



# TROPICAL UPDATE



4:00 PM EST

Wednesday, November 11, 2020

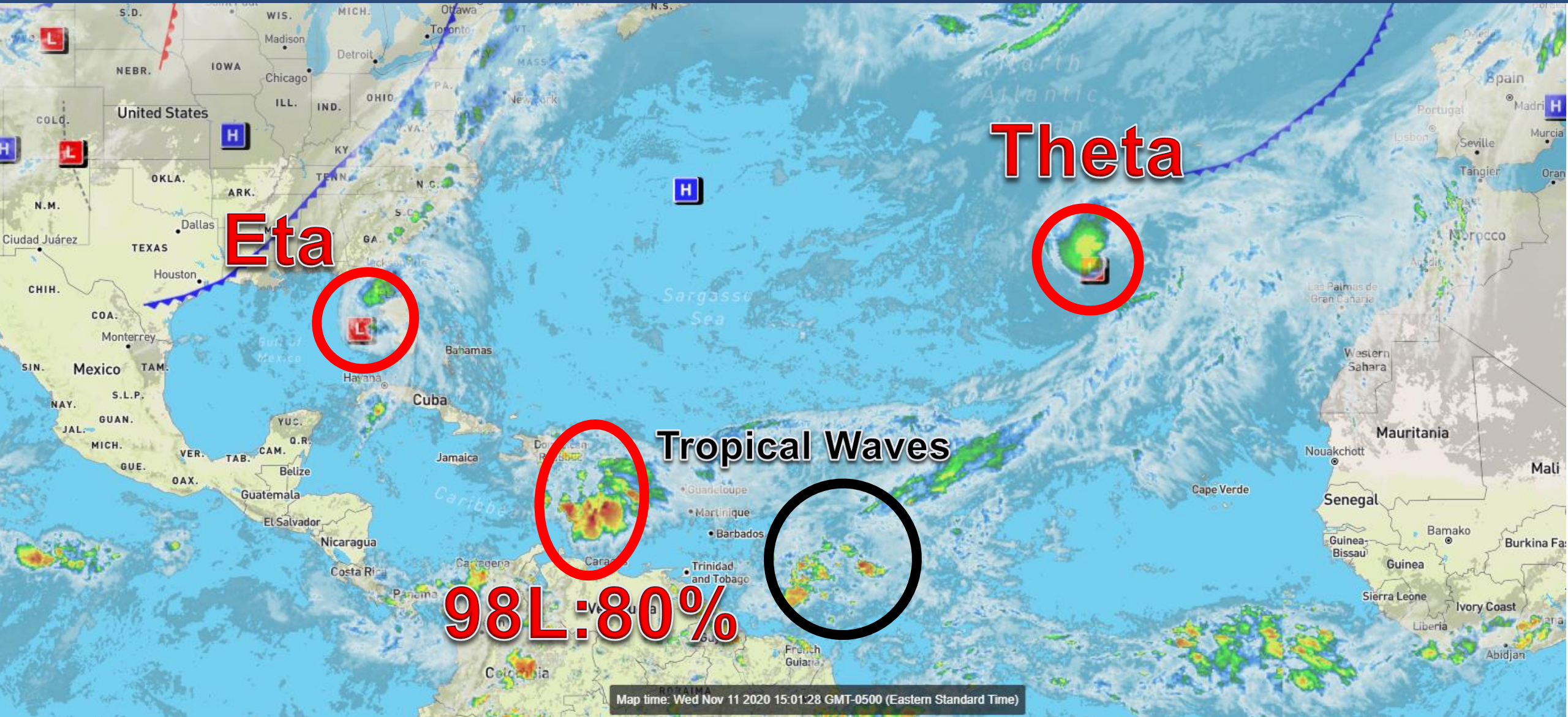
Tropical Storm Eta, Tropical Storm Theta,  
and Invest 98L in the Caribbean (80%)

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).



# Atlantic Basin Satellite Image

Chance of development: — None — Low — Medium — High





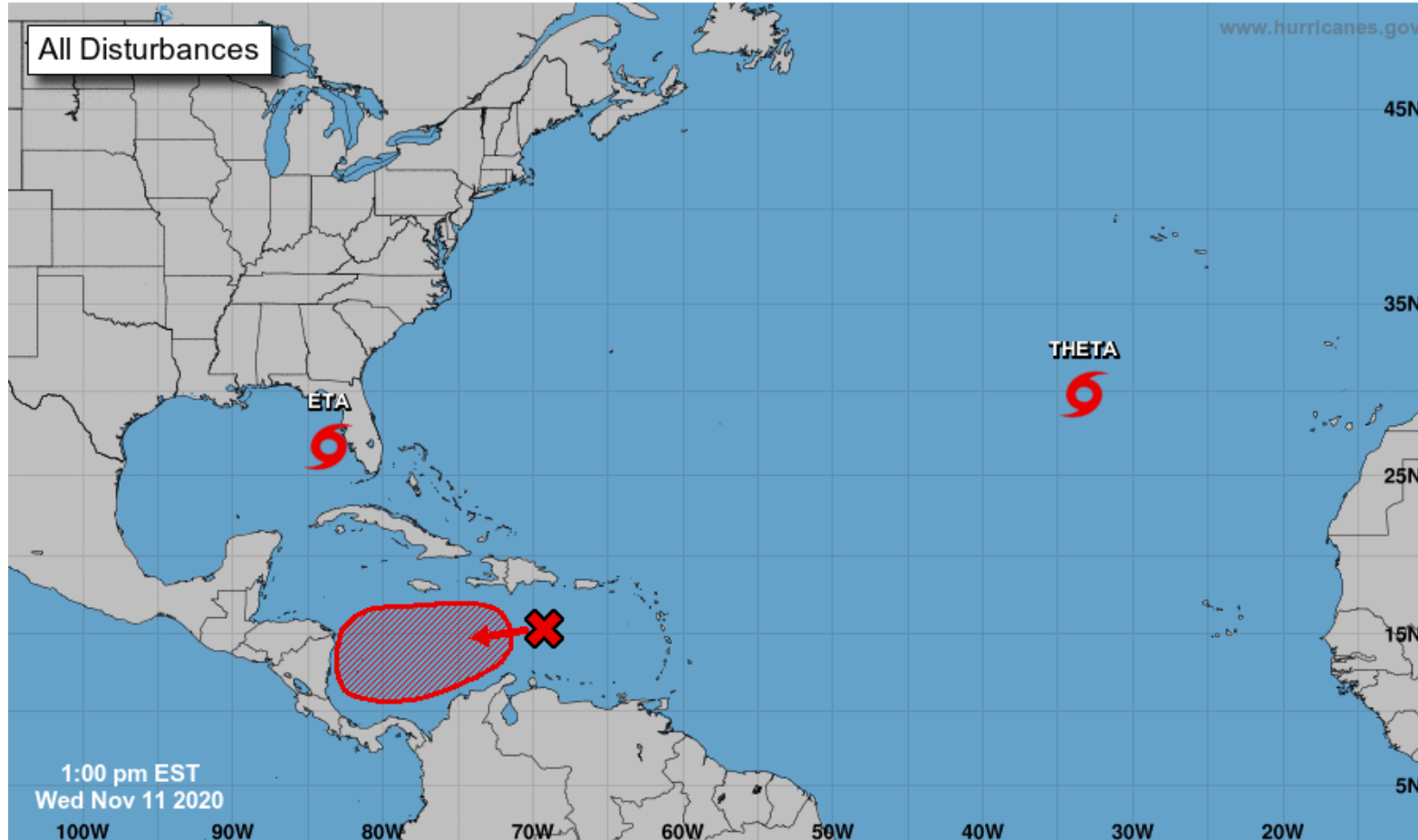


# Tropical Weather Overview

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



## Five-Day Graphical Tropical Weather Outlook National Hurricane Center Miami, Florida



Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

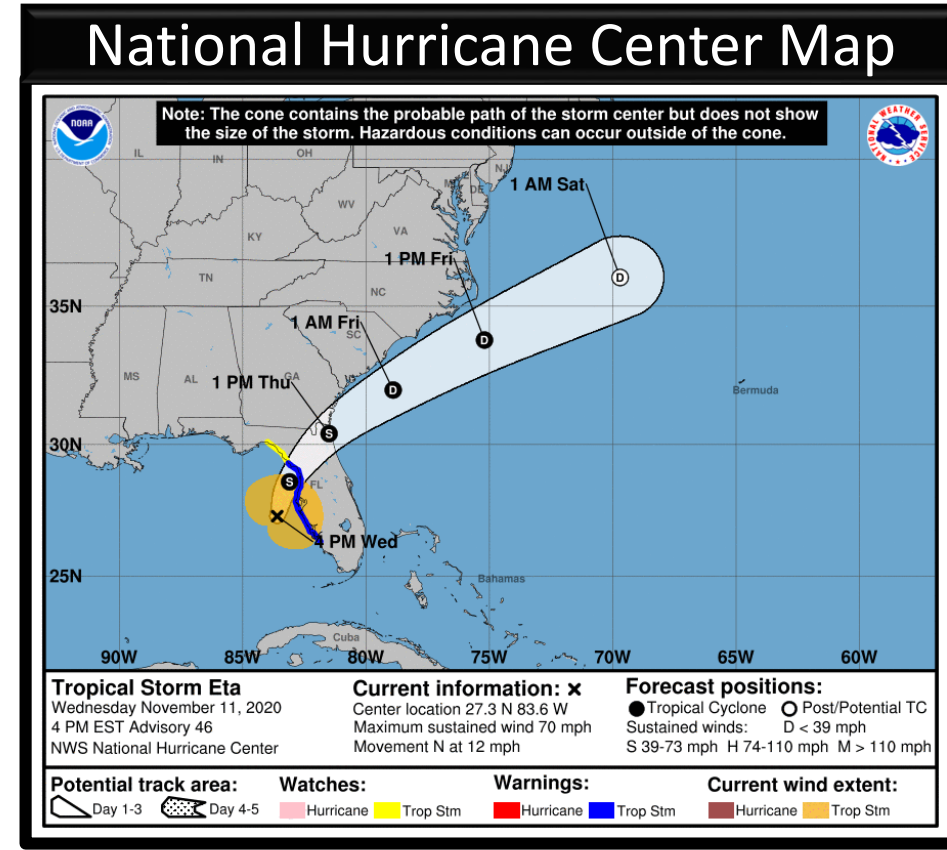
Post-Tropical Cyclone or Remnants



# Tropical Storm Eta

4 PM ET Wednesday: 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:

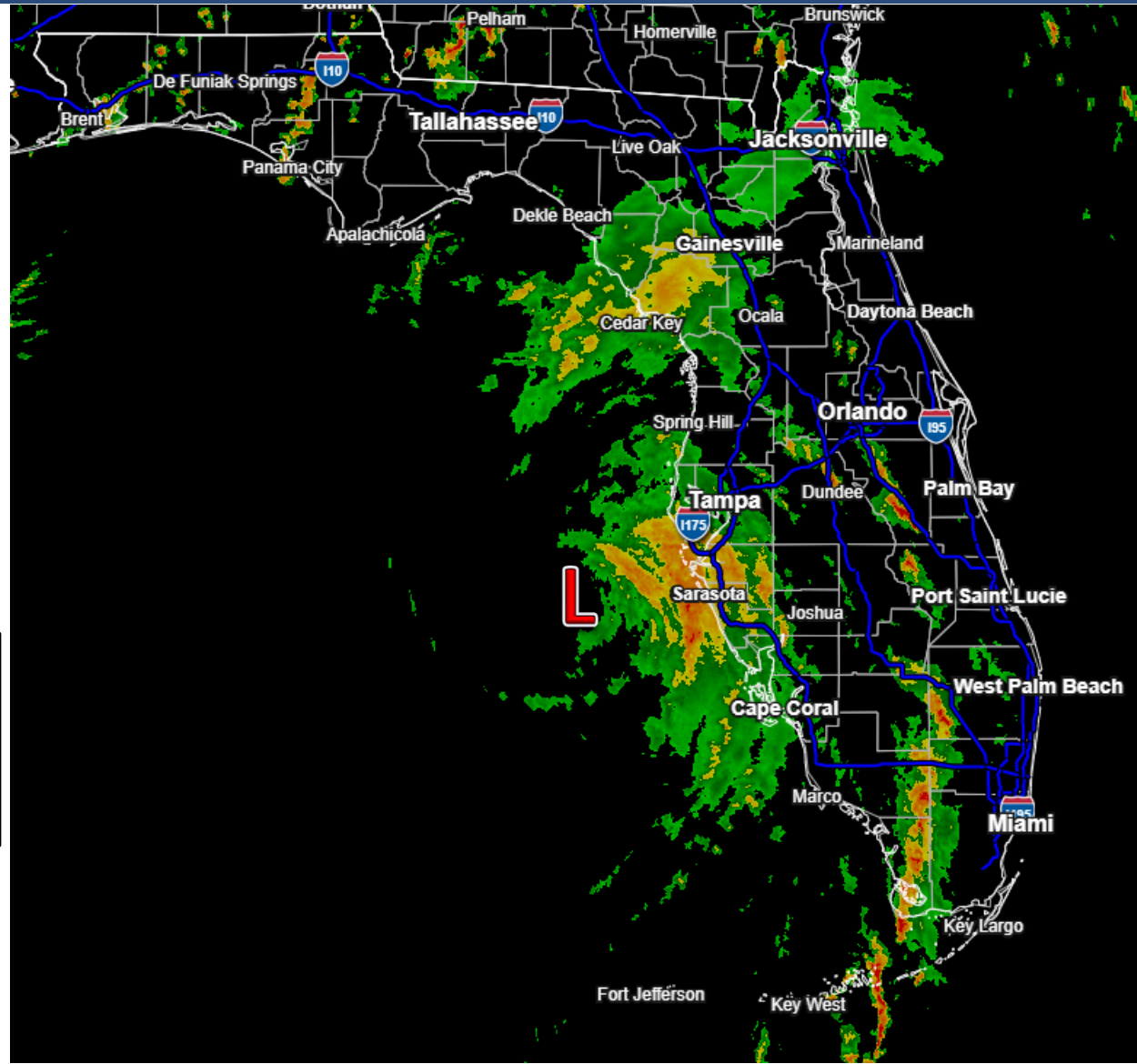
Eta has weakened some back to a tropical storm. However, impacts remain the same. Hurricane Watches for the Tampa Bay area and the Nature Coast have been canceled. Impacts ongoing across Southwest Florida and Tampa Bay. Deteriorating conditions expected along the Nature Coast and North Florida through tonight.



# Current Florida Radar

As of 3:30 PM ET

Rain bands from Eta continue impacting much of the West Coast. Wind gusts of 40-60 mph, heavy rainfall, and isolated tornadoes remain possible in these rain bands.





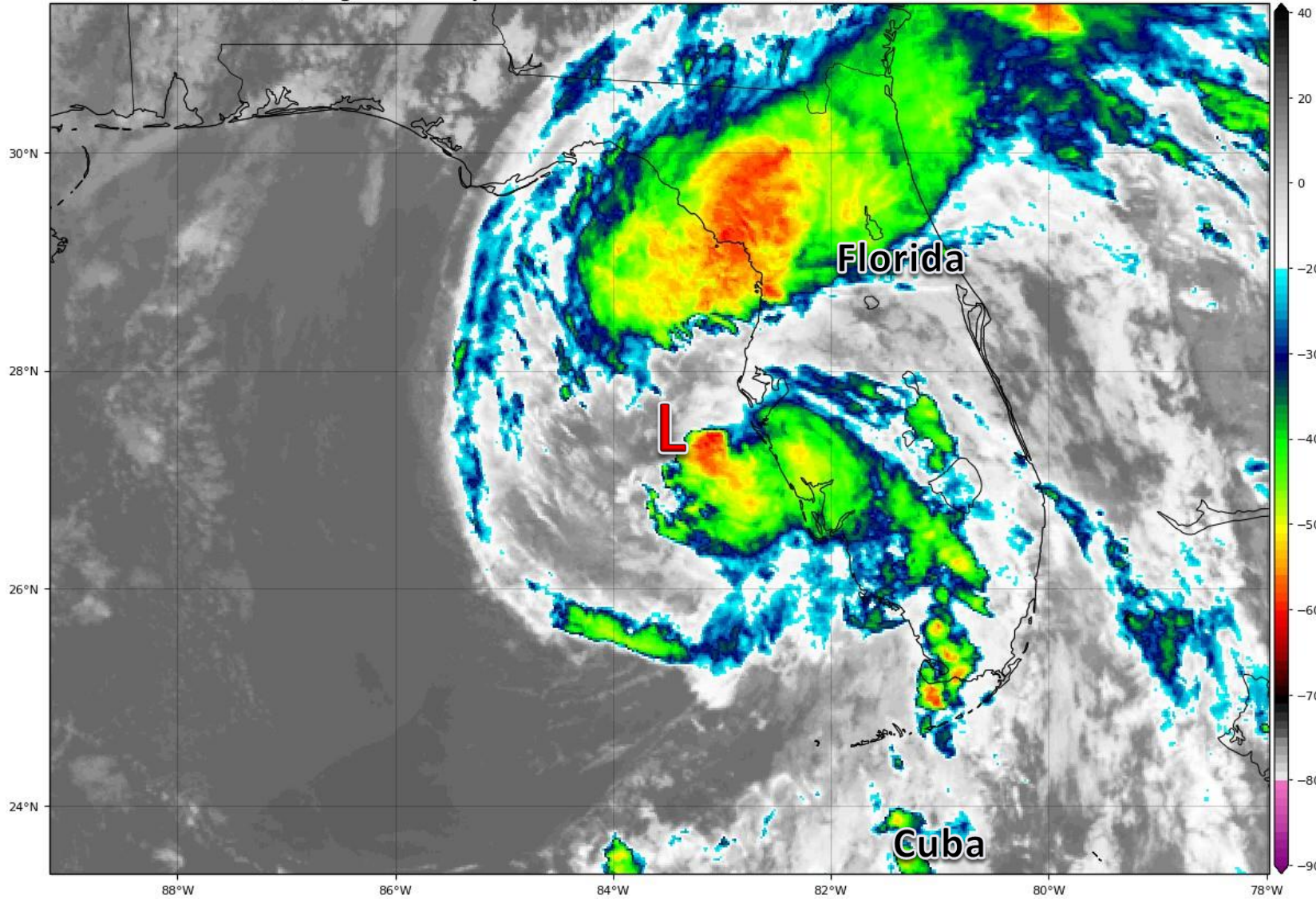


# Satellite Imagery

## Tropical Storm Eta – Southeastern Gulf of Mexico

GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 19:57Z Nov 11, 2020

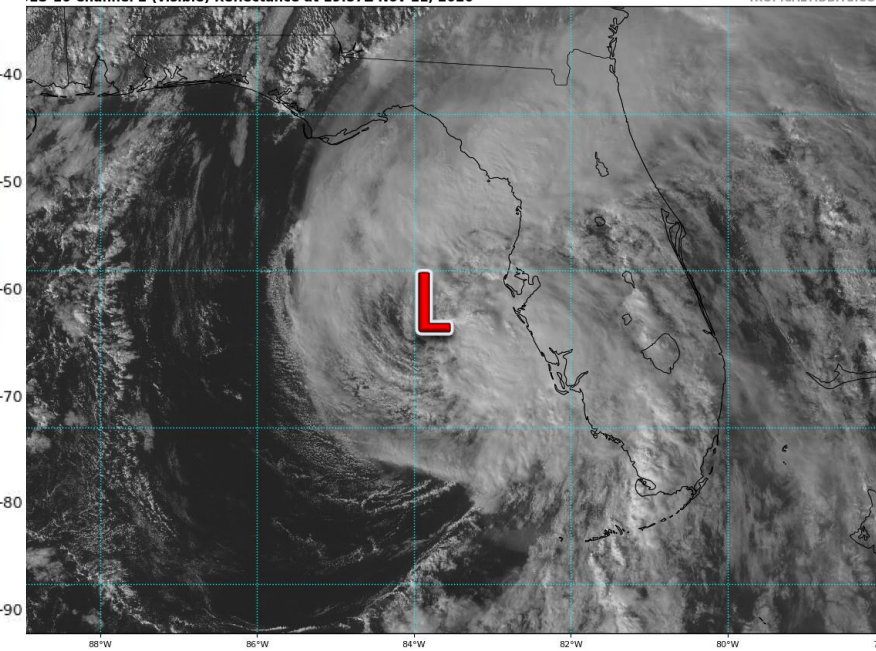
TROPICALTIDBITS.COM



Eta remains disorganized this afternoon with thunderstorms well to the north and also to the southeast of the circulation. Dry air and wind shear have taken their toll, and have resulted in some weakening. Regardless, impacts remain largely the same.

GOES-16 Channel 2 (visible) Reflectance at 19:57Z Nov 11, 2020

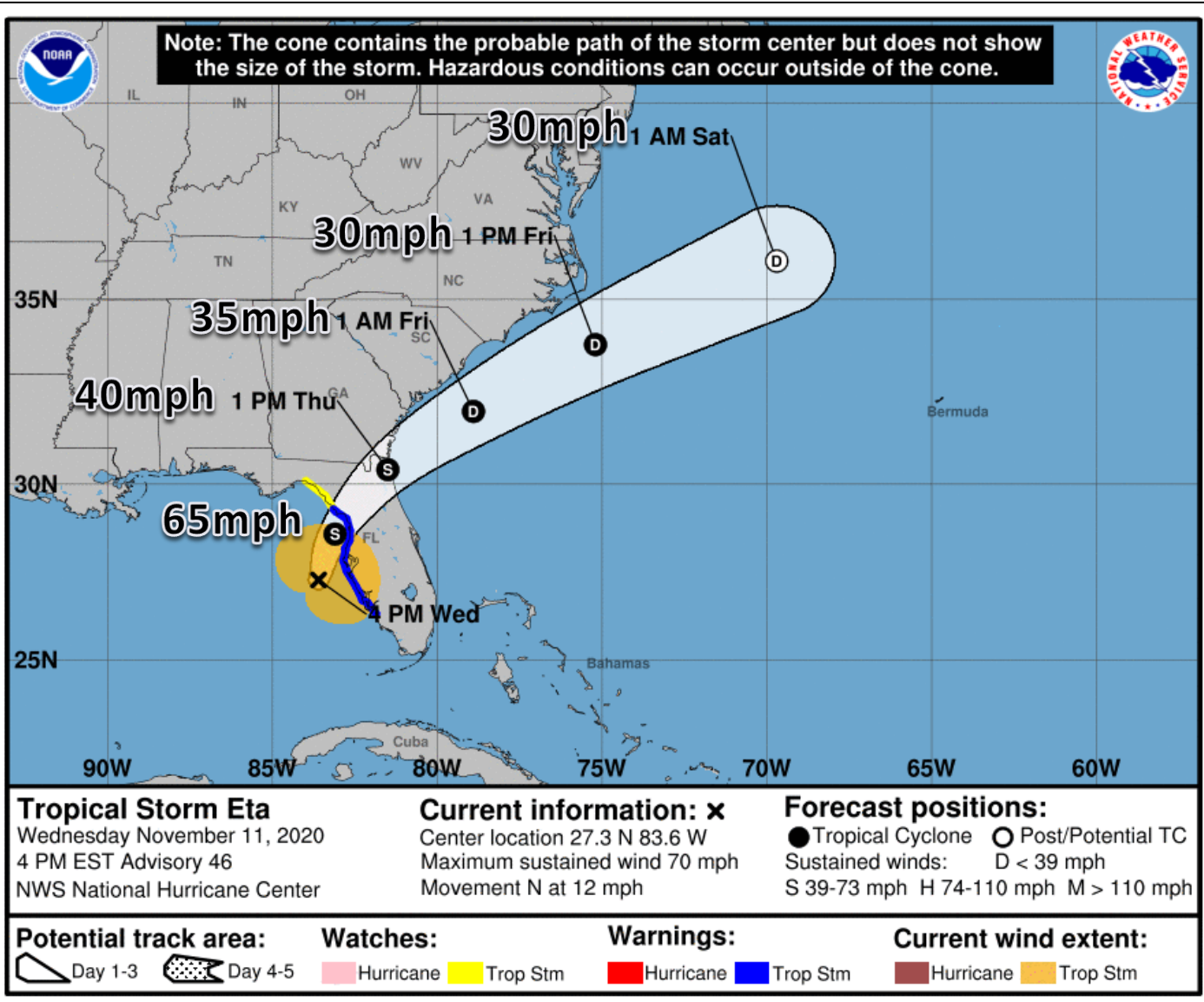
TROPICALTIDBITS.COM





# Official Forecast Track

## From the National Hurricane Center – Tropical Storm Eta



- The center of Tropical Storm Eta is about 65 miles west-southwest of St. Petersburg, FL, moving north at 12 mph.
- Maximum sustained winds are near 70 mph, and Eta is forecast to gradually weaken until landfall. Eta is still expected to be a strong tropical storm at landfall. Rapid weakening is expected after landfall.
- Eta will turn northeastward as it makes landfall and will move into the Atlantic tomorrow afternoon.
- Eta should exit Northeast Florida into the Atlantic late Thursday.





# Key Messages

## From the National Hurricane Center



### Key Messages for Tropical Storm Eta

Advisory 46: 4:00 PM EST Wed Nov 11, 2020



1. There is a danger of life-threatening storm surge along portions of the Florida Gulf Coast from Bonita Beach to Suwannee River, including Tampa Bay and Charlotte Harbor. Residents in this area should follow any advice given by local officials.

2. Tropical-storm-force winds are expected this evening and tonight along portions of the Florida Gulf Coast from Bonita Beach to Suwannee River, and are possible tonight and early Thursday from Suwannee River to Aucilla River. Interests elsewhere along the Florida Gulf Coast should monitor the progress of Eta.

3. Heavy rainfall from Eta will continue to spread northward across west and central Florida through Thursday. Additional flash and urban flooding will be possible in south Florida through Thursday, especially across previously inundated areas. Flash, urban, and isolated minor river flooding are expected across portions of west and north Florida through Thursday.



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





# Time of Arrival & Wind Speed Probabilities

**MOST LIKELY** Time of Arrival of Tropical Storm Force Winds (>39 mph)

## Most Likely Arrival Time of Tropical-Storm-Force Winds



City

Chance for  
TS Winds

Changes Since  
Last Packet

Naples

5%

-18%

Ft. Myers

5%

-21%

Tampa

98%

+2%

Orlando

37%

-16%

Cedar Key

94%

+17%

Gainesville

80%

+10%

Jacksonville

49%

+4%

Tallahassee

3%

-4%

Apalachicola

7%

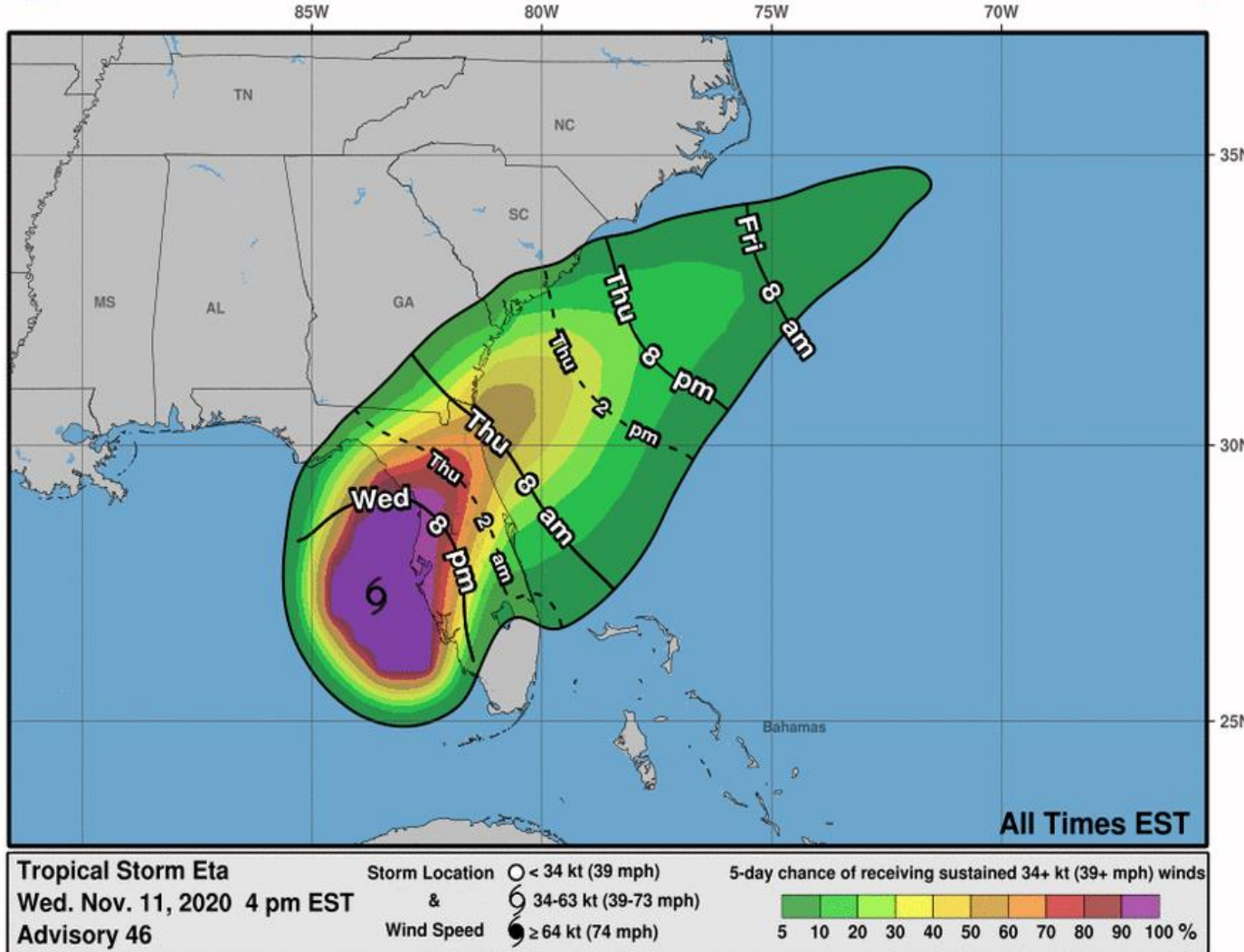
-2%

Panama City

3%

-3%

In general, the threat of tropical storm force winds has **INCREASED** across the Nature Coast and Northeast Florida.



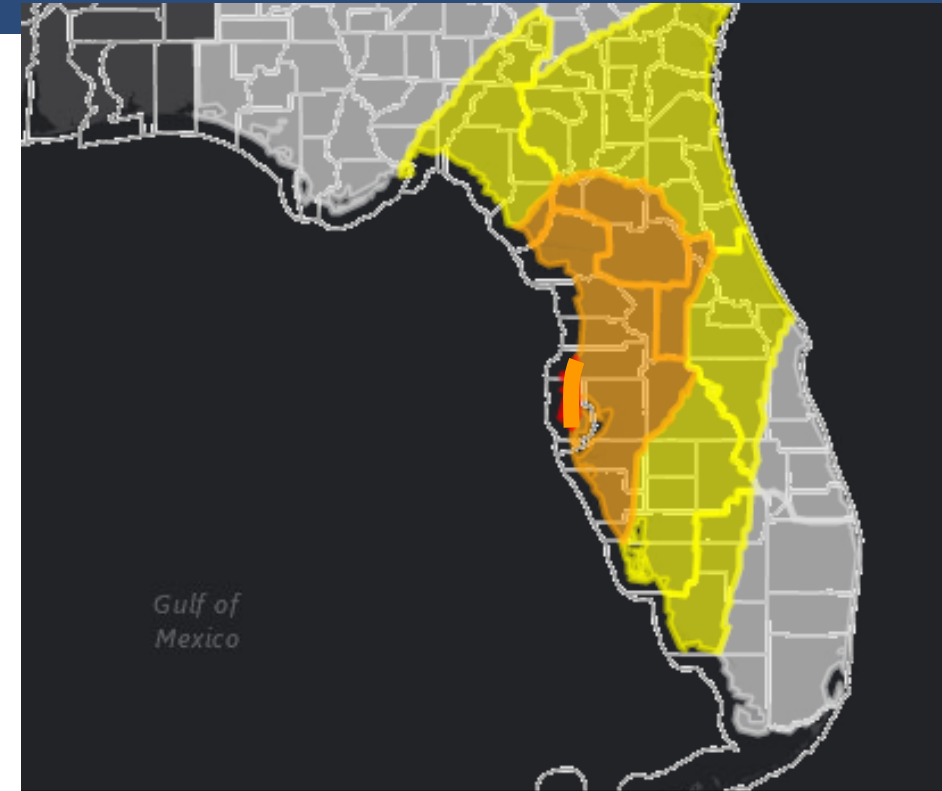


# Damaging Wind Threat Overview

## Tropical Storm Eta

The greatest wind threat will be along the West Coast of the Peninsula, generally west of I-75. Sustained winds of 45-60 mph are possible with gusts to 60-70 mph are possible in the orange areas, generally west of I-75 .

Sustained winds of 25-35 mph with gusts to 35-45 mph are possible across inland areas (yellow).



[\[Download KML\]](#)

[\[Download Image\]](#)

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

Click on "Threats and Impacts" Tab



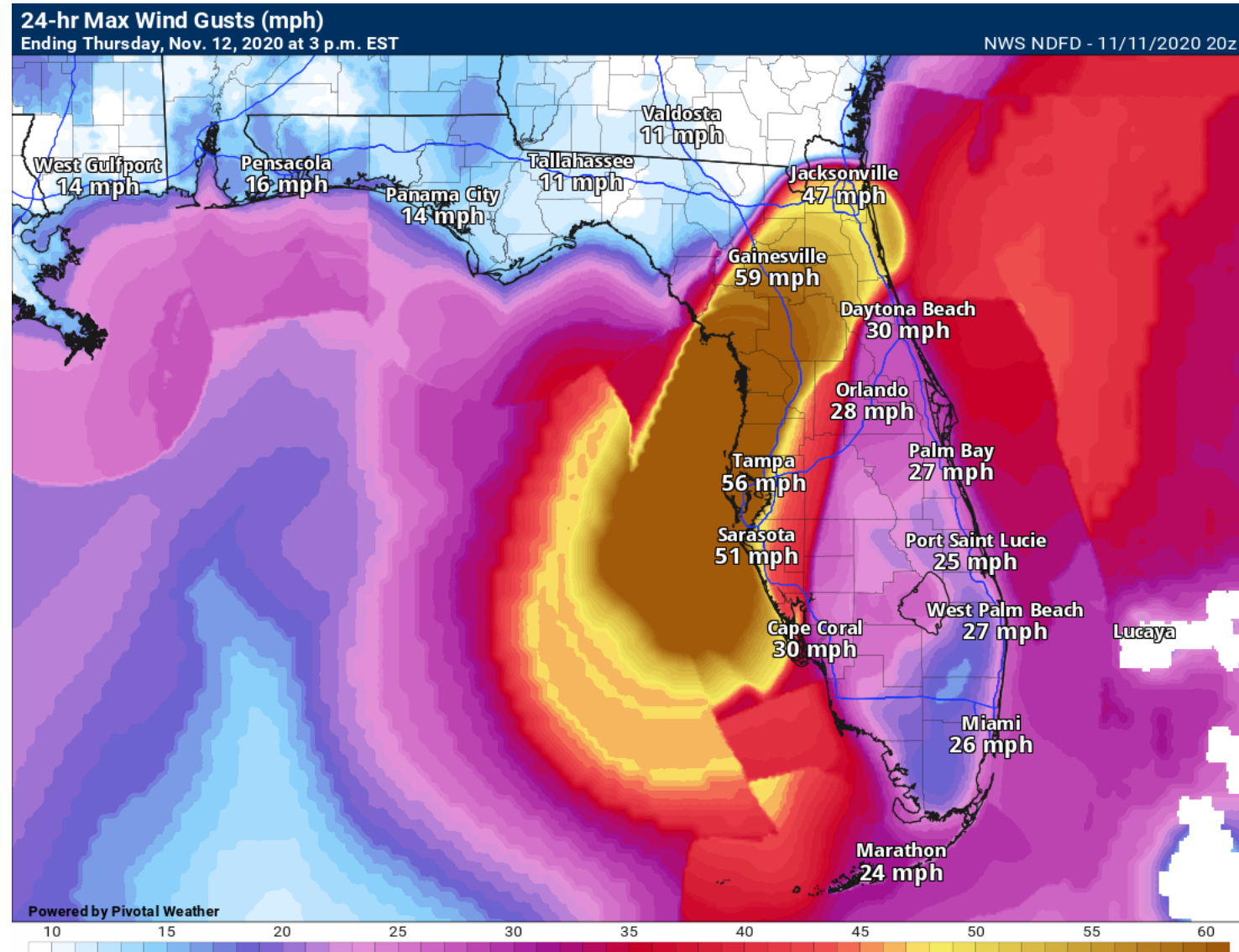


# Maximum Wind Gusts

## Next 24 Hours

Gusts of 50-70 mph are possible near Tampa Bay, along the Nature Coast, and across to North Central Florida.

Wind gusts of 35-50 mph will remain possible along coastal Southwest Florida and in Northeast Florida.





# Wind Watches and Warnings

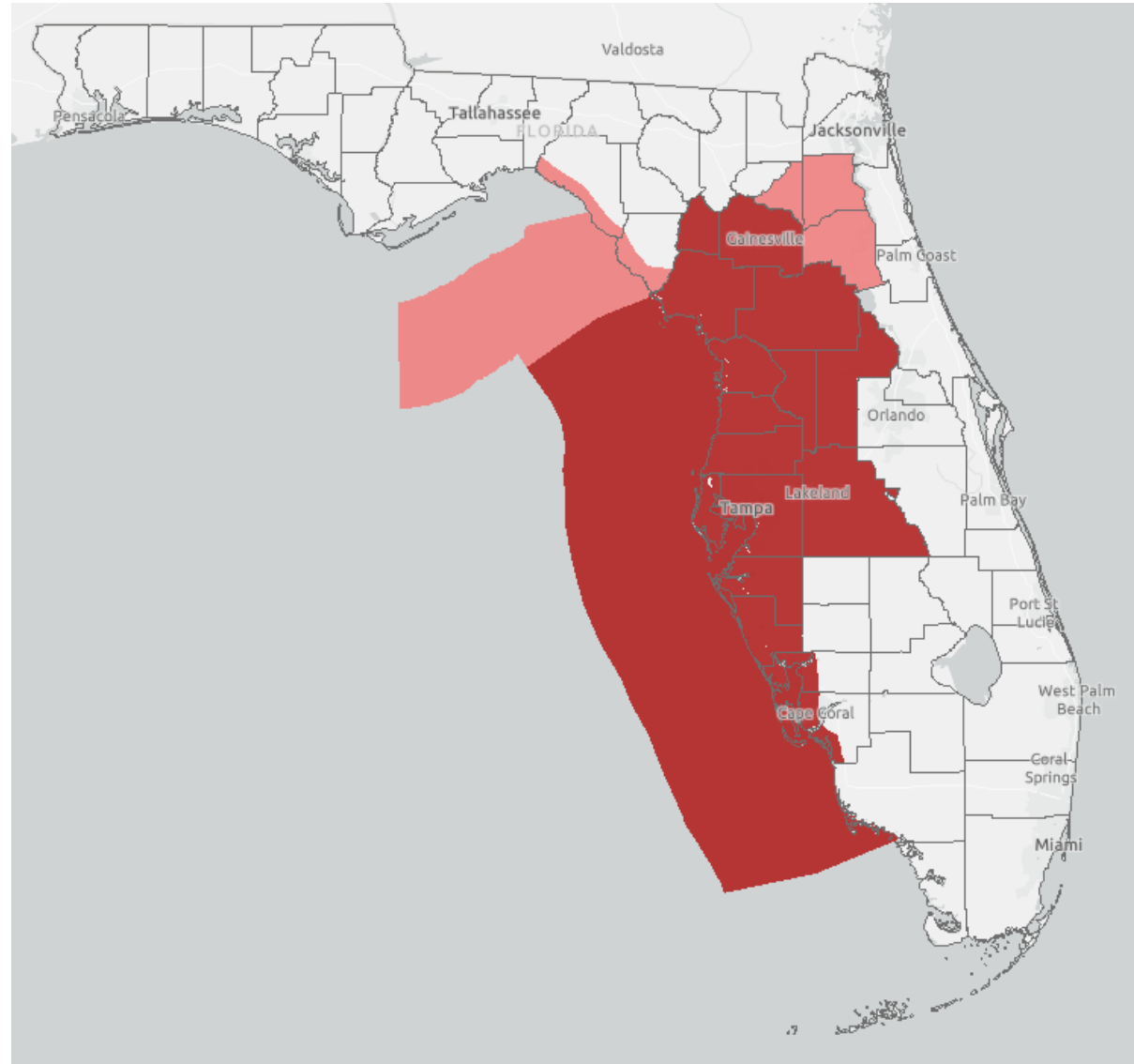
In Effect Until Further Notice

## Tropical Storm Warnings:

Gilchrist, Alachua, Levy, Marion, Citrus, Hernando, Pasco, Sumter, Lake, Pinellas, Hillsborough, Polk, Manatee, Sarasota, coastal Charlotte, coastal Lee

## Tropical Storm Watch

Coastal Taylor, coastal Dixie, Bradford, Clay, Putnam





# 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



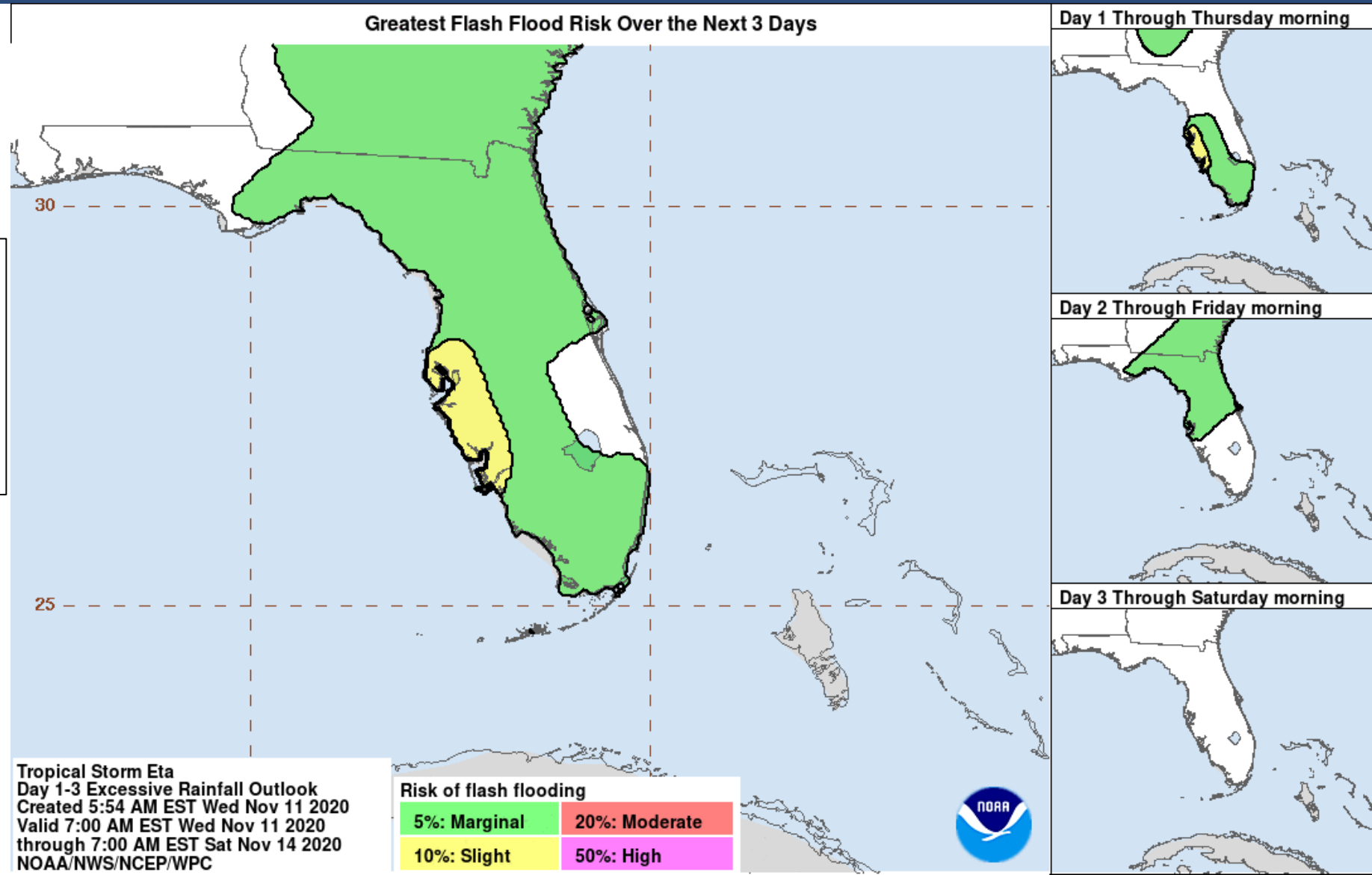
[weather.gov/mob](https://weather.gov/mob)



# Flash Flood Outlook

## 3-Day Event Summary

Isolated flash flooding remains possible over much of the Peninsula through tomorrow as heavy rain bands move through.





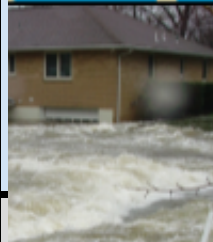




# Flash Flood Risk Categories

## Understanding the Weather Prediction Center Risk Scale

### Understanding WPC Excessive Rainfall Risk Categories

<div>No Area/Label</div> <div>Flash floods are generally not expected.</div> <div><a href="http://www.wpc.ncep.noaa.gov">www.wpc.ncep.noaa.gov</a> @NWSWPC</div>	<div>MARGINAL (MRGL)</div> <div>Isolated flash floods possible</div> <div>Localized and primarily affecting places that can experience rapid runoff with heavy rainfall.</div>	<div>SLIGHT (SLGT)</div> <div>Scattered flash floods possible</div> <div>Mainly localized. Most vulnerable are urban areas, roads, small streams and washes. Isolated significant flash floods possible.</div>	<div>MODERATE (MDT)</div> <div>Numerous flash floods likely</div> <div>Numerous flash flooding events with significant events possible. Many streams may flood, potentially affecting larger rivers.</div>	<div>HIGH (HIGH)</div> <div>Widespread flash floods expected</div> <div>Severe, widespread flash flooding. Areas that don't normally experience flash flooding, could. Lives and property in greater danger.</div>
<div>Flash flooding near me?</div> <div>Flash Flooding</div> <div>NO Flash Flooding</div>				
<div> WEATHER PREDICTION CENTER</div> <div></div>	<div>Risk of rainfall exceeding flash flood guidance within 25 miles of a point to the right of a line</div> <div>HIGH: &gt; 50%SLGT: 10%-20%</div> <div>MDT: 20%-50%MRGL: 5%-10%</div>			<div></div>



# Flood Watches

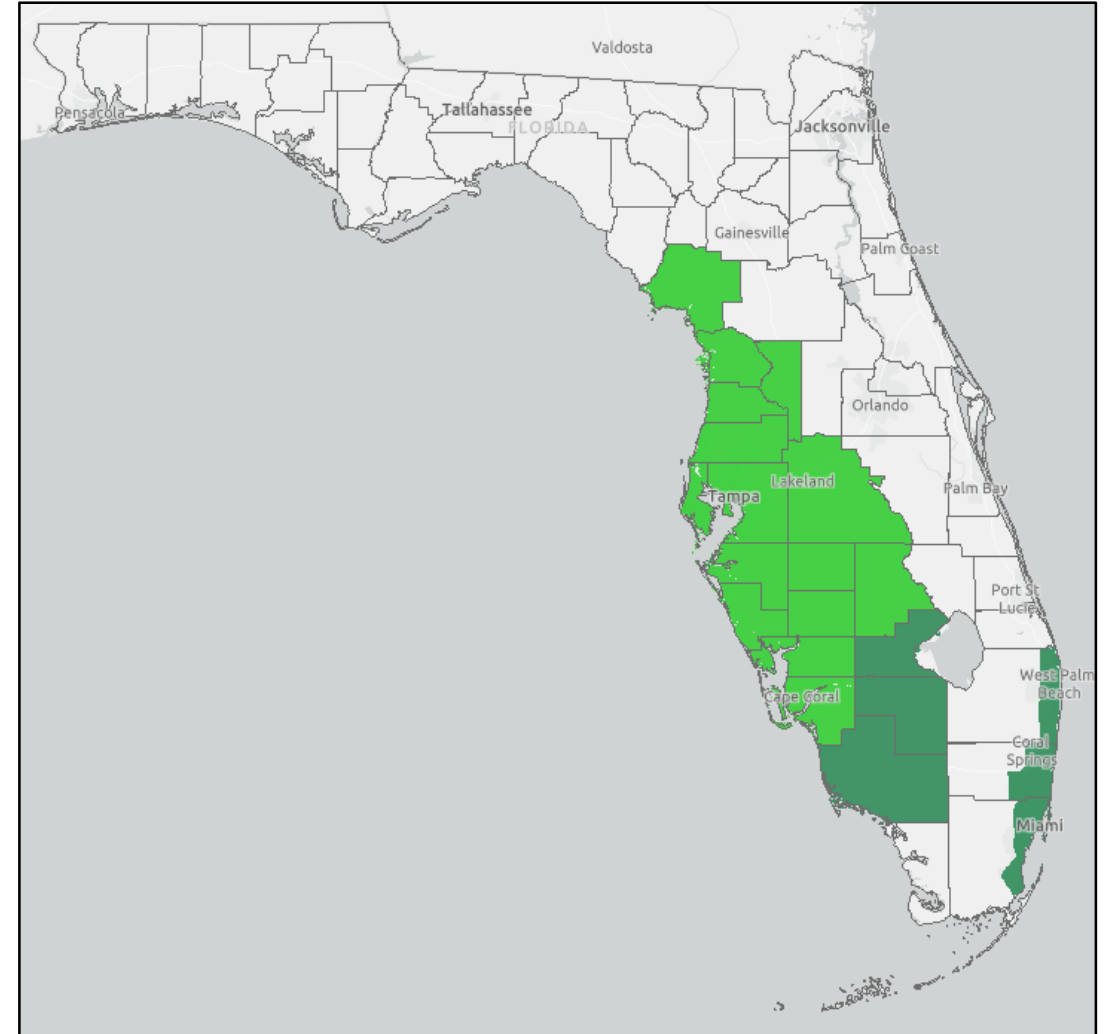
Links: [NWS Miami](#) | [NWS Tampa Bay](#)

## **Flash Flood Watch until Friday afternoon:**

Levy, Citrus, Hernando, Pasco, Sumter,  
Pinellas, Hillsborough, Polk, Manatee,  
Sarasota, Hardee, DeSoto, Highlands,  
Charlotte, Lee

## **Flood Watch until Thursday evening:**

Glades, Hendry, Collier, coastal Palm  
Beach, coastal Broward, coastal Miami-  
Dade





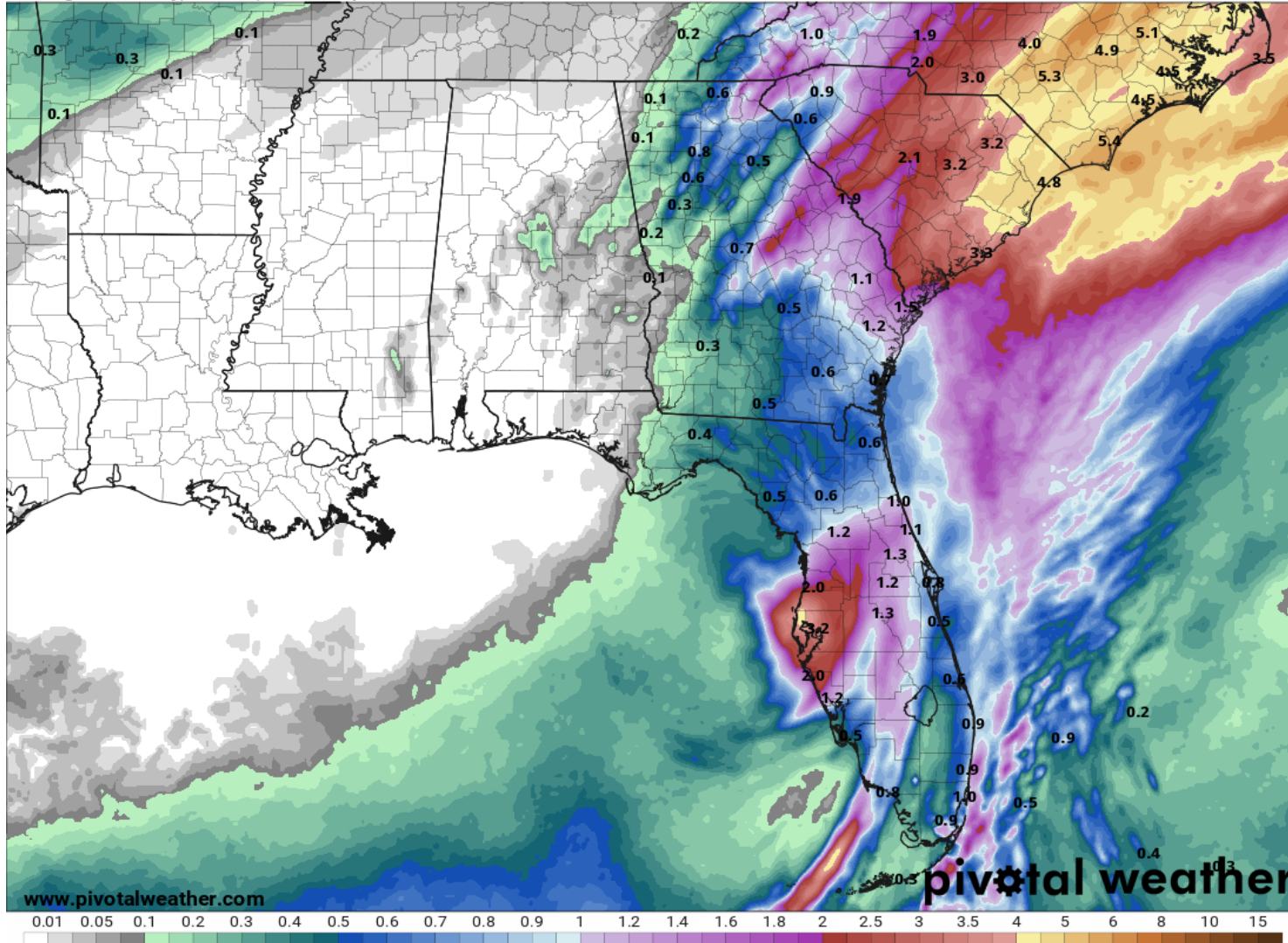
# Rainfall Totals Next 7 Days

Ending 7 PM ET Wednesday

7-Day Precipitation (in)

Ending Wednesday, Nov. 18, 2020 at 7 p.m. EST

Init: Thu 2020-11-12 00z WPC



Rainfall totals will generally be around 2-4" along the West Coast and Southwest Florida with localized totals of 6" possible.

Rainfall totals near 1" are possible in Northeast, East-Central, and South Florida. In South Florida, this could be enough to exacerbate flood concerns.

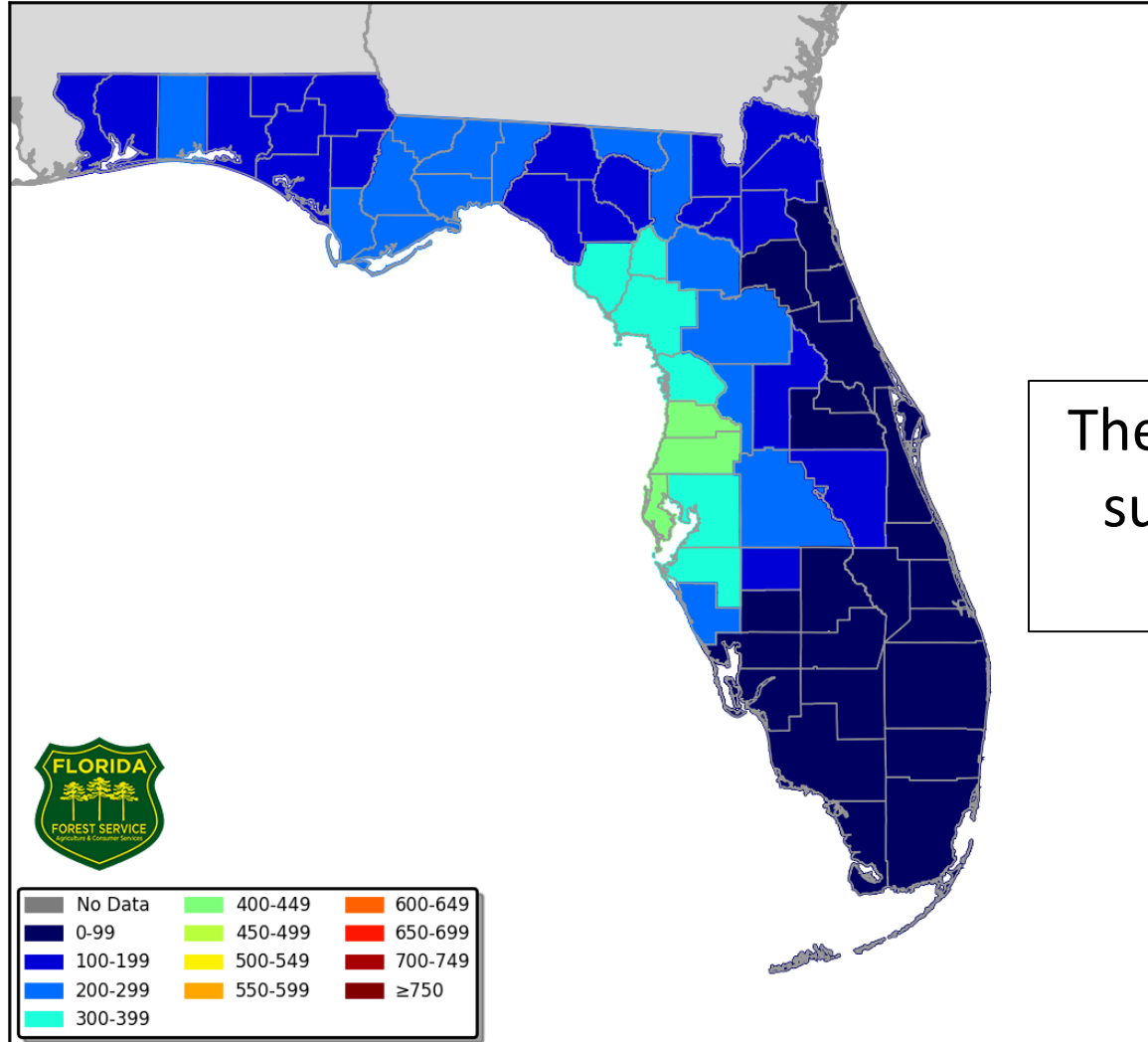




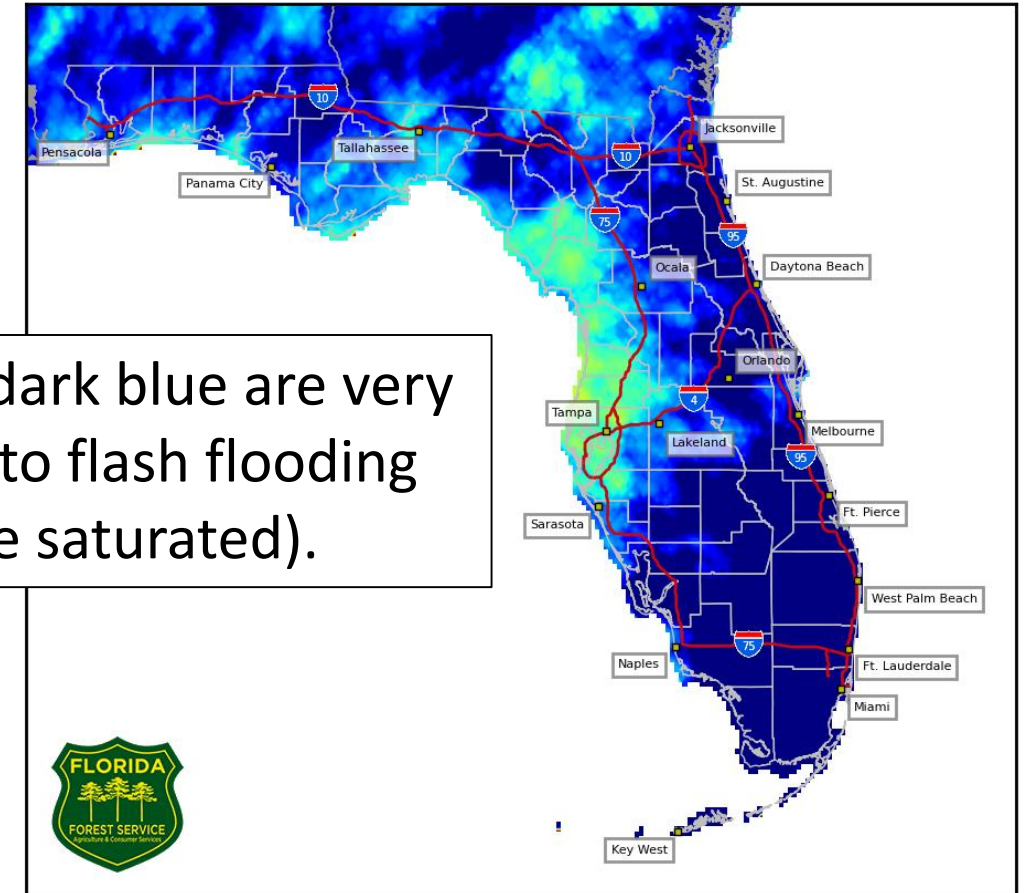
# Drought Index – Soil Moisture

KBDI – Full Report from the FFS

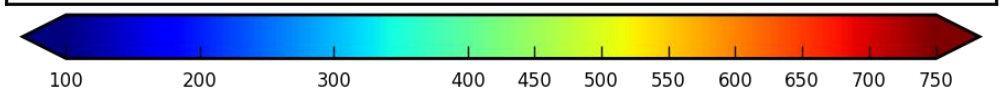
Keetch Byram Drought Index (KBDI)  
County Averages for November 11, 2020



4 km Resolution KBDI  
Statewide  
November 11, 2020



The areas in dark blue are very susceptible to flash flooding (soils are saturated).

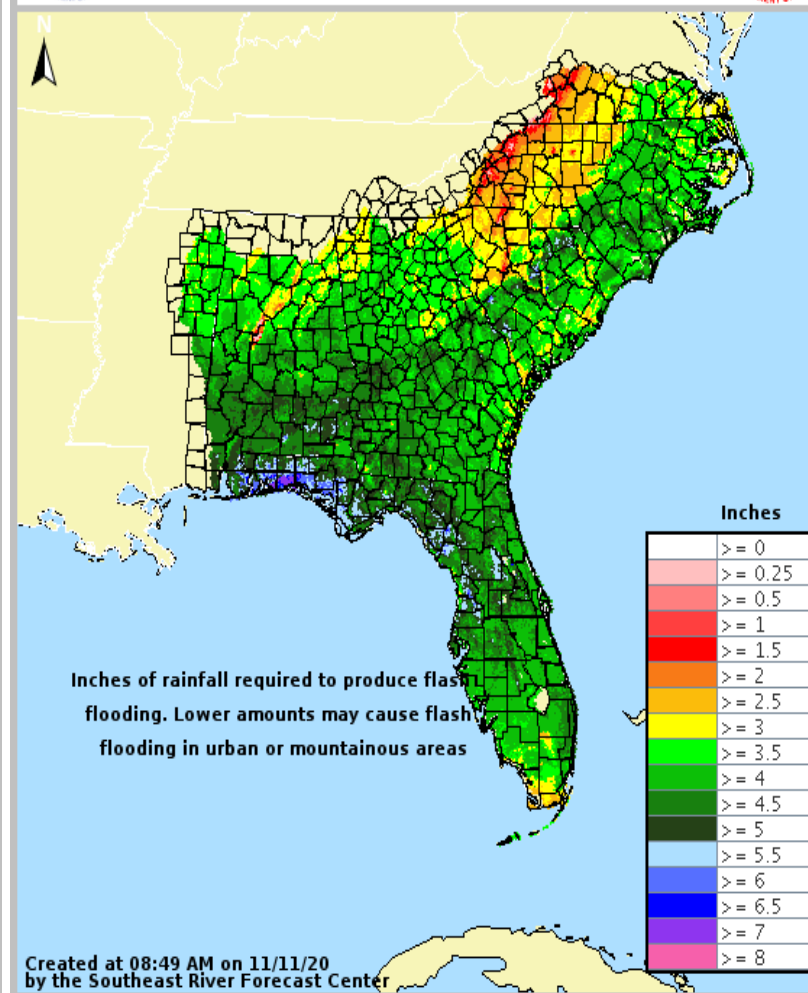
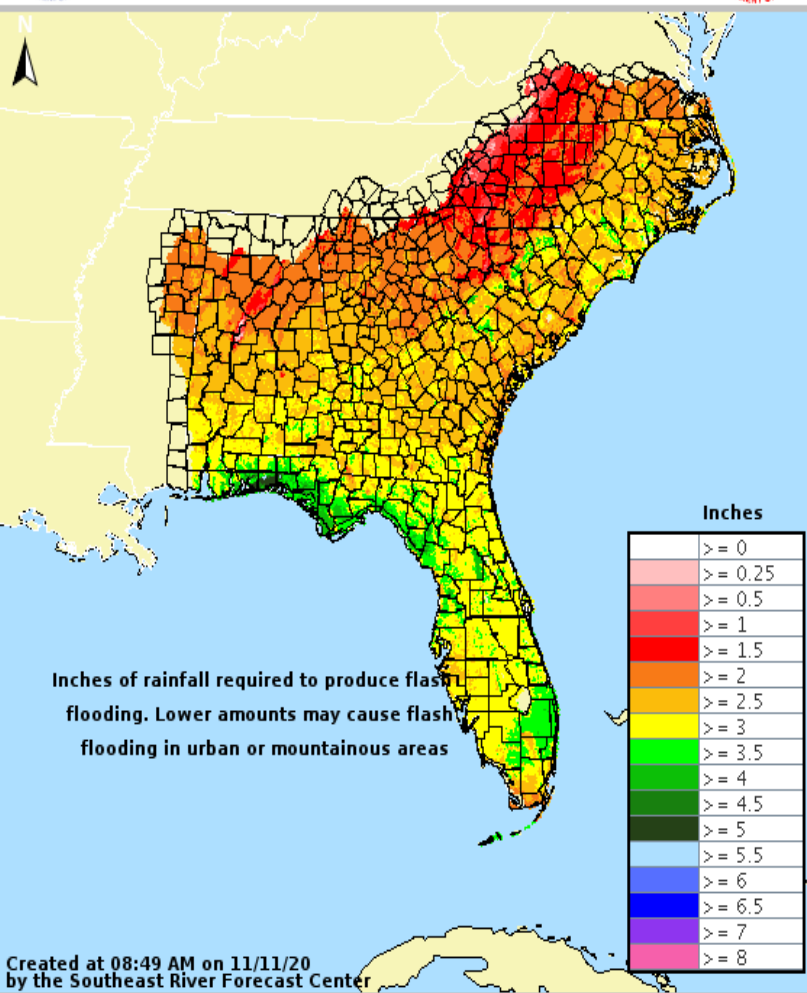


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# Flash Flood Guidance

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



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

**It will only take about 1-2" of rain in an hour in parts of Broward, Miami-Dade, and Monroe Counties to create flash flooding.**

Along the West Coast, it will take about 3-4" of rain in 1 hour or 5-6" in 6 hours to cause flash flooding.



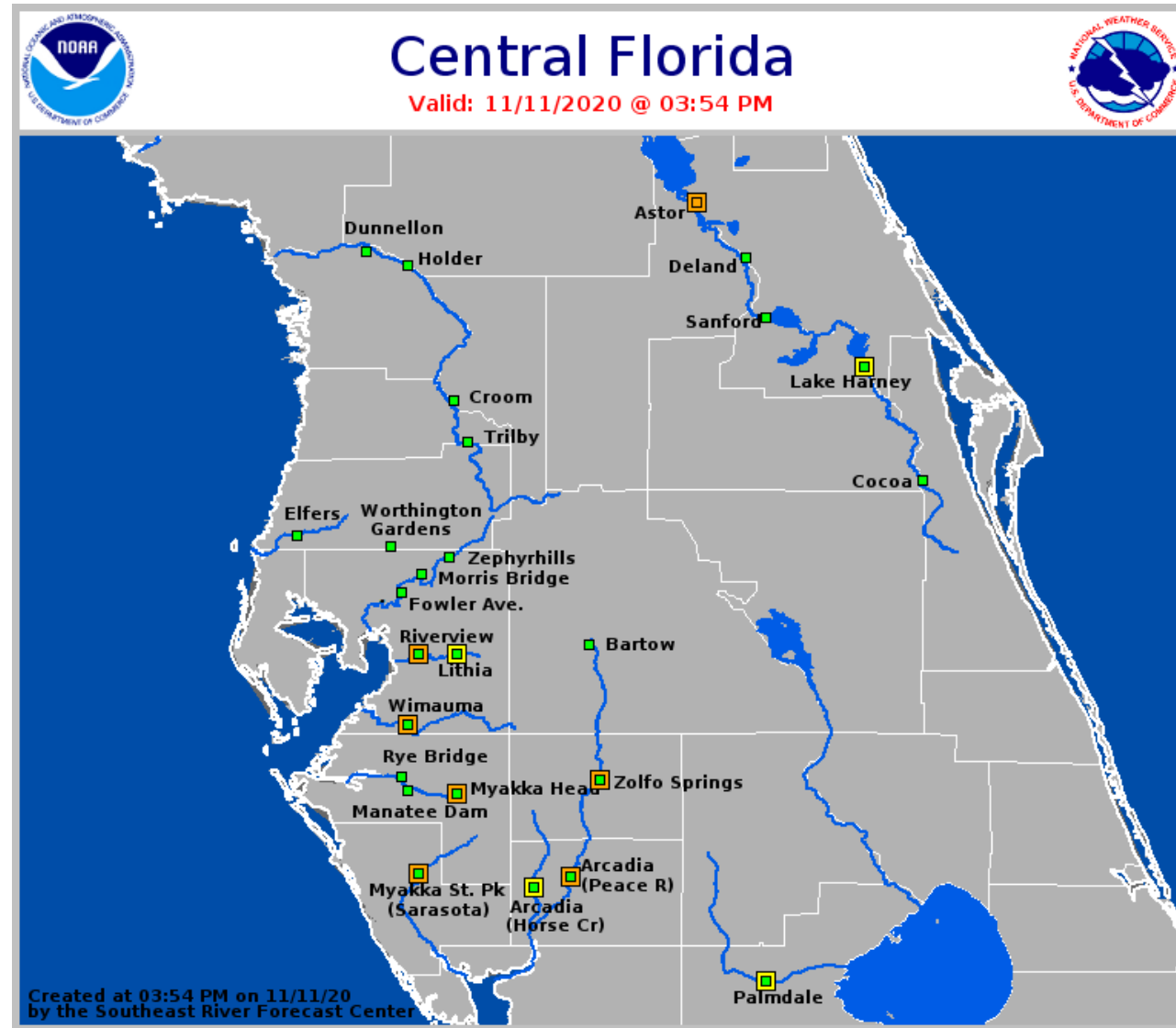
# Current & Forecast River Flooding

## Central Florida – Southeast River Forecast Center

### Rivers Currently in or Forecast to Reach Flood Stage:

River	Forecast Stage	Tendency
<a href="#">St. Johns River at Astor</a>	Minor	Steady
<a href="#">Alafia River at Riverview</a>	Minor	Rising
<a href="#">Little Manatee River at Wimauma</a>	Minor	Rising
<a href="#">Manatee River near Myakka Head</a>	Minor	Rising
<a href="#">Myakka River at Myakka River State Park</a>	Minor	Rising
<a href="#">Peace River at Zolfo Springs</a>	Minor	Rising
<a href="#">Peace River at Arcadia</a>	Minor	Rising

More details on river levels available at the [Southeast River Forecast Center website.](#)







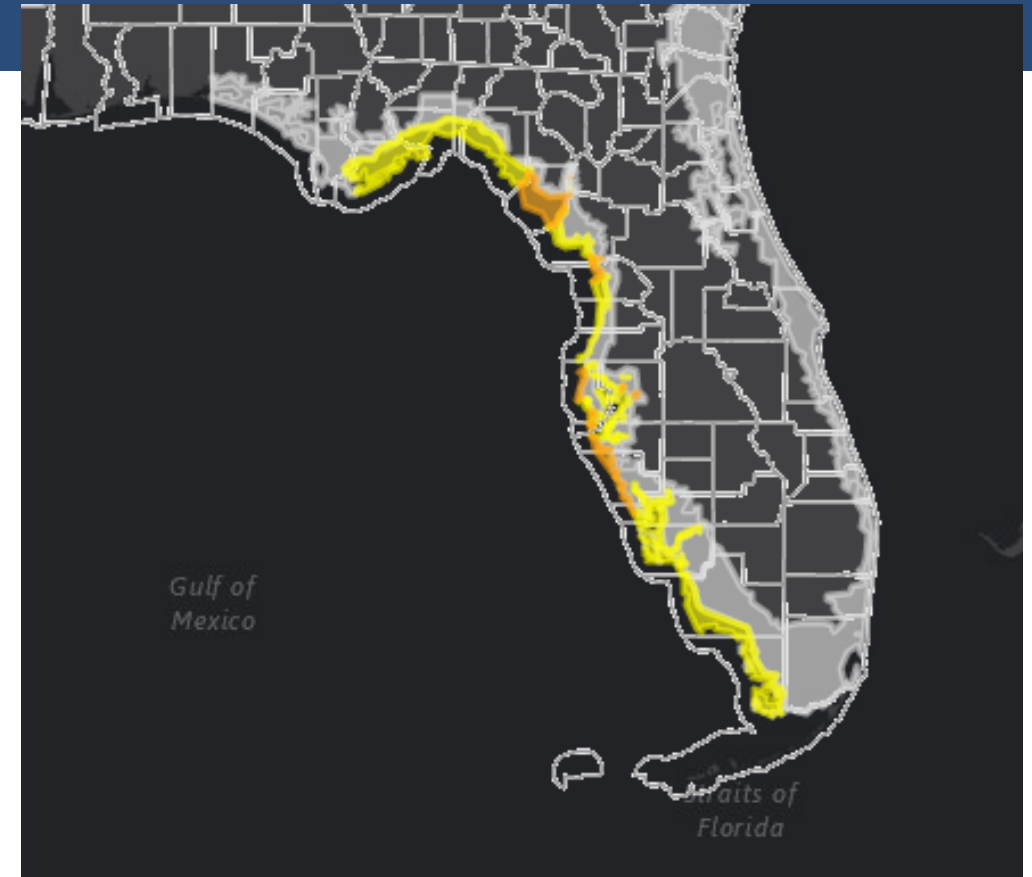
# Storm Surge Threat Overview

## Tropical Storm Eta

Pockets of storm surge greater than 3' are possible in the normally flood-prone areas (orange). Most of the Big Bend and West Coast will generally see storm surge around 1-2'

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

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

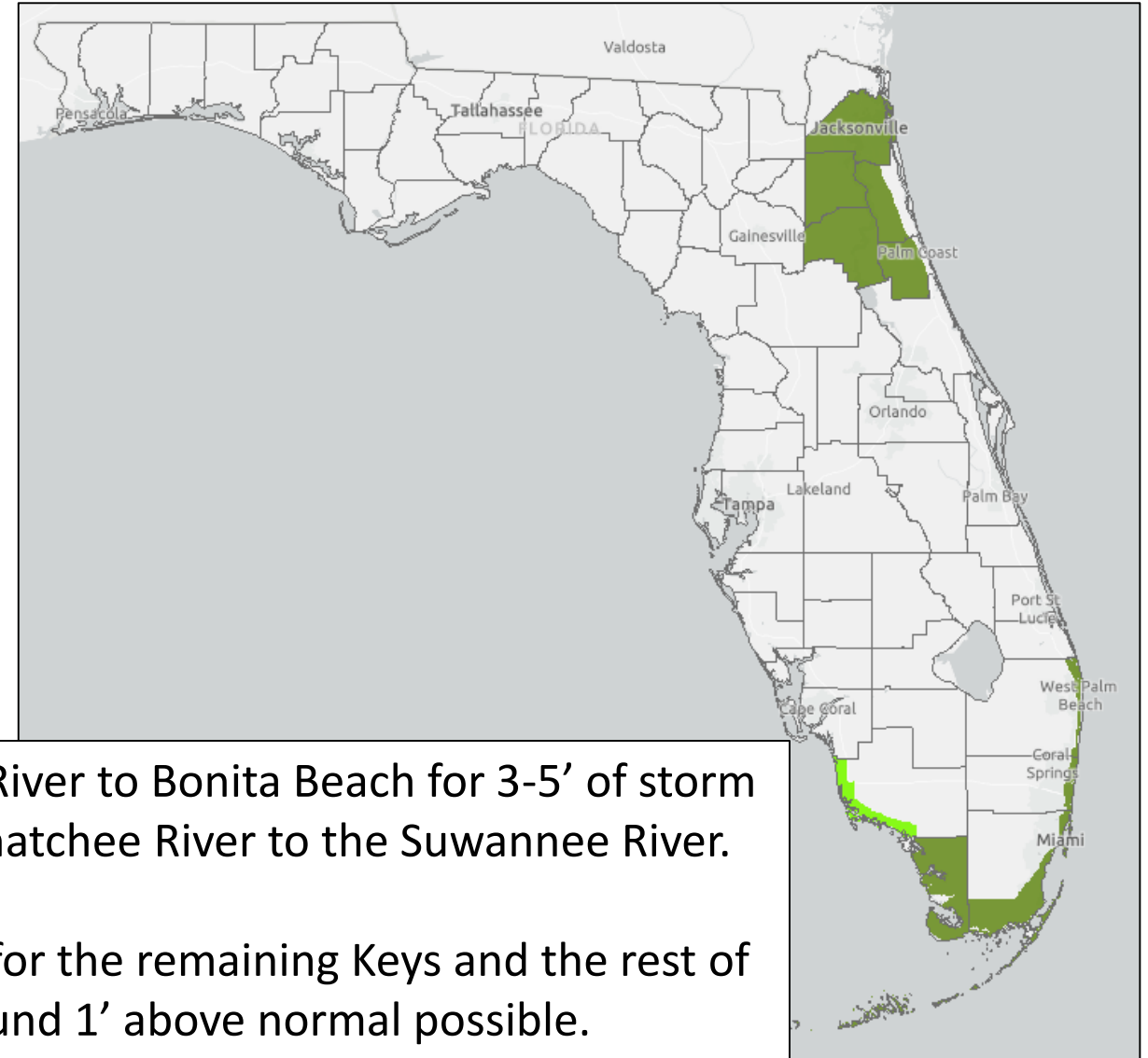
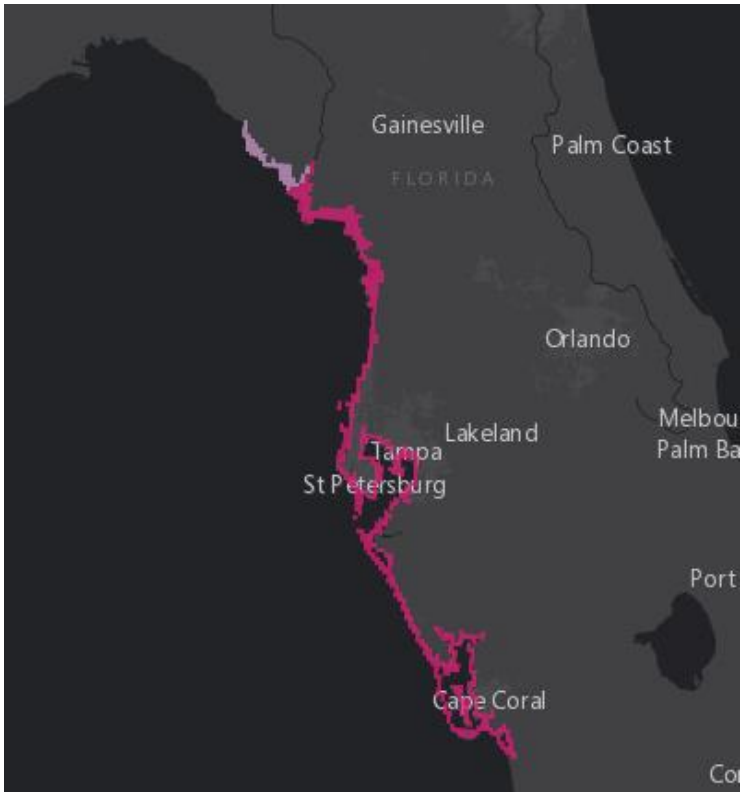
Potential for storm surge flooding greater than 1 ft above ground

Little to no storm surge flooding



# Coastal Flood/Storm Surge Alerts

## Tropical Storm Eta



**Storm Surge Warnings** are in effect from the Suwannee River to Bonita Beach for 3-5' of storm surge. **Storm Surge Watches** are in effect from the Steinatchee River to the Suwannee River.

**Coastal Flood Advisories & Statements** remain in effect for the remaining Keys and the rest of Northeast Florida including the St. Johns River. Tides around 1' above normal possible.

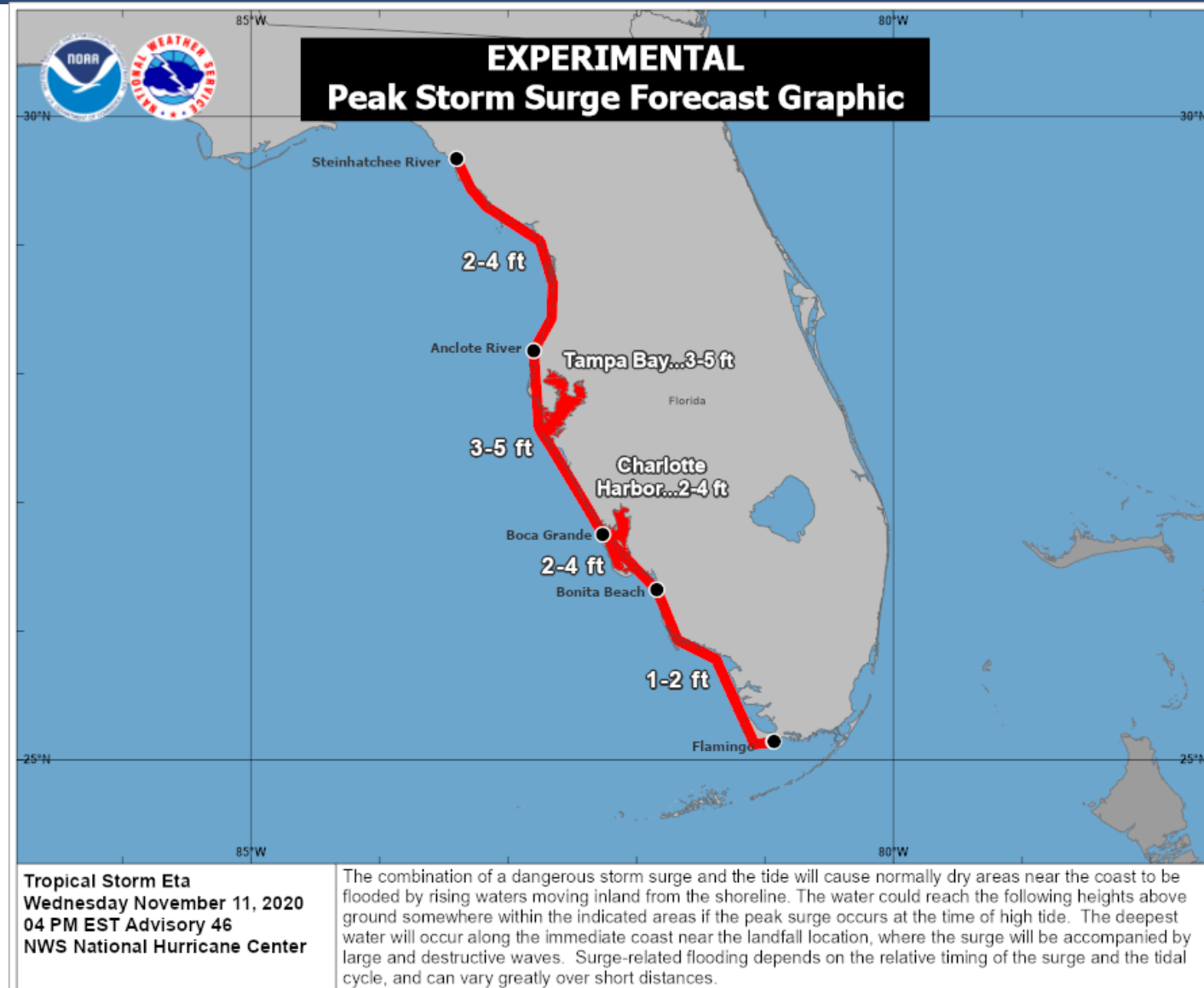


# Storm Surge/Coastal Flooding

## Tropical Storm Eta

The highest storm surge will be from the Anclote River to Boca Grande, including Tampa Bay, where 3-5' of storm surge is possible.

2-4' of storm surge is possible from the Steinhatchee River to Bonita Beach, including Charlotte Harbor. 1-2' of storm surge is possible across far Southwest Florida.

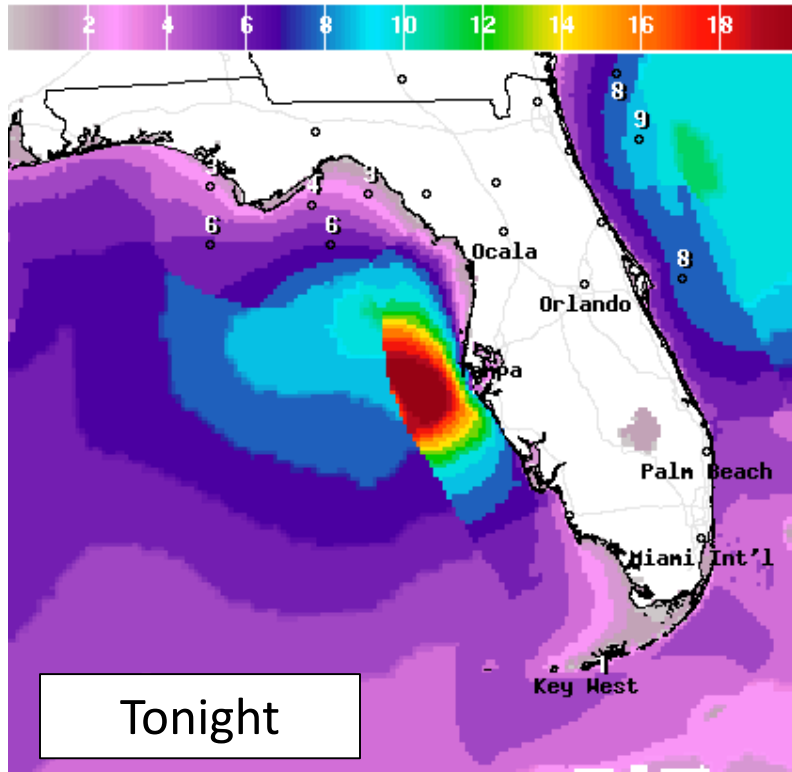






# Forecast Wave Heights

## Through Late Week

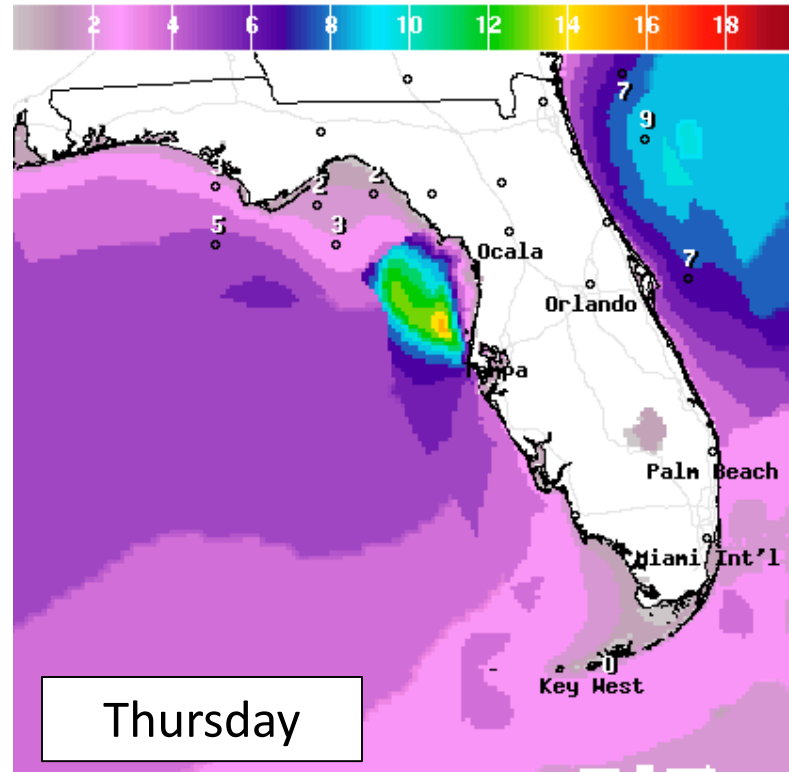


Wave Height(ft) Ending Thu Nov 12 2020 7AM EST  
(Thu Nov 12 2020 12Z)



National Digital Forecast Database

19z issuance Graphic created-Nov 11 2:27PM EST

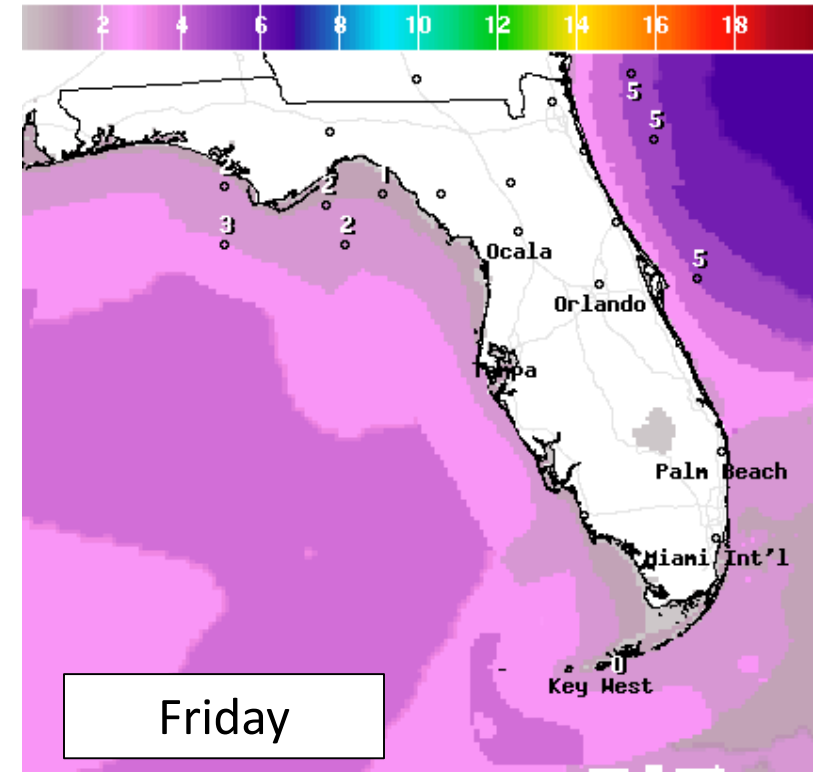


Wave Height(ft) Ending Thu Nov 12 2020 7PM EST  
(Fri Nov 13 2020 00Z)



National Digital Forecast Database

19z issuance Graphic created-Nov 11 2:27PM EST



Wave Height(ft) Ending Fri Nov 13 2020 7PM EST  
(Sat Nov 14 2020 00Z)



National Digital Forecast Database

14z issuance Graphic created-Nov 11 9:28AM EST



Surf will build through today along the West Coast and will subside Thursday into Friday as Eta moves across Northeast Florida into the Atlantic. Significant beach erosion and possible dune overwash may occur along the West Coast. Swells will remain into late week, which could result in dangerous rip currents for several days.



# Tornado Watch

In Effect Until 5 PM ET



Counties: Pinellas, Hillsborough, Manatee, Sarasota, Hardee, DeSoto, Charlotte, Lee, Collier

Additional watches could be needed farther north across parts of Tampa Bay and Nature Coast.



**Tornado Watch # 507 - Valid from 800 AM until 500 PM EST**



# Severe Weather Outlook Today

From the Storm Prediction Center



Isolated tornadoes will be possible across Central and Southwest Florida in some of the outer bands. There is a **Marginal to Slight Risk** (level 1-2 of 5) of Severe Weather.






# Severe Thunderstorm Risk Categories

## Understanding the Storm Prediction Center Risk Scale

### Understanding Severe Thunderstorm Risk Categories

THUNDERSTORMS (no label)	1 - MARGINAL (MRGL)	2 - SLIGHT (SLGT)	3 - ENHANCED (ENH)	4 - MODERATE (MDT)	5 - HIGH (HIGH)
No severe* thunderstorms expected	Isolated severe thunderstorms possible	Scattered severe storms possible	Numerous severe storms possible	Widespread severe storms likely	Widespread severe storms expected
Lightning/flooding threats exist with <u>all</u> thunderstorms	Limited in duration and/or coverage and/or intensity	Short-lived and/or not widespread, isolated intense storms possible	More persistent and/or widespread, a few intense	Long-lived, widespread and intense	Long-lived, very widespread and particularly intense
					

\* NWS defines a severe thunderstorm as measured wind gusts to at least 58 mph, and/or hail to at least one inch in diameter, and/or a tornado. All thunderstorm categories imply lightning and the potential for flooding. Categories are also tied to the probability of a severe weather event within 25 miles of your location.



National Weather Service

[www.spc.noaa.gov](http://www.spc.noaa.gov)



**Thunderstorms  
(no label)** No severe\* thunderstorms expected  
Lightning/flooding threat exists with all thunderstorms  
Winds to 40 mph and small hail possible



**1 Marginal Risk  
(MRGL)** *Isolated severe thunderstorms possible*  
Limited in duration and/or coverage and/or intensity  
Wind to 40-60 mph, hail up to 1", and low tornado risk



**2 Slight Risk  
(SLGT)** *Scattered severe storms possible*  
Short-lived and/or not widespread, isolated  
intense storms  
One or two tornadoes  
Reports of strong winds and wind damage  
Hail ~1", isolated 2"



**3 Enhanced Risk  
(ENH)** *Numerous severe storms possible*  
More persistent and/or widespread, a few intense  
A few tornadoes  
Several wind damage reports  
Damaging hail, 1"-2"



**4 Moderate Risk  
(MDT)** *Widespread severe storms likely*  
Long-lived, widespread and intense  
Strong tornadoes  
Widespread wind damage  
Destructive hail, 2" or greater



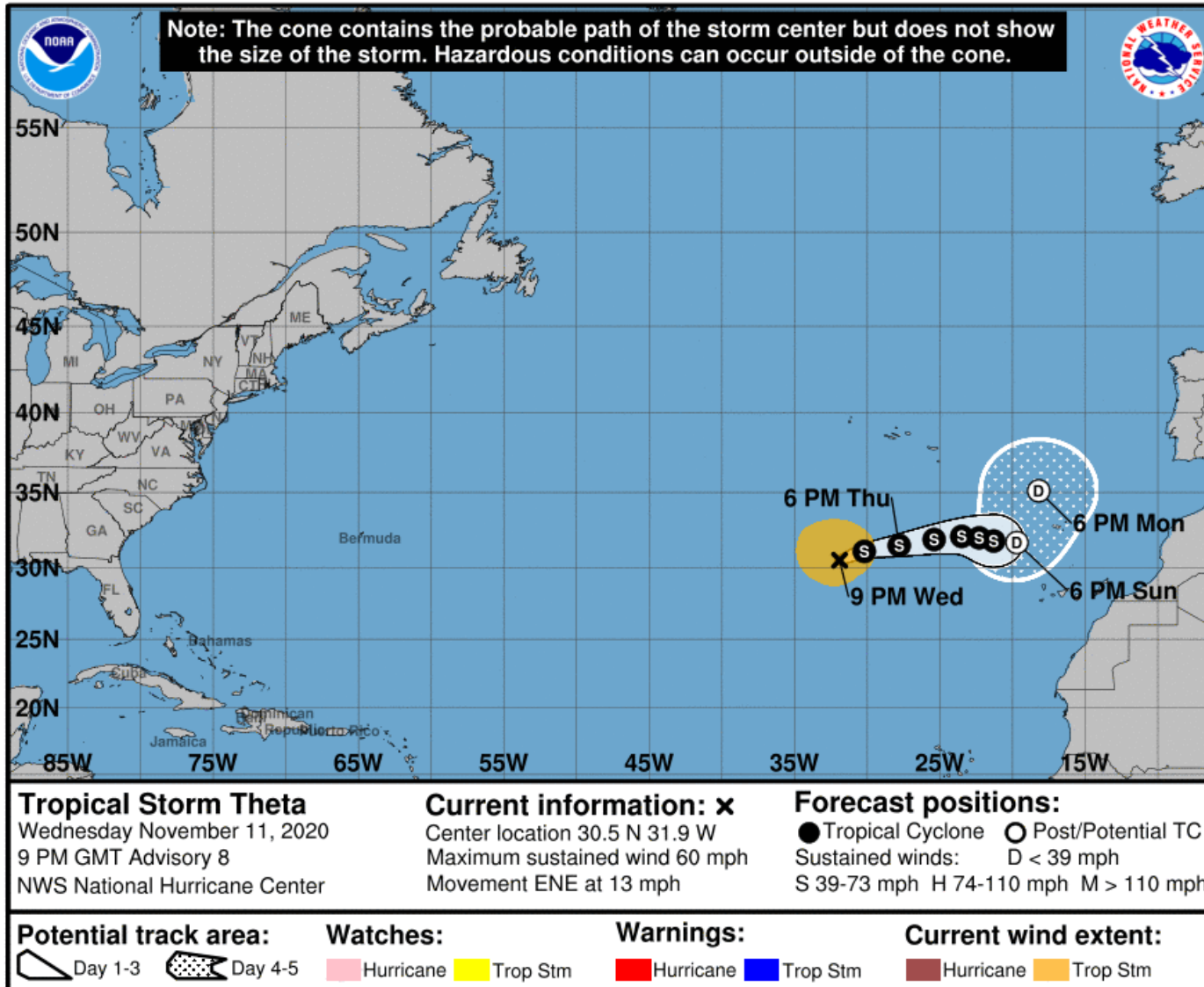
**5 High Risk  
(HIGH)** *Widespread severe storms expected*  
Long-lived, very widespread and particularly intense  
Tornado outbreak  
Derecho





# Official Forecast Track

From the National Hurricane Center – Tropical Storm Theta



Theta is weakening slightly from yesterday's peak at 70 mph. This system poses no threat to land as it continues eastward over the open northeast Atlantic.



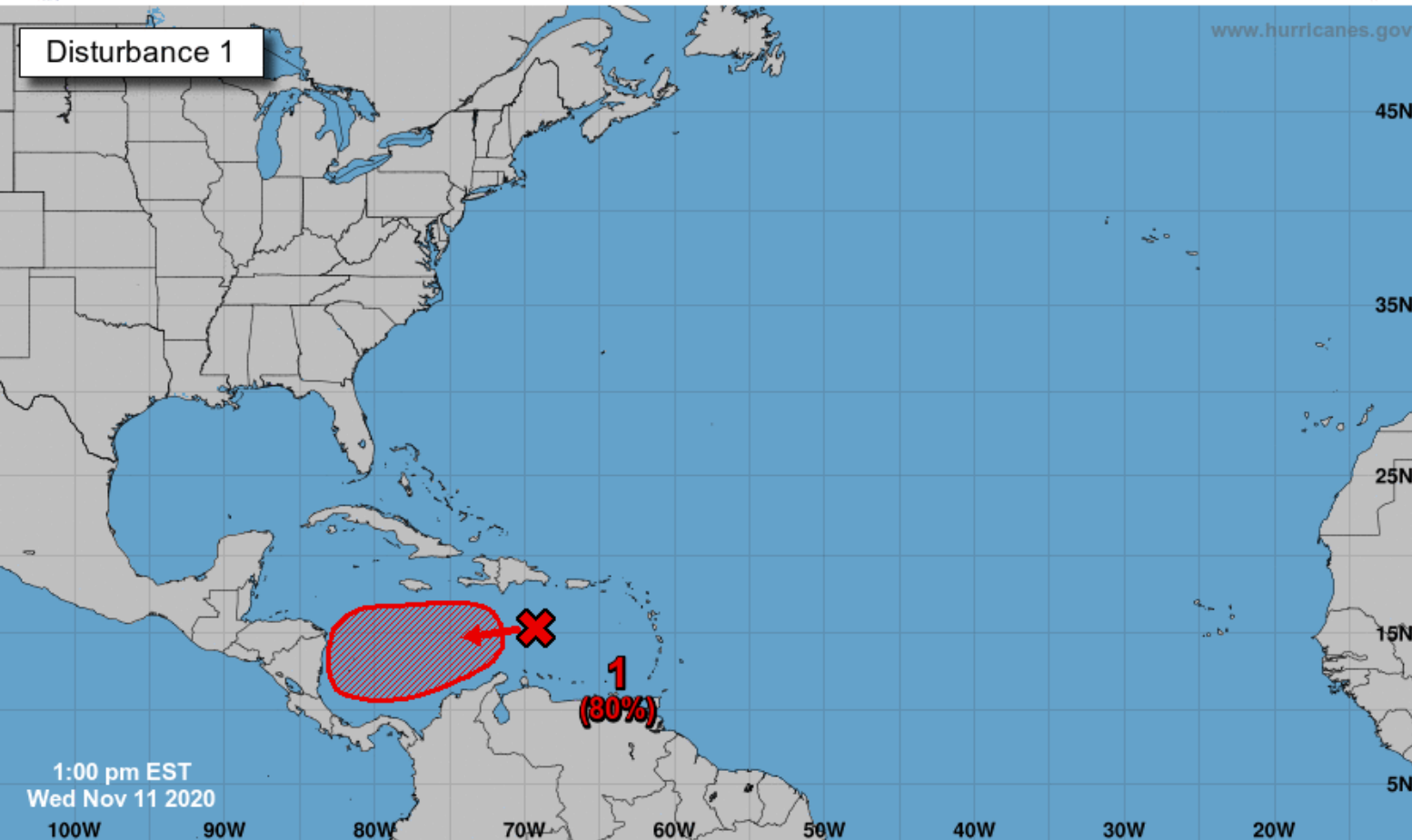
# Tropical Weather Outlook

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



## Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



A tropical wave located over the east-central Caribbean Sea is producing a large area of disorganized showers and thunderstorms.

This wave is expected to move slowly westward into more conducive environmental conditions over the next several days, and a tropical depression is likely to form late this week or this weekend when the disturbance reaches the central or western Caribbean Sea.

**This system is not expected to bring impacts to Florida over the next 7 days, if at all.**

**\*Formation chance through 48 hrs...low...30%.**

**\*Formation chance through 5 days...high...80%.**

Current Disturbances and Five-Day Cyclone Formation Chance:   
 Tropical or Sub-Tropical Cyclone:   
    < 40%    40-60%    > 60%   
    Depression    Storm    Hurricane   
    Post-Tropical Cyclone or Remnants





# Overall Summary

## **Tropical Storm Eta**

- The center of Tropical Storm Eta is about 65 miles west-southwest of St. Petersburg, moving north at 12 mph.
- Maximum sustained winds are near 70 mph, and gradual weakening is forecast until landfall. However, Eta will likely be a strong tropical storm at landfall. Impacts extend well north and east of the center.
- Eta will move across North-Central and Northeast Florida through tonight and Thursday morning, then offshore of Northeast Florida Thursday afternoon.
- Rapid weakening is forecast as Eta moves inland and into the Atlantic.

## **Tropical Storm Theta**

- Theta poses no threat to land as it moves over the open Atlantic.

## **Invest 98L - Caribbean Wave**

- A tropical wave located over the eastern Caribbean Sea is producing disorganized showers and thunderstorms.
- The wave is expected to move westward into more conducive environmental conditions over the next several days, and a tropical depression is likely to form late this week or this weekend when the wave reaches the central/western Caribbean Sea.
- This system has a 30% (low) chance of formation during the next 48 hours but a 80% (high) chance during the next 5 days.
- This system is not expected to bring impacts to Florida over the next 7 days, if at all.
- The next name on the list is Iota (eye-o-tah)



# Florida Outlook

## Florida Outlook:

- **Storm Surge Warnings:** Levy, Citrus, Hernando, Pasco, Pinellas, Hillsborough, Manatee, Sarasota, Charlotte, Lee
- **Storm Surge Watches:** Dixie
- **Coastal Flood Advisories/Statements:** Duval, Clay, Putnam, inland St. Johns, inland Flagler, Collier, Monroe (Keys and Mainland), Miami-Dade, Broward, Palm Beach
- **Tropical Storm Warnings:** Gilchrist, Alachua, Levy, Marion, Citrus, Hernando, Pasco, Sumter, Lake, Pinellas, Hillsborough, Polk, Manatee, Sarasota, coastal Charlotte, coastal Lee
- **Tropical Storm Watches:** coastal Taylor, coastal Dixie, Bradford, Clay, Putnam
- **Flood/Flash Flood Watches:** Levy, Citrus, Hernando, Pasco, Sumter, Pinellas, Hillsborough, Polk, Manatee, Sarasota, Hardee, DeSoto, Highlands, Charlotte, Lee, Glades, Hendry, Collier, coastal Palm Beach, coastal Broward, and coastal Miami-Dade

- 
- Tropical-storm-force winds are ongoing across coastal parts of Southwest Florida as rain bands move onshore.
  - Tropical-storm-force winds will spread northward along the West Coast into this evening and tonight, and a couple hurricane-force gusts cannot be ruled out along the Nature Coast.
  - Sustained winds of 45-60 mph will be possible across much of the West Coast (west of I-75) with gusts of 60-70 mph. Heavy rainfall is possible across much of Central and South Florida where 2-6" of rainfall is expected.
  - Storm surge of 3-5' is expected from Anclote River to Boca Grande with 2-4' elsewhere along the West Coast.
  - Isolated tornadoes are also possible today across Central and Southwest Florida. A Tornado Watch is in effect until 5 PM for the Tampa Bay area and Southwest Florida. Additional watches may be needed this evening around Tampa Bay and the Nature Coast.

The next tropics packet will be issued Thursday morning. 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:

Cameron Young, Assistant State Meteorologist

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State Meteorological Support Unit

Florida Division of Emergency Management

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