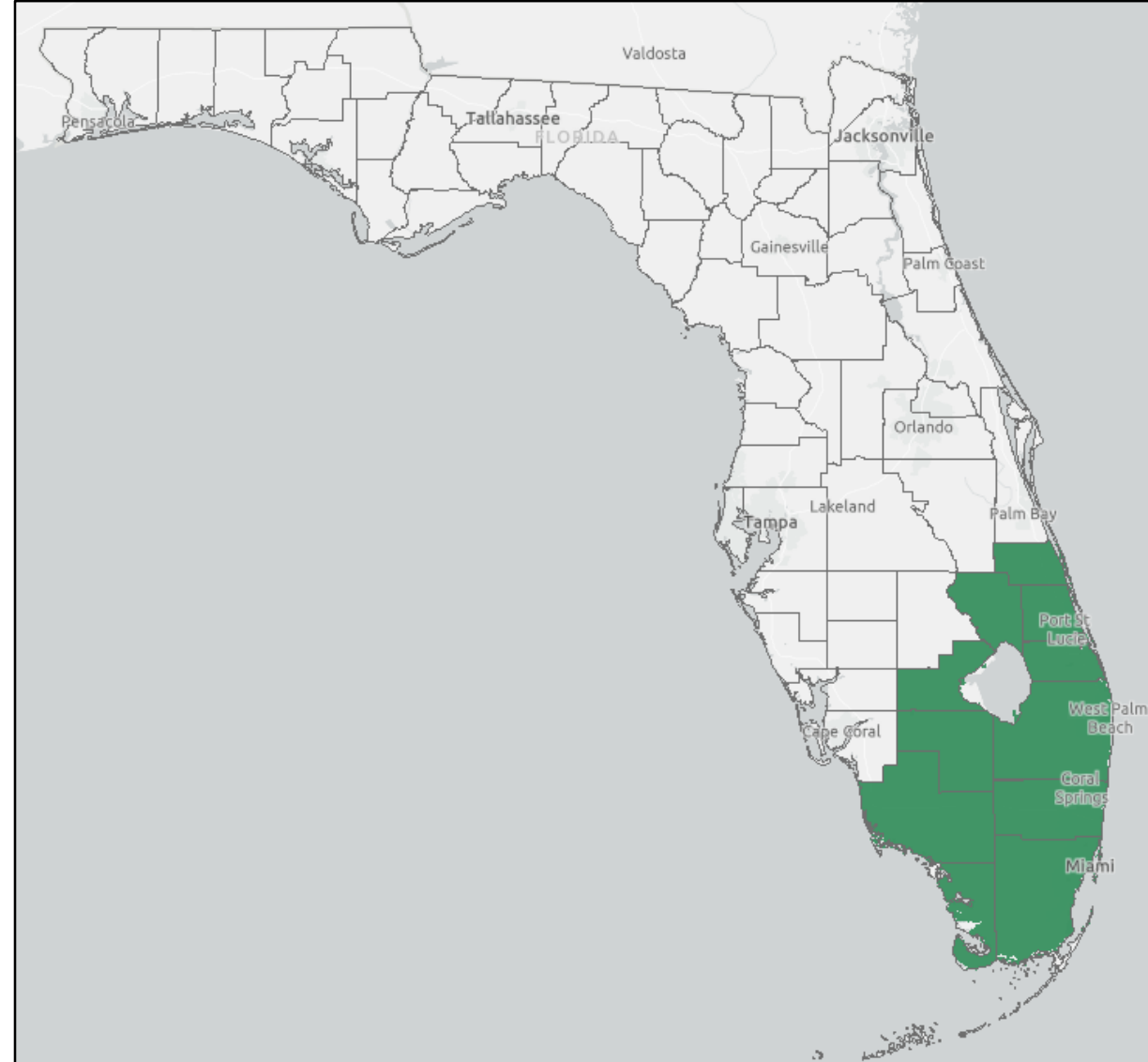
Links: [NWS Miami](#) | [NWS Melbourne](#)

**From tonight through Monday Evening:**

Indian River, St. Lucie, Martin, and  
Okeechobee Counties

**Now until Tuesday Evening:**

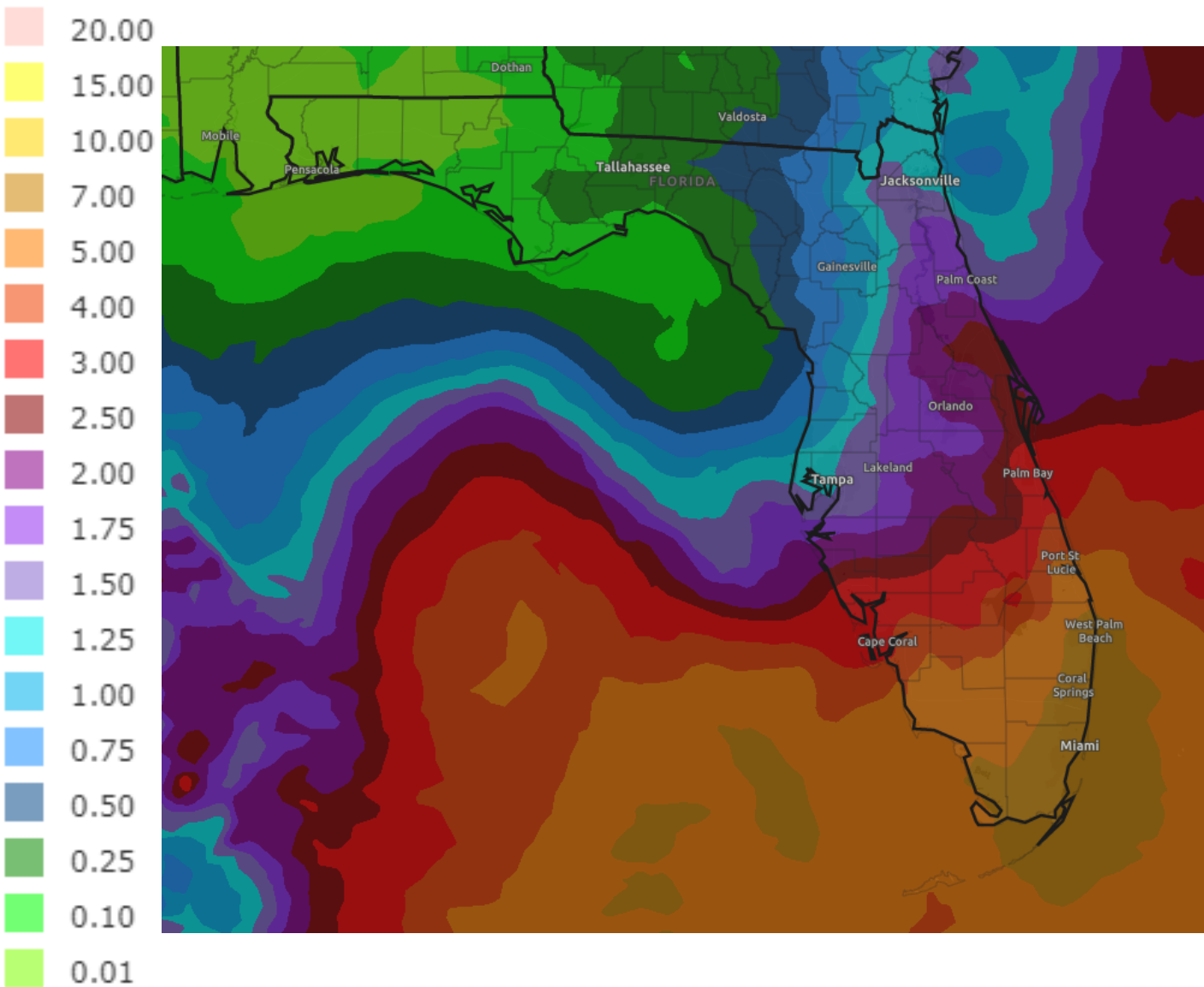
Glades, Hendry, Collier, mainland Monroe,  
Palm Beach, Broward, and Miami-Dade  
Counties





# Rainfall Totals Next 7 Days

Ending 7 AM ET Saturday



There remains considerable uncertainty in the exact placement of the heavy rainfall. However, it appears that much of Eta's rainfall could be to the north and east of its center.

A widespread 5-10" of rain is possible across South Florida through early next week. Localized areas in South Florida and the Keys could see 15"+ of rain.

Areas along the Space and Treasure Coasts could see 2-4" of rain with localized totals of 6-8".

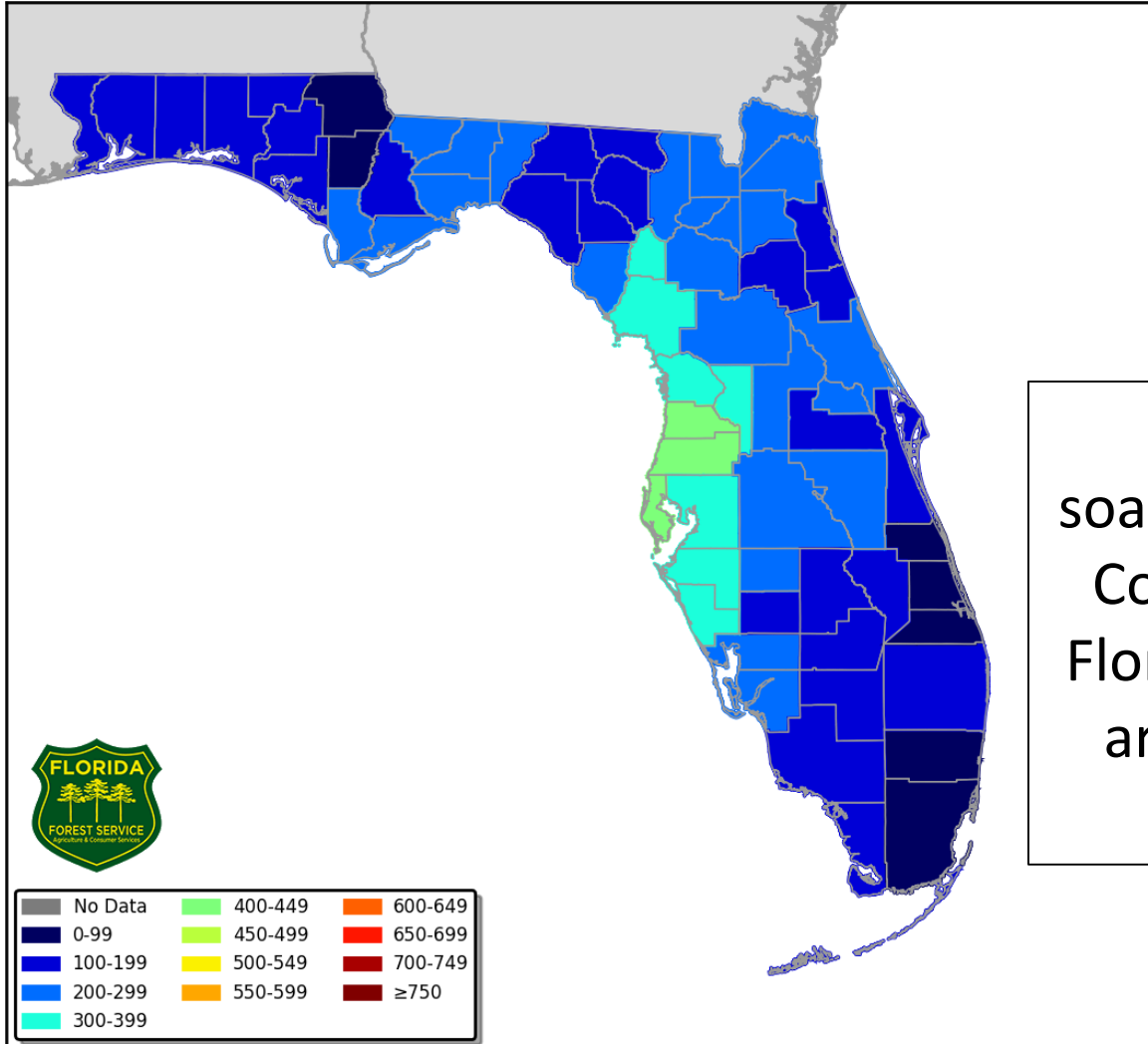




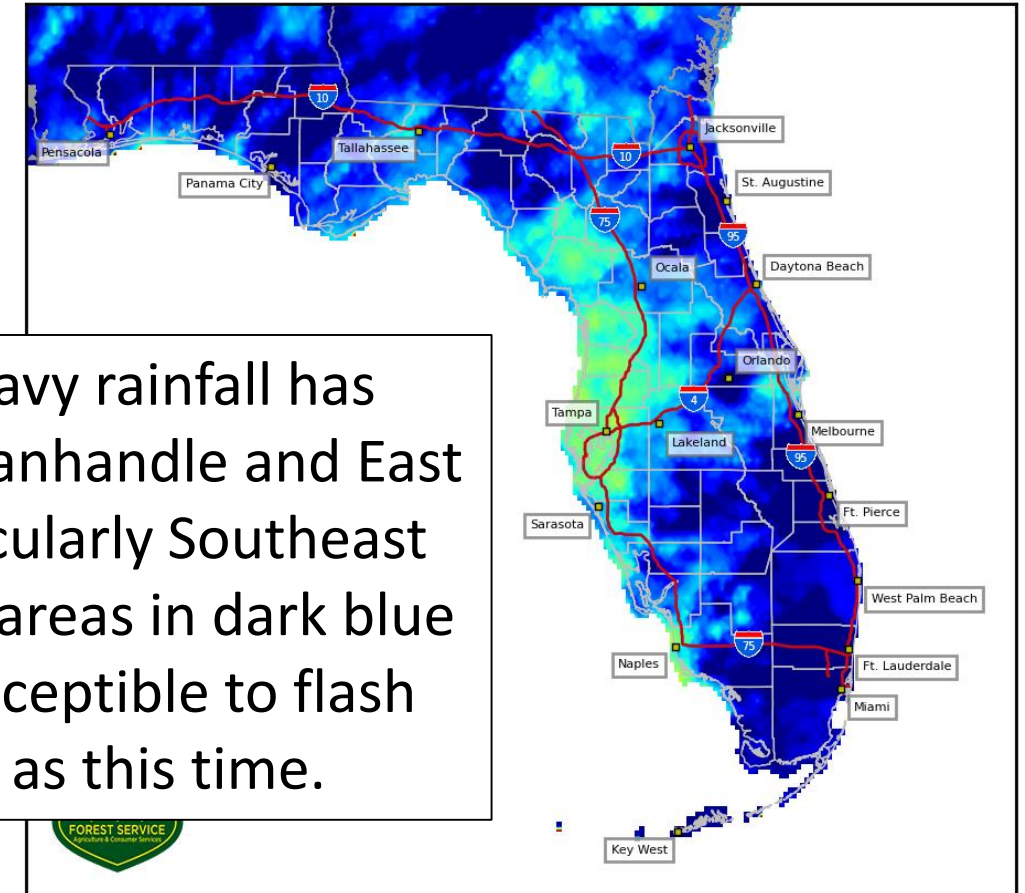
# Drought Index – Soil Moisture

[KBDI – Full Report from the FFS](#)

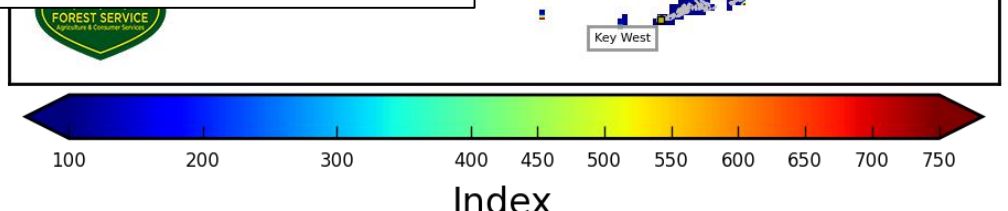
Keetch Byram Drought Index (KBDI)  
County Averages for November 06, 2020



4 km Resolution KBDI  
Statewide  
November 06, 2020



Recent heavy rainfall has soaked The Panhandle and East Coast (particularly Southeast Florida). The areas in dark blue are very susceptible to flash flooding as this time.





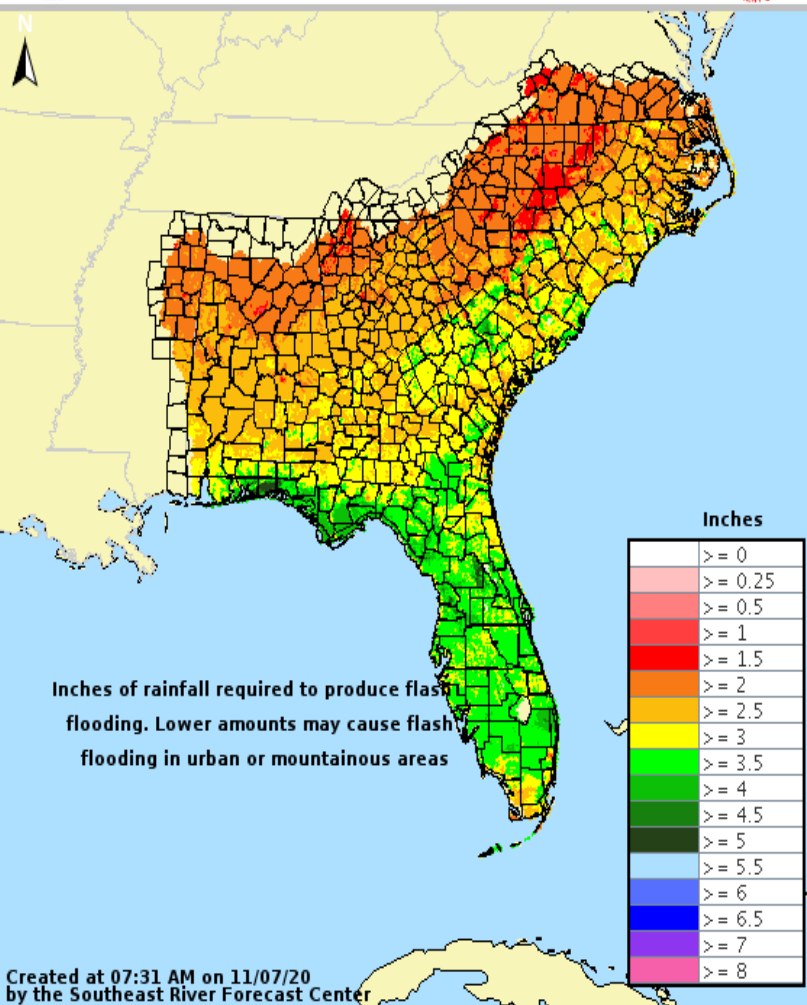
# Flash Flood Guidance

## How Much Rain is Needed to Create Flash Flooding?



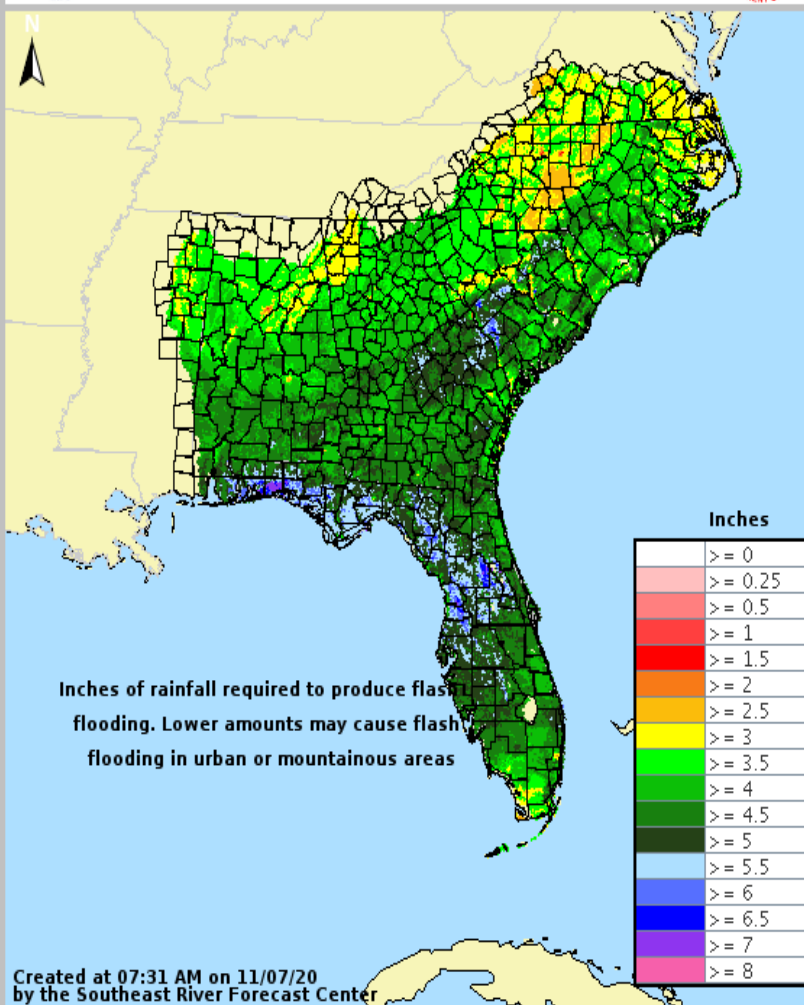
### 1-hr Flash Flood Guidance

Valid: 11/07/2020 @ 07:31 AM



### 6-hr Flash Flood Guidance

Valid: 11/07/2020 @ 07:31 AM



South Florida remains very wet from rainfall over the last several months. This area remains very prone to flooding.

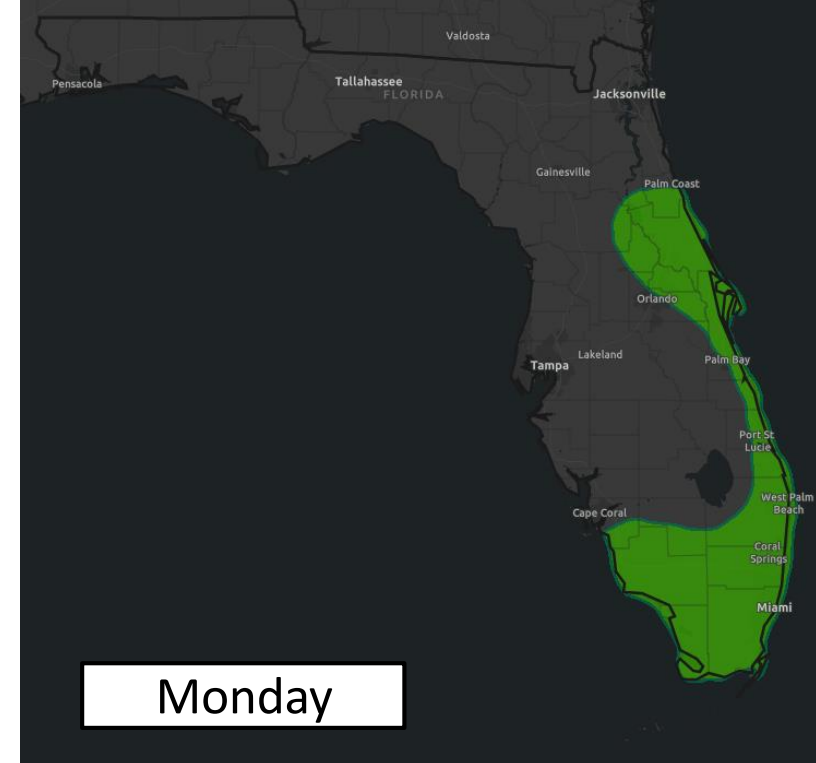
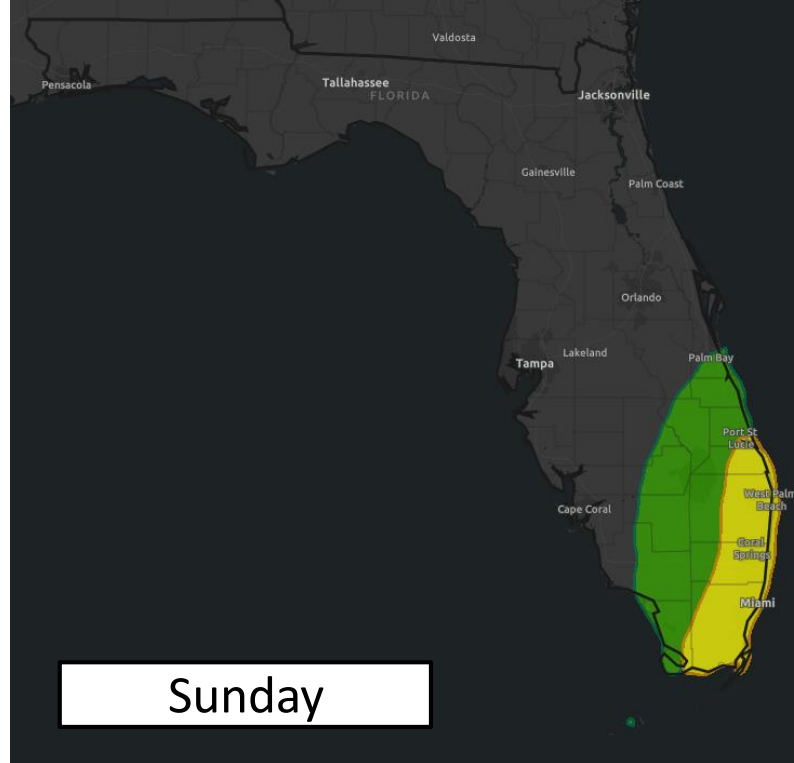
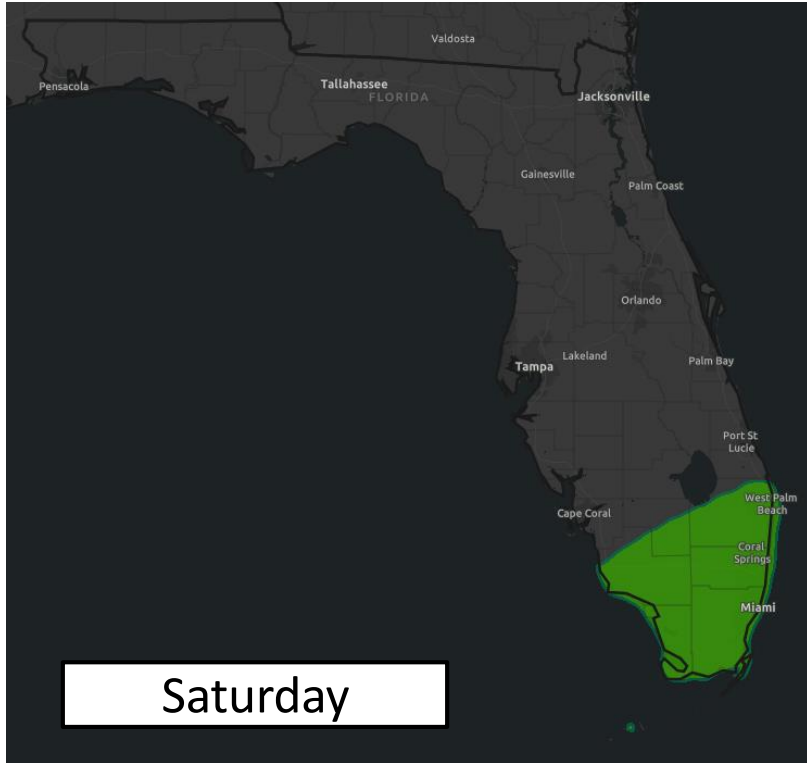
It will take about 2-4" of rain within 1 hour or 3-5" of rain within 6 hours to cause flash flooding in these areas.





# Flash Flood Outlooks

From the Weather Prediction Center



Risk of rainfall exceeding flash flood guidance within 25 miles of a point to the right of a line

**HIGH: > 50%**

**SLGT: 10%-20%**

**MDT: 20%-50%**

**MRGL: 5%-10%**



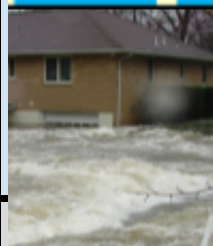
Some heavy rainfall is possible today from a stalled front, but as Eta approaches South Florida, the flood risk will increase across South Florida and the East Coast.



# Flash Flood Risk Categories

## Understanding the Weather Prediction Center Risk Scale

### Understanding WPC Excessive Rainfall Risk Categories

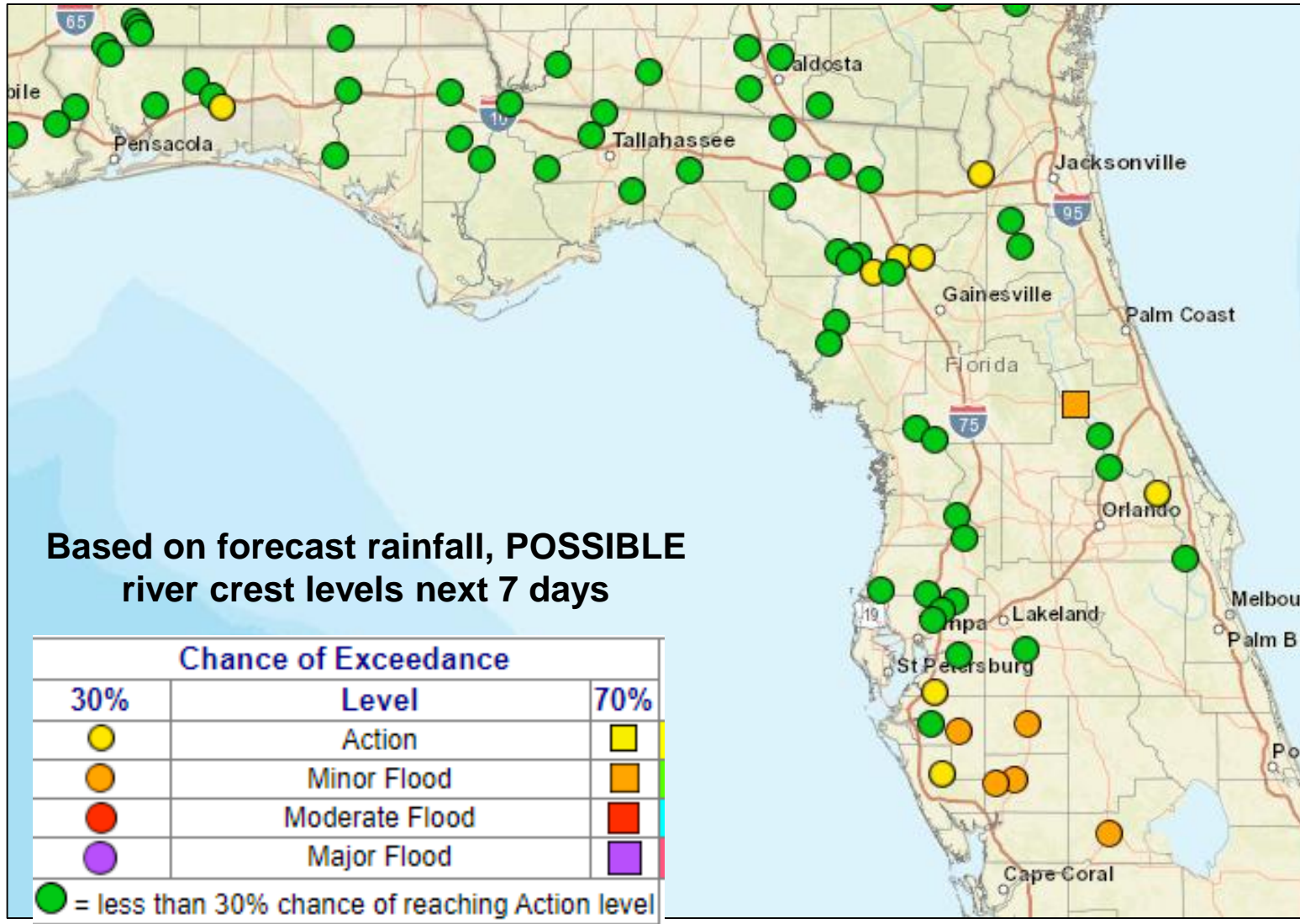
No Area/Label	MARGINAL (MRGL)	SLIGHT (SLGT)	MODERATE (MDT)	HIGH (HIGH)
Flash floods are generally not expected.	Isolated flash floods possible	Scattered flash floods possible	Numerous flash floods likely	Widespread flash floods expected
Localized and primarily affecting places that can experience rapid 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.	
<a href="http://www.wpc.ncep.noaa.gov">www.wpc.ncep.noaa.gov</a> @NWSWPC				
Flash flooding near me?	Flash Flooding			
	NO Flash Flooding			
 WEATHER PREDICTION CENTER		Risk of rainfall exceeding flash flood guidance within 25 miles of a point to the right of a line HIGH: > 50% MDT: 20%-50%		 SLGT: 10%-20% MRGL: 5%-10%





# Possible River Flooding

Chance of River Flooding Based on Range of Forecasted Rainfall



Some minor flooding is possible along some North and Central Florida rivers if heavier rainfall materializes. Myakka and Peace Rivers as well the Horse and Fisheating Creeks have about a 1 in 3 chance of reaching minor flood. The St. Johns River at Astor remains in minor flood through the next 5 days.



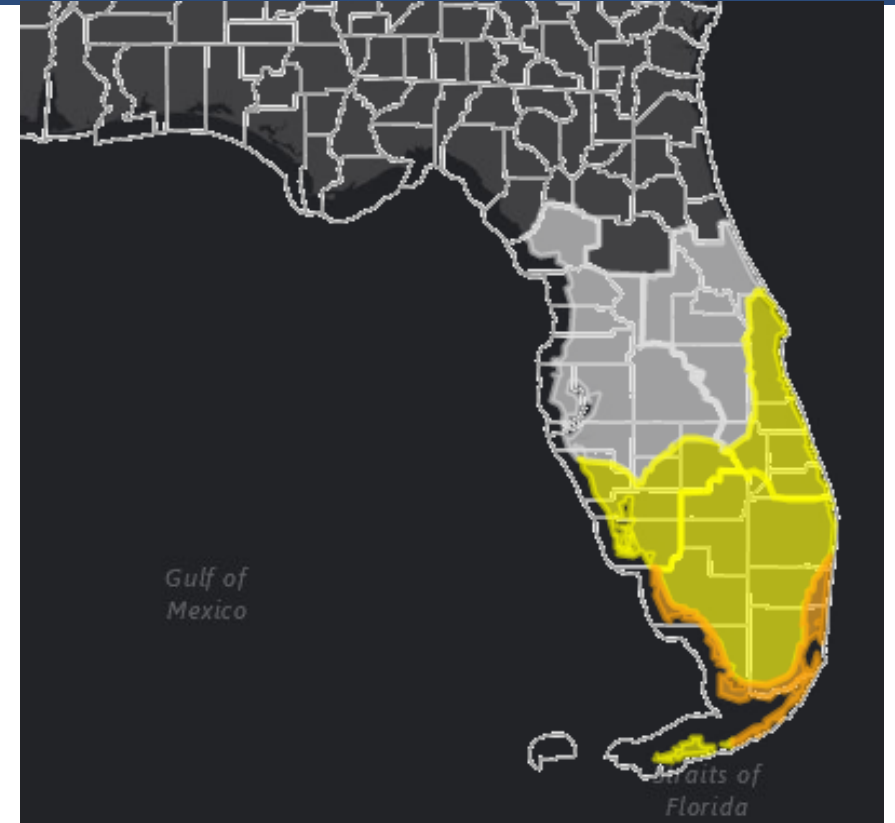
# Damaging Wind Threat Overview

## Tropical Storm Eta

The greatest wind threat is across the Florida Keys and the coastal areas of far southern Florida. Sustained winds of 50-60 mph are possible in these areas with gusts of 65-75 mph possible.

Across inland South Florida and northward to State Road 60 and along the Space Coast, sustained winds of 35-50 mph with gusts up to 60 mph are possible.

Saturated soils, especially along the Treasure Coast through the Keys make trees and power lines more susceptible to wind damage.



[\[Download KML\]](#)

[\[Download Image\]](#)

Wind Threat
Potential for wind greater than 110 mph
Potential for wind 74 to 110 mph
Potential for wind 58 to 73 mph
Potential for wind 39 to 57 mph
Wind less than 39 mph

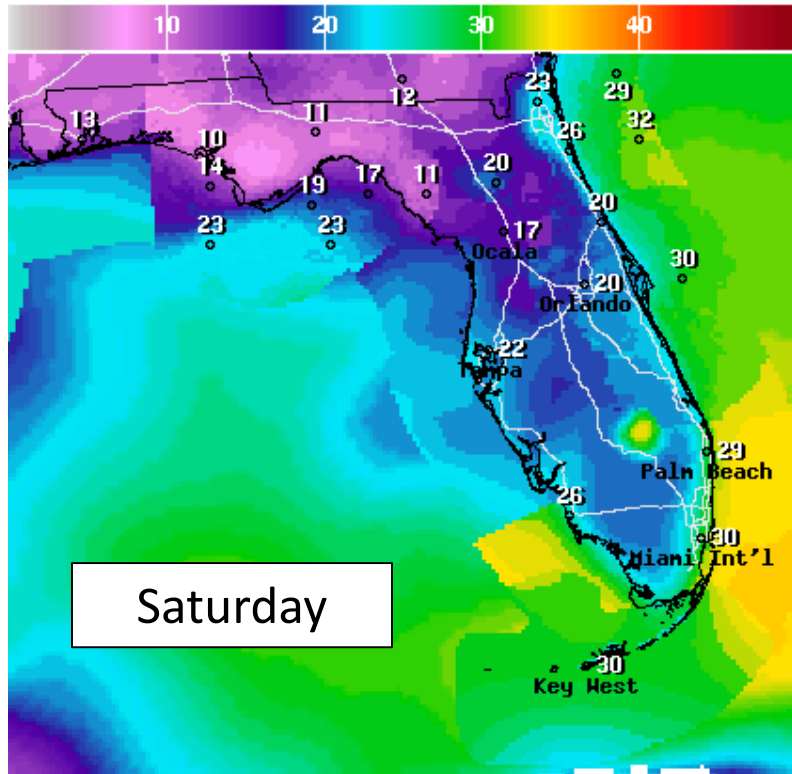
[https://www.weather.gov/srh/tropical?  
office=mfl](https://www.weather.gov/srh/tropical?office=mfl)

Click on "Threats and Impacts" Tab



# Forecast Wind Gusts

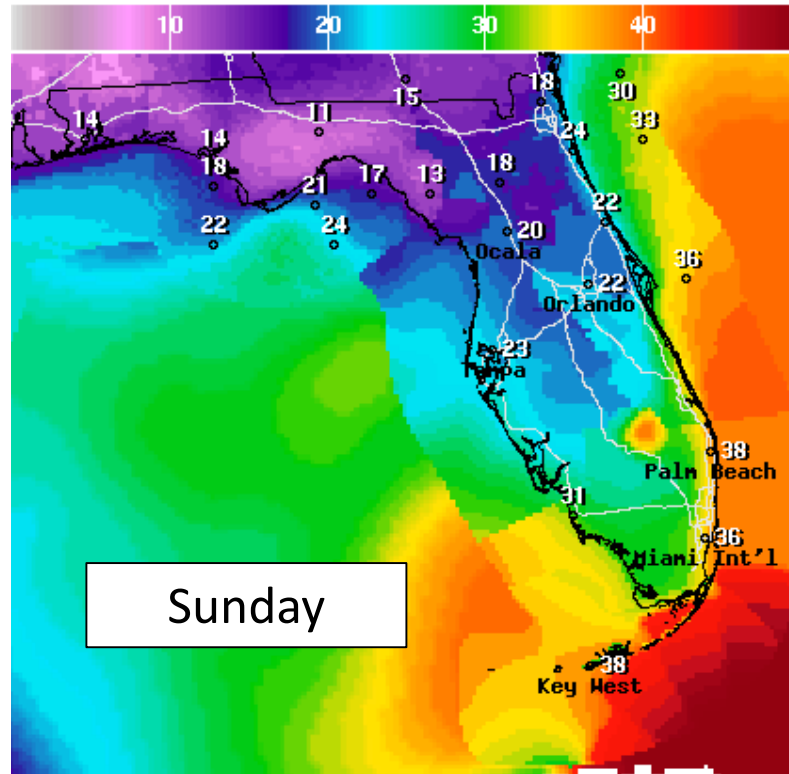
## Through this Weekend



Wind Gust(Kts) Sat Nov 07 2020 4PM EST  
(Sat Nov 07 2020 21Z)



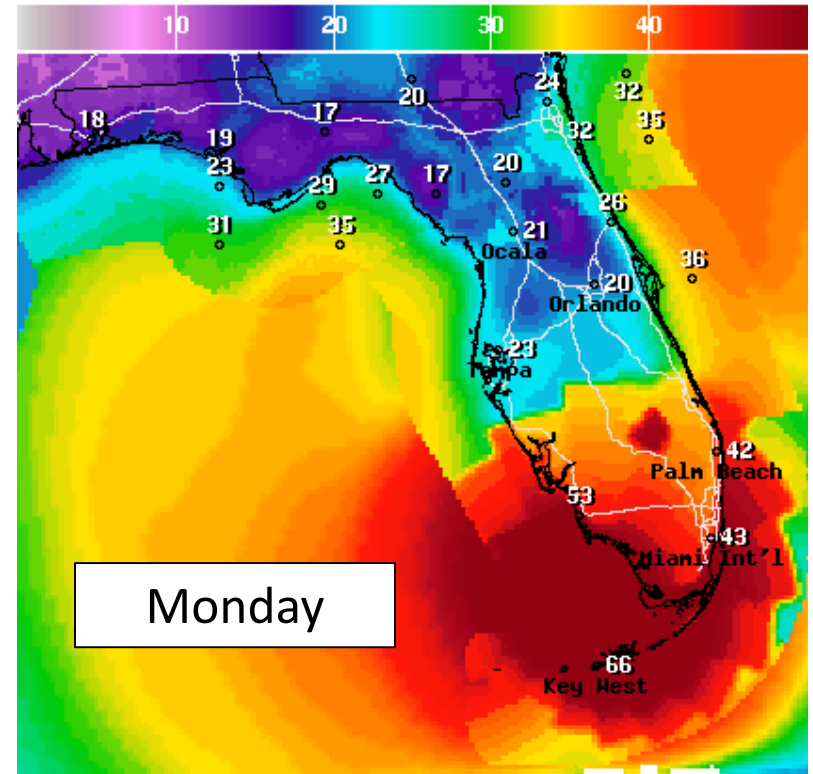
National Digital Forecast Database  
13z issuance Graphic created-Nov 07 8:50AM EST



Wind Gust(Kts) Sun Nov 08 2020 4PM EST  
(Sun Nov 08 2020 21Z)



National Digital Forecast Database  
13z issuance Graphic created-Nov 07 8:51AM EST



Wind Gust(Kts) Mon Nov 09 2020 4PM EST  
(Mon Nov 09 2020 21Z)



National Digital Forecast Database  
13z issuance Graphic created-Nov 07 8:52AM EST



Windy conditions are possible along coastal Southeast Florida and the Keys. Tropical-storm-force wind gusts could start tomorrow in coastal Southeast Florida and the Keys, especially in rain bands, but sustained tropical-storm-force winds would likely begin Sunday night. Wind gusts will continue to increase Sunday into Monday as Eta passes near or over the Keys or South Florida.





# Wind Watches and Warnings

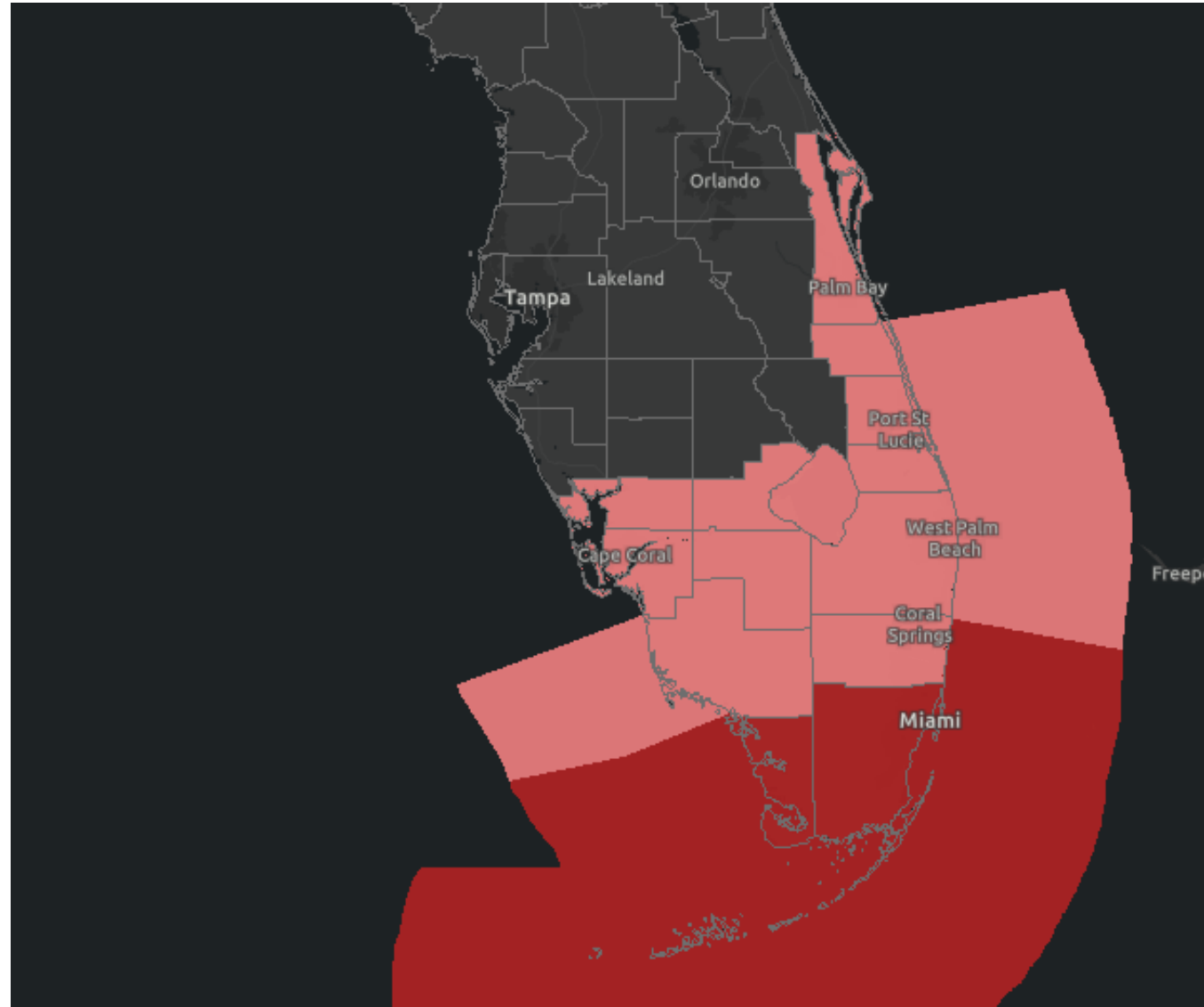
In Effect Until Further Notice

## Tropical Storm Warnings:

Monroe (Keys and Mainland) and  
Miami-Dade

## Tropical Storm Watches:

Charlotte, Lee, Hendry, Glades,  
Brevard, Indian River, St. Lucie,  
Martin, Palm Beach, Collier, and  
Broward Counties





# Tropical Storm & Hurricanes

## Watches Versus Warnings

### ***WATCH***

Tropical storm and/or hurricane conditions are **POSSIBLE** in Watch area

Issued up to 48 hours in advance of tropical storm force winds

### ***WARNING***

Tropical storm and/or hurricane conditions are **EXPECTED** in Warning area

Issued up to 36 hours in advance of onset of tropical storm force winds

Hurricane preparedness activities become difficult once winds reach tropical storm force. **Watches & Warnings are issued in advance of onset of tropical storm force winds, 39-73mph**



NWSMobile



[weather.gov/mob](https://weather.gov/mob)



# Storm Surge Threat Overview

## Tropical Storm Eta

The greatest storm surge threat will be across South Florida and the Keys, though the risk could increase farther north depending on the track.

Current forecasts call for 1-3 feet of storm surge possible along the East Coast, through the Florida Keys, and across parts of Southwest Florida.

Tides are already running about 1' above normal in the Keys, which has resulted in some nuisance to minor flooding.

<https://www.weather.gov/srh/tropical?office=mfl>

Click on “Threats and Impacts” Tab



[\[Download KML\]](#)

[\[Download Image\]](#)

Storm Surge Threat
Potential for storm surge flooding greater than 9 ft above ground
Potential for storm surge flooding greater than 6 ft above ground
Potential for storm surge flooding greater than 3 ft above ground
Potential for storm surge flooding greater than 1 ft above ground
Little to no storm surge flooding





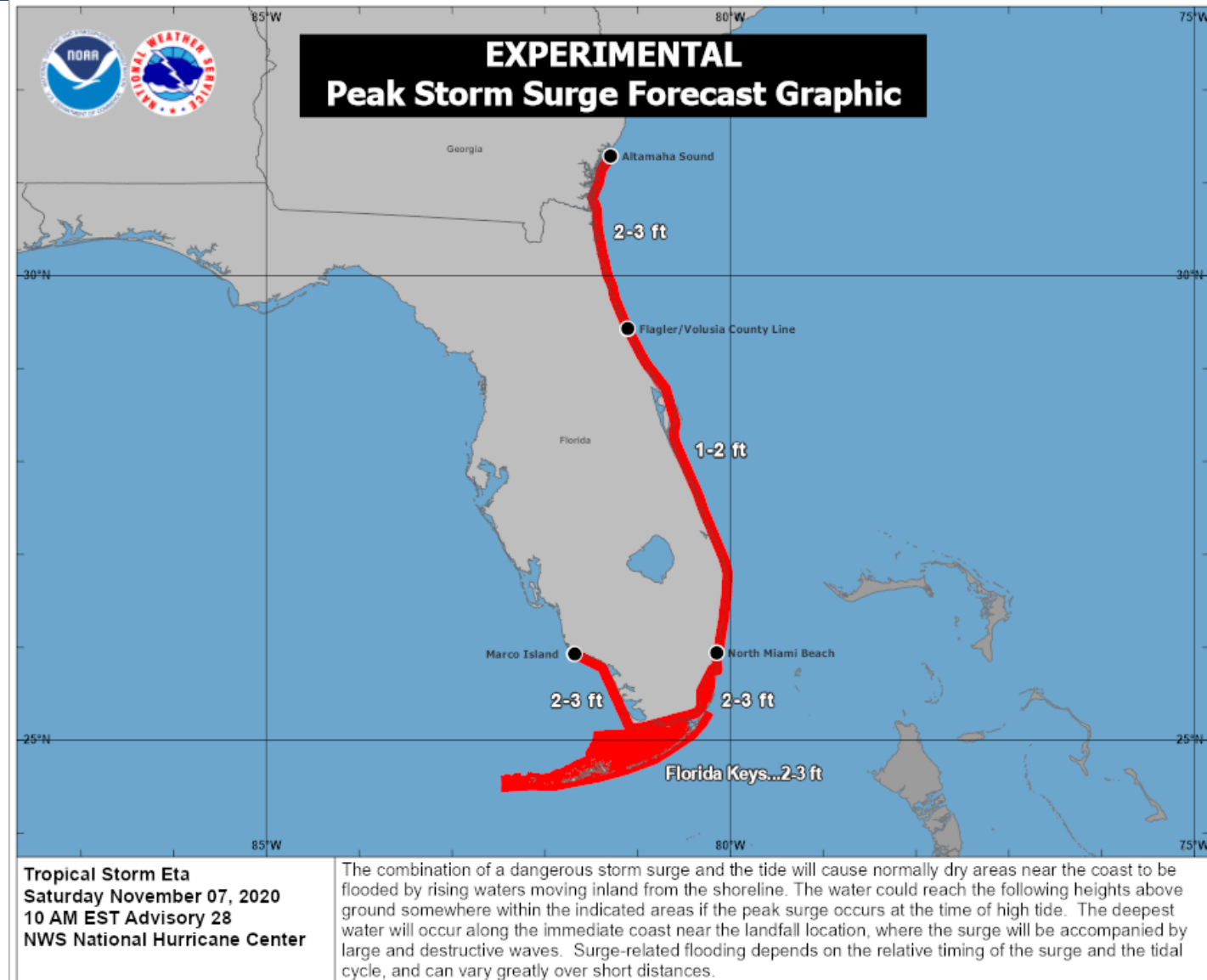
# Storm Surge/Coastal Flooding

## Tropical Storm Eta

The highest storm surge will be along coastal Northeast Florida, in South Florida from Marco Island around to North Miami Beach, and for the Florida Keys. These areas could see 2-3' of storm surge.

The East Coast from the Flagler/Volusia County Line to North Miami Beach could see 1-2' of storm surge.

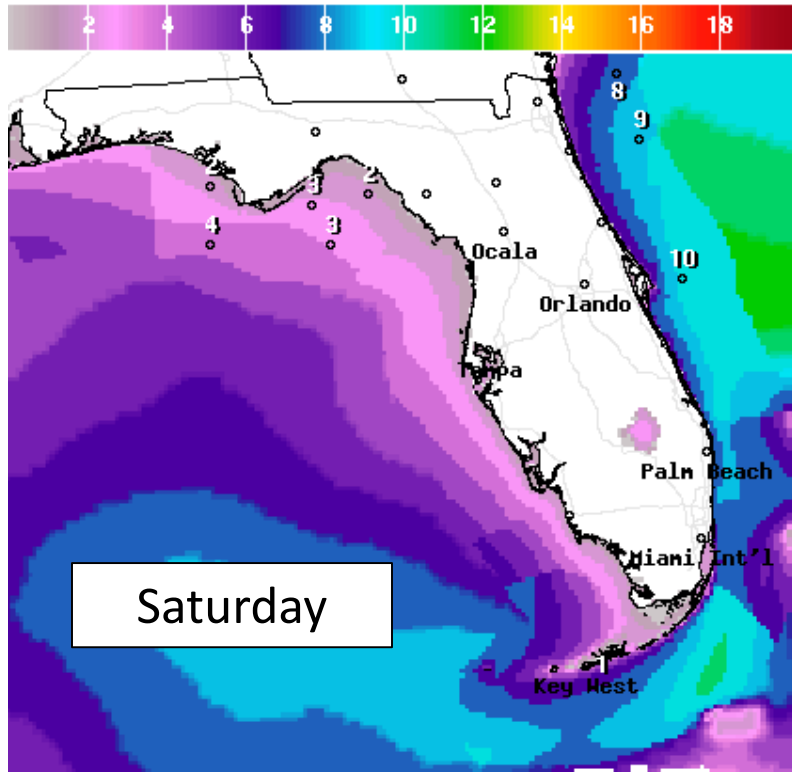
**Please refer to any Coastal Flood Advisories or Statements issued by the local National Weather Service offices. There are NO Storm Surge Watches or Warnings in effect.**





# Forecast Wave Heights

## Through this Weekend



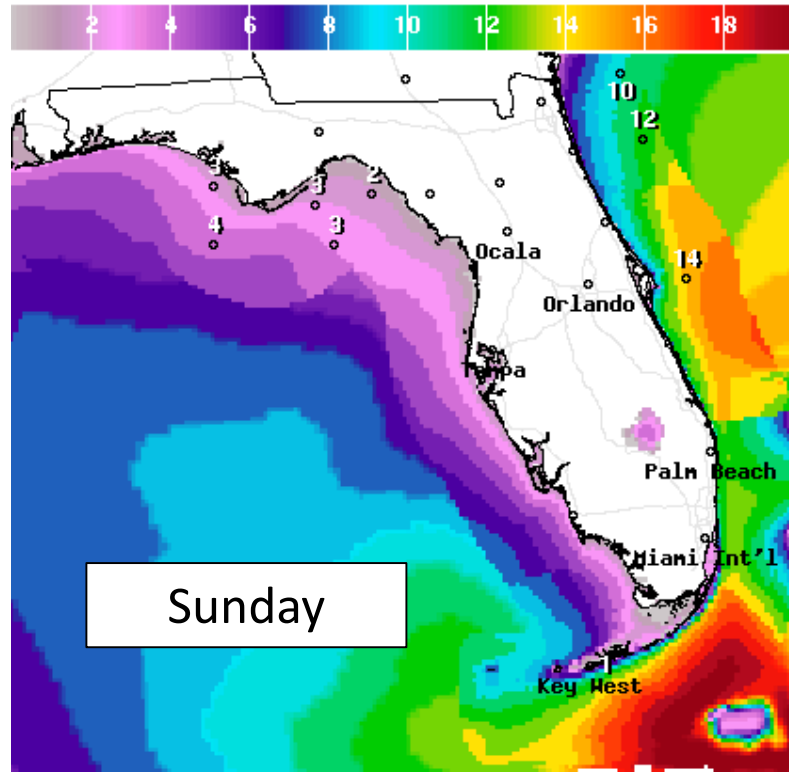
Saturday

Wave Height(ft) Ending Sat Nov 07 2020 7PM EST  
(Sun Nov 08 2020 00Z)



National Digital Forecast Database

13z issuance Graphic created-Nov 07 8:31AM EST



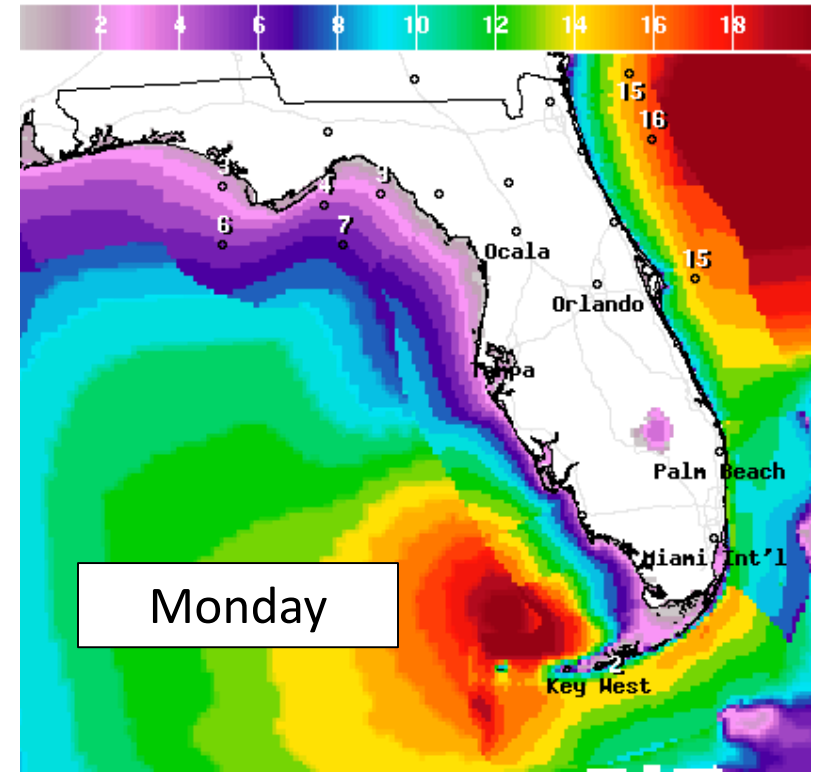
Sunday

Wave Height(ft) Ending Sun Nov 08 2020 7PM EST  
(Mon Nov 09 2020 00Z)



National Digital Forecast Database

14z issuance Graphic created-Nov 07 9:26AM EST



Monday

Wave Height(ft) Ending Mon Nov 09 2020 7PM EST  
(Tue Nov 10 2020 00Z)



National Digital Forecast Database

14z issuance Graphic created-Nov 07 9:27AM EST



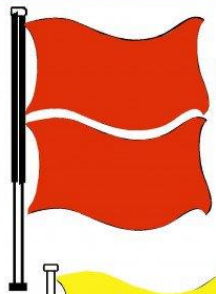
High surf of 7-13 feet will be possible along the East Coast, especially Sunday and Monday. Waves will begin to build in the Gulf later this weekend into next week. Significant beach erosion is possible at many beaches into next week.



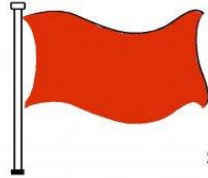
# Rip Current Outlook

Today

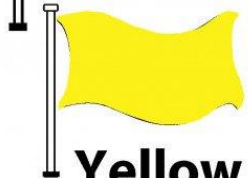
## BEACH FLAG WARNING SYSTEM



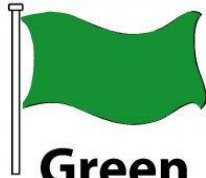
**Double Red**  
Water Closed to  
Public Use



**Red**  
High Hazard  
(rough conditions,  
such as strong surf  
and or currents)



**Yellow**  
Medium Hazard  
(light surf and or  
currents)

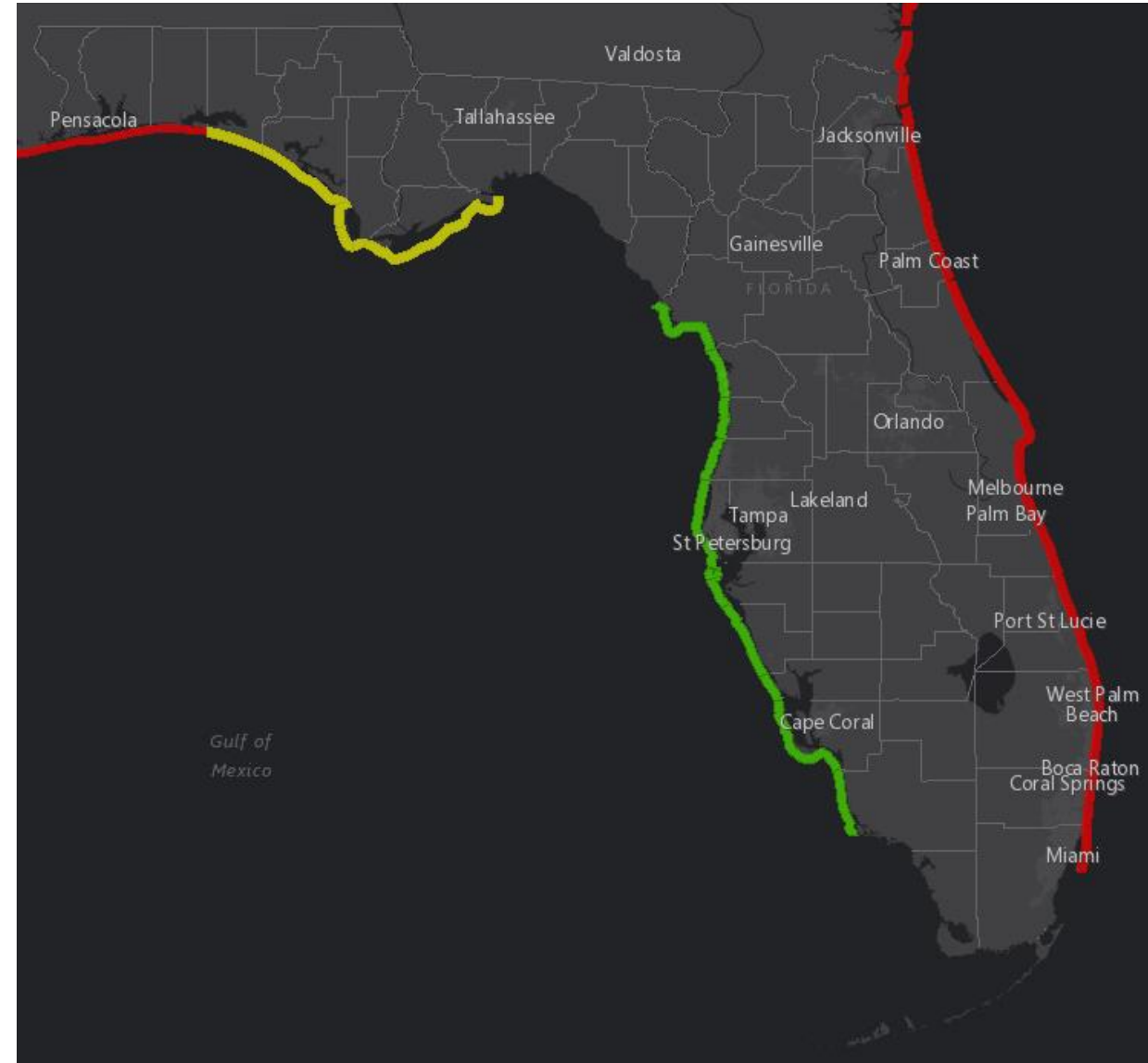


**Green**  
Low Hazard  
(calm conditions)



**Purple**  
Marine Pest  
(jellyfish, stingrays  
& dangerous fish)

Dangerous rip currents continue due to strong easterly winds and rough surf.





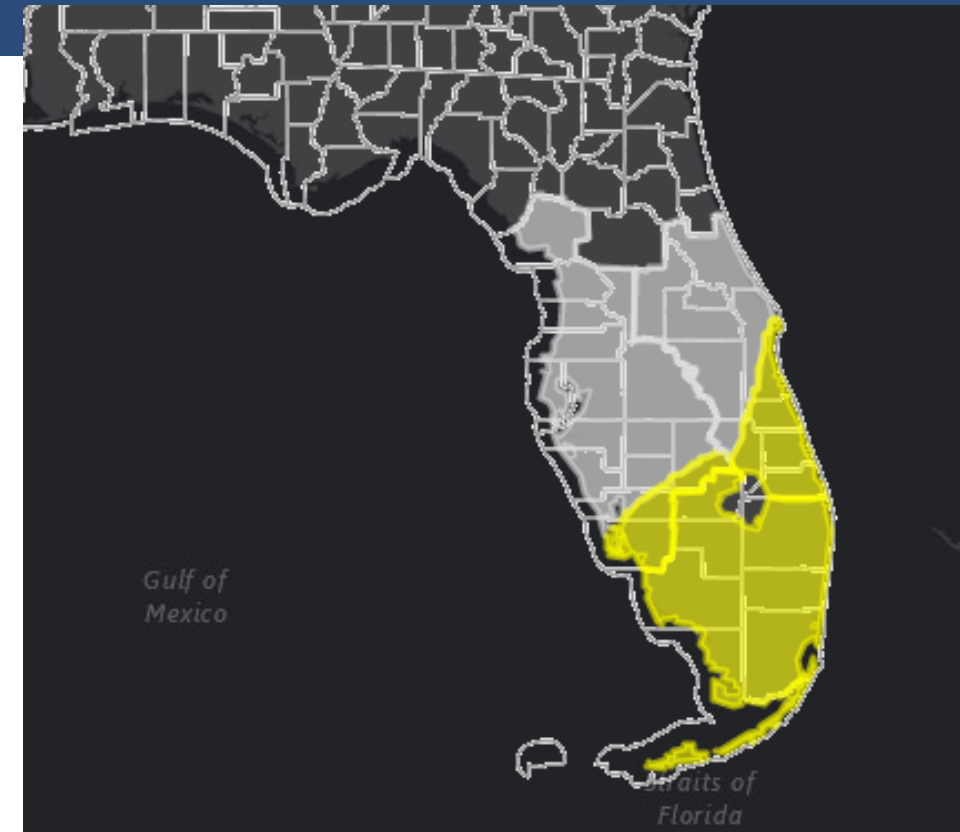


# Tornado Threat Overview

## Tropical Storm Eta

The greatest tornado threat is across South Florida and the Florida Keys, mainly Sunday, Monday, and possibly Tuesday.

Isolated tornadoes are possible in the outer rain bands of Tropical Storm Eta.



[\[Download KML\]](#)

[\[Download Image\]](#)

Tornado Threat
Potential for outbreak of tornadoes
Potential for many tornadoes
Potential for several tornadoes
Potential for a few tornadoes
Tornadoes not expected

[https://www.weather.gov/srh/tropical?  
office=mfl](https://www.weather.gov/srh/tropical?office=mfl)

Click on “Threats and Impacts” Tab



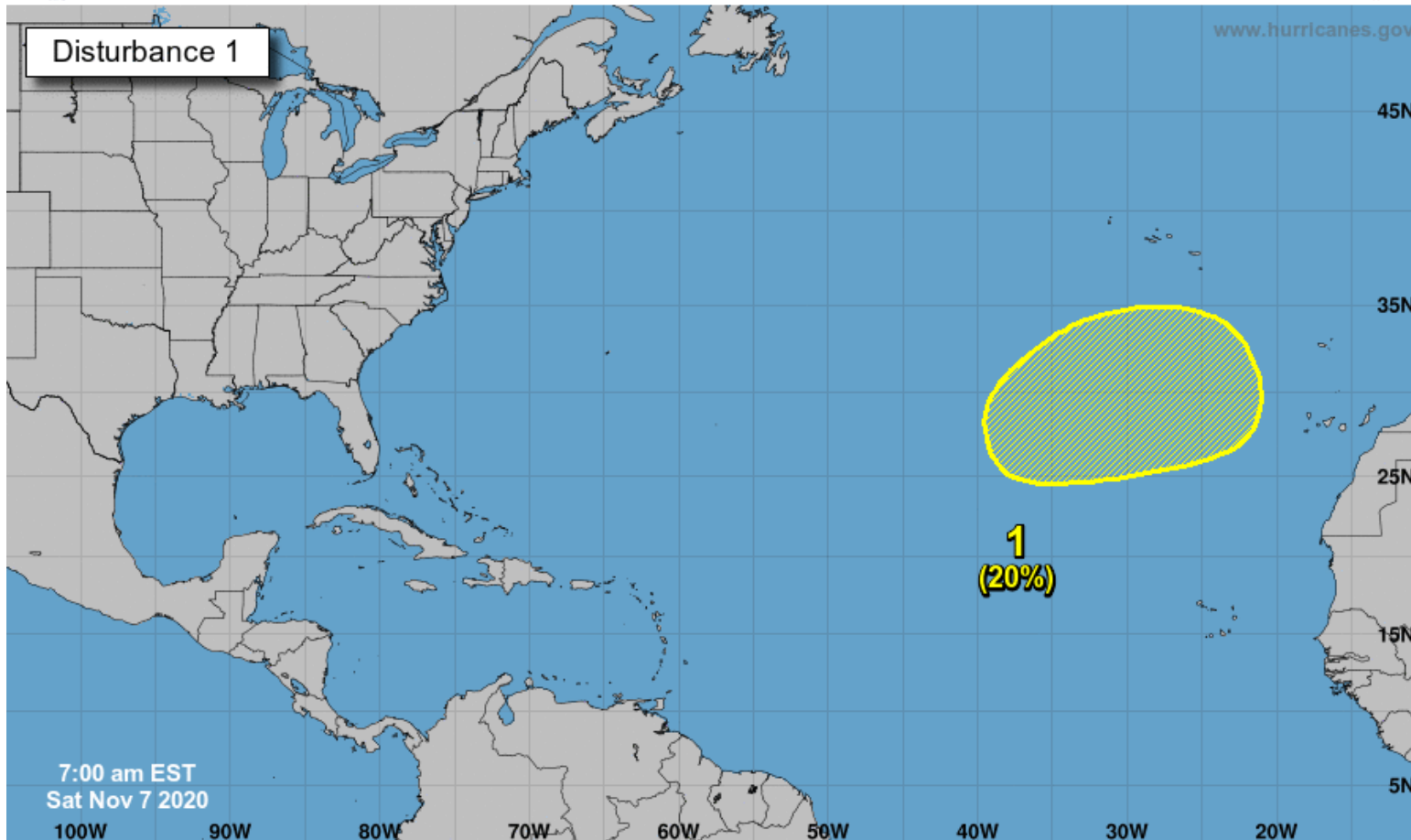
# Tropical Weather Outlook

Possible Areas of Development During the Next 5 Days ([LINK](#))



## Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



A broad non-tropical low pressure system could form several hundred miles southwest of the Azores early next week.

Any subtropical development of this system is expected to be slow to occur while it moves generally eastward over the northeastern Atlantic Ocean through the middle of next week.

**\*Formation chance through 48 hours...low...near 0%.**

**\*Formation chance through 5 days...low...20%.**

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



# Overall Summary

## **Tropical Storm Eta**

- The center of Eta is located about 45 mph west-northwest of Grand Cayman, moving northeast at 17 mph.
- Maximum sustained winds are near 40 mph, and additional strengthening is expected through Sunday night.
- Eta will move over Cuba tonight and be near the Florida Keys and South Florida by Monday morning.
- Eta will turn westward into the Gulf of Mexico early next week, then turn northward over the eastern Gulf of Mexico or near the West Coast during the middle of next week.
- The forecast remains somewhat uncertain. Disorganized systems tend to be difficult to forecast due to possible erratic movements and center reformations.
- The forecast in the Gulf of Mexico remains highly uncertain, but areas farther north in the state should continue to monitor.





# Florida Outlook

## Florida Outlook:

- **It is important to NOT focus on the exact track of Eta. Impacts will extend well beyond the cone away from the center.**
- Heavy rainfall and flash flooding will be the primary threat from Eta across South Florida and the Keys. Flood Watches are in effect for all of South Florida, the Treasure Coast, and Okeechobee County.
- 7-day rainfall totals could approach a widespread 5-10" with localized totals of 15"+ in South Florida and the Keys. Northward to the I-4 corridor, rainfall totals of 2-4" with localized totals of 6-8" are possible.
- Tropical-storm-force winds could begin as early as Sunday evening in the Keys and South Florida, but will likely begin late Sunday night or early Monday morning.
- **Tropical Storm Warnings:** Monroe (Keys and Mainland) and Miami-Dade
- **Tropical Storm Watches:** Collier, Broward, Palm Beach, Hendry, Glades, Martin, St. Lucie, Indian River, Lee, Charlotte, and Brevard
- Sustained winds of 50-65 mph with gusts of 65-75 mph will be possible in the Keys and coastal South Florida. Sustained winds of 40-50 mph with gusts of 50-60 mph will be possible across inland South Florida northward to State Road 60.
- Saturated soils make trees and power lines more susceptible to wind damage.
- Isolated tornadoes will also be possible in any of the outer bands, possibly beginning Sunday across South Florida and the Keys, spreading northward into early next week.
- 1-3' of storm surge is possible along the East Coast, the Keys, and Southwest Florida.
- Beach erosion and dangerous rip currents from very high surf are expected along the East Coast.
- This system could impact other parts of the state farther north. However, details there become highly uncertain.

The next tropics packet will be issued this afternoon with the 4PM ET Advisory. For the latest information on the tropics, please visit the National Hurricane Center website at [www.hurricanes.gov](http://www.hurricanes.gov).



# TROPICAL UPDATE



Created by:

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State Meteorological Support Unit

Florida Division of Emergency Management

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