



# TROPICAL UPDATE



11:00 AM EDT

Saturday, June 6, 2020

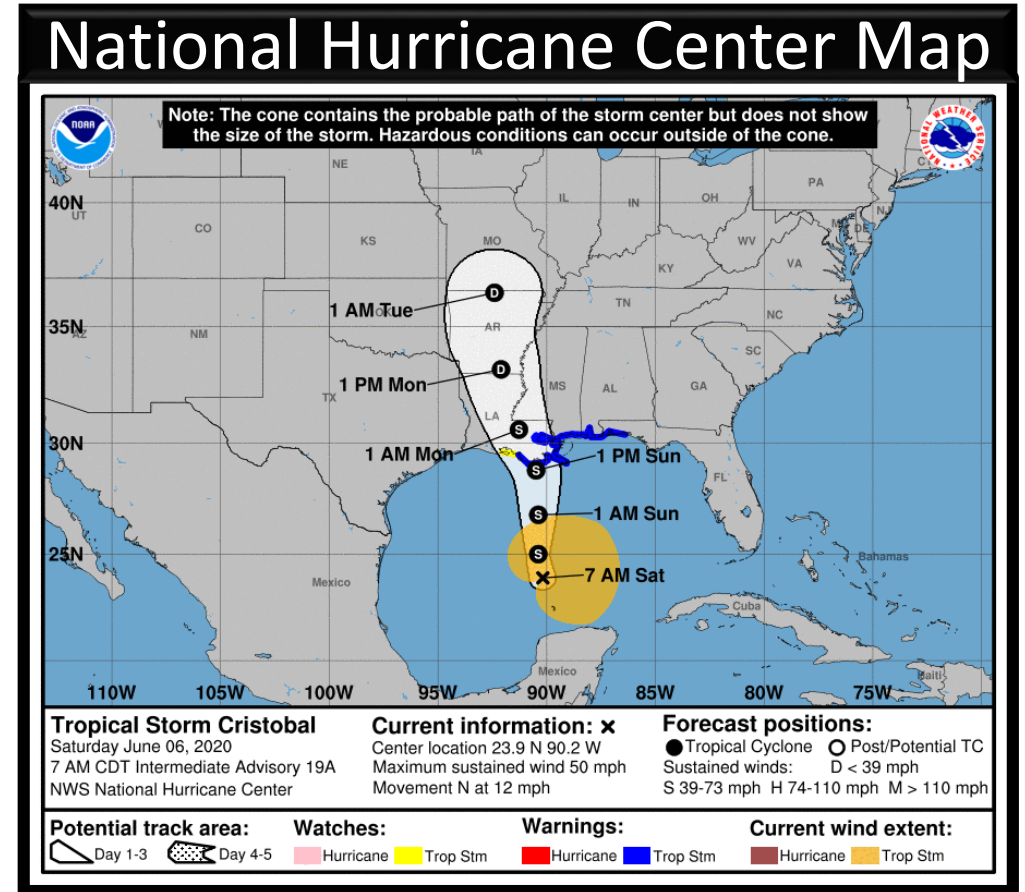
Tropical Storm Cristobal  
& Bermuda Low (20%)

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 Cristobal Saturday, June 6

	MINIMAL	Low	MODERATE	HIGH	EXTREME
 WINDS					
 STORM SURGE					
 FLASH FLOODING					
 TORNADOES					

	Low	MODERATE	HIGH
 RIP CURRENTS			



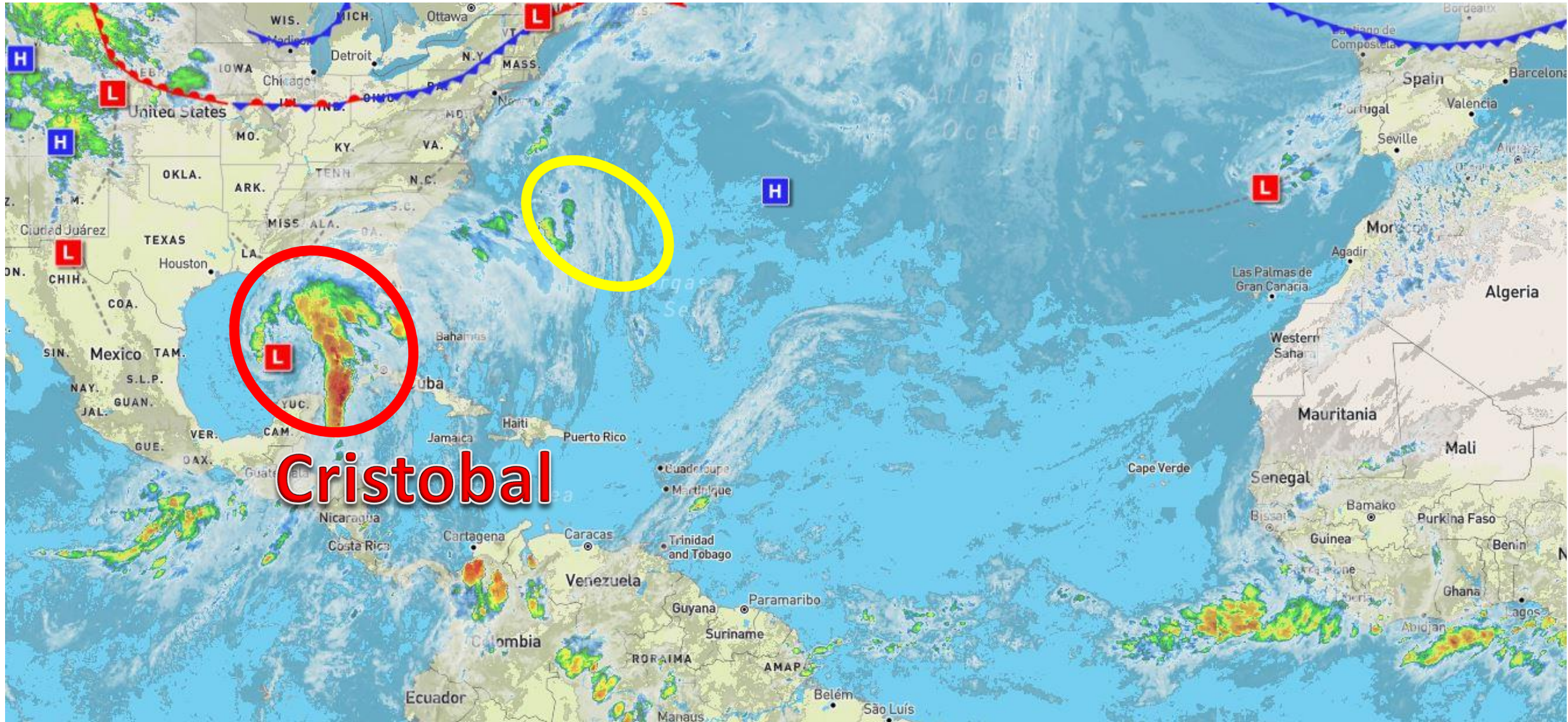
## Tropical Weather Overview:

The main threat from Cristobal continues to be heavy rainfall. Flash Flood Watches have been issued for the entire Panhandle and Big Bend starting tonight and lasting into Monday. The Storm Surge Watches have been cancelled for Florida. Otherwise, the forecast remains on track with breezy winds, isolated tornadoes, minor coastal flooding, and rip currents/beach erosion along the Gulf Coast.

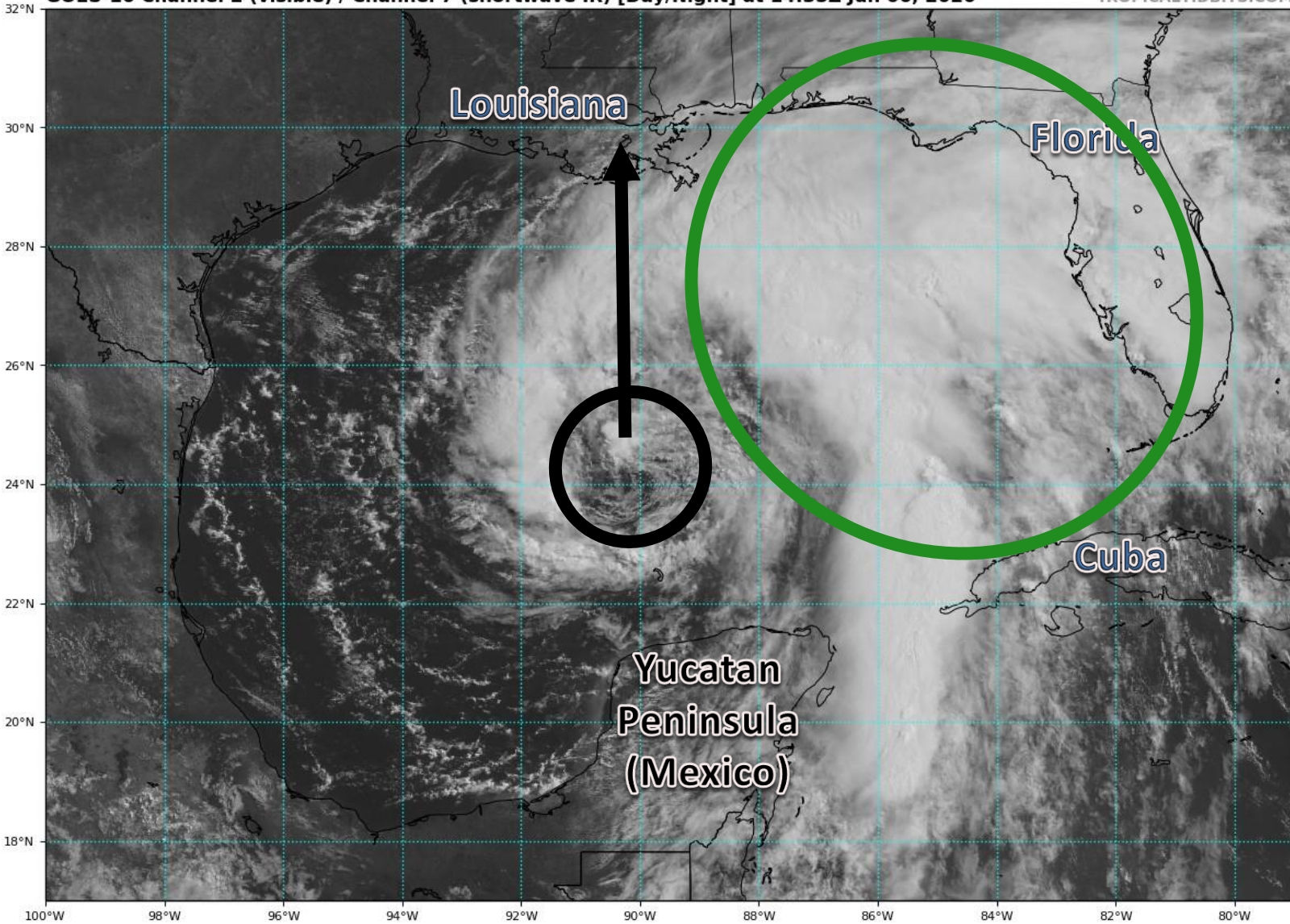


# Atlantic Basin Satellite Image

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



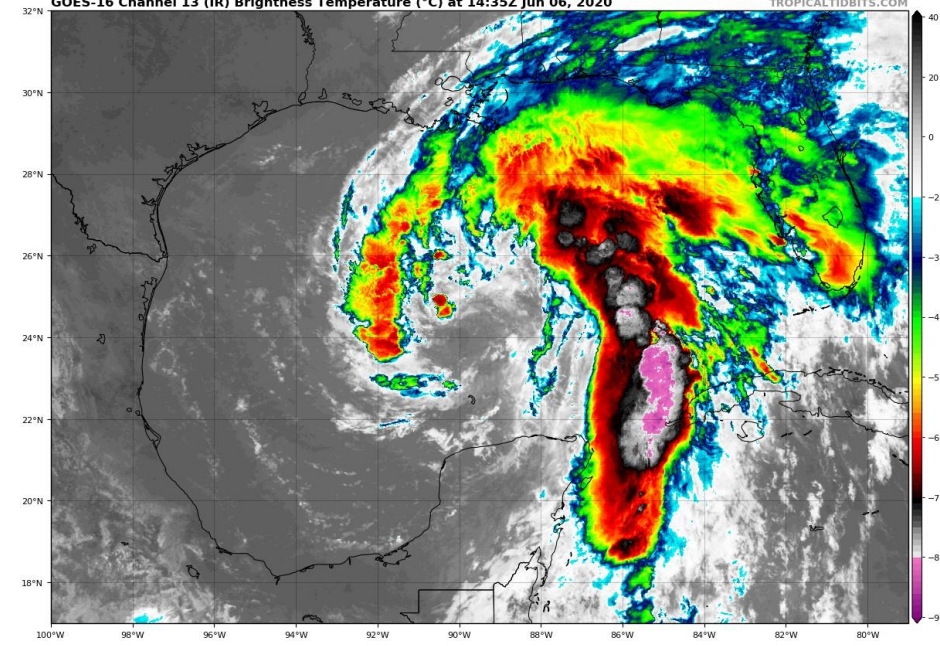




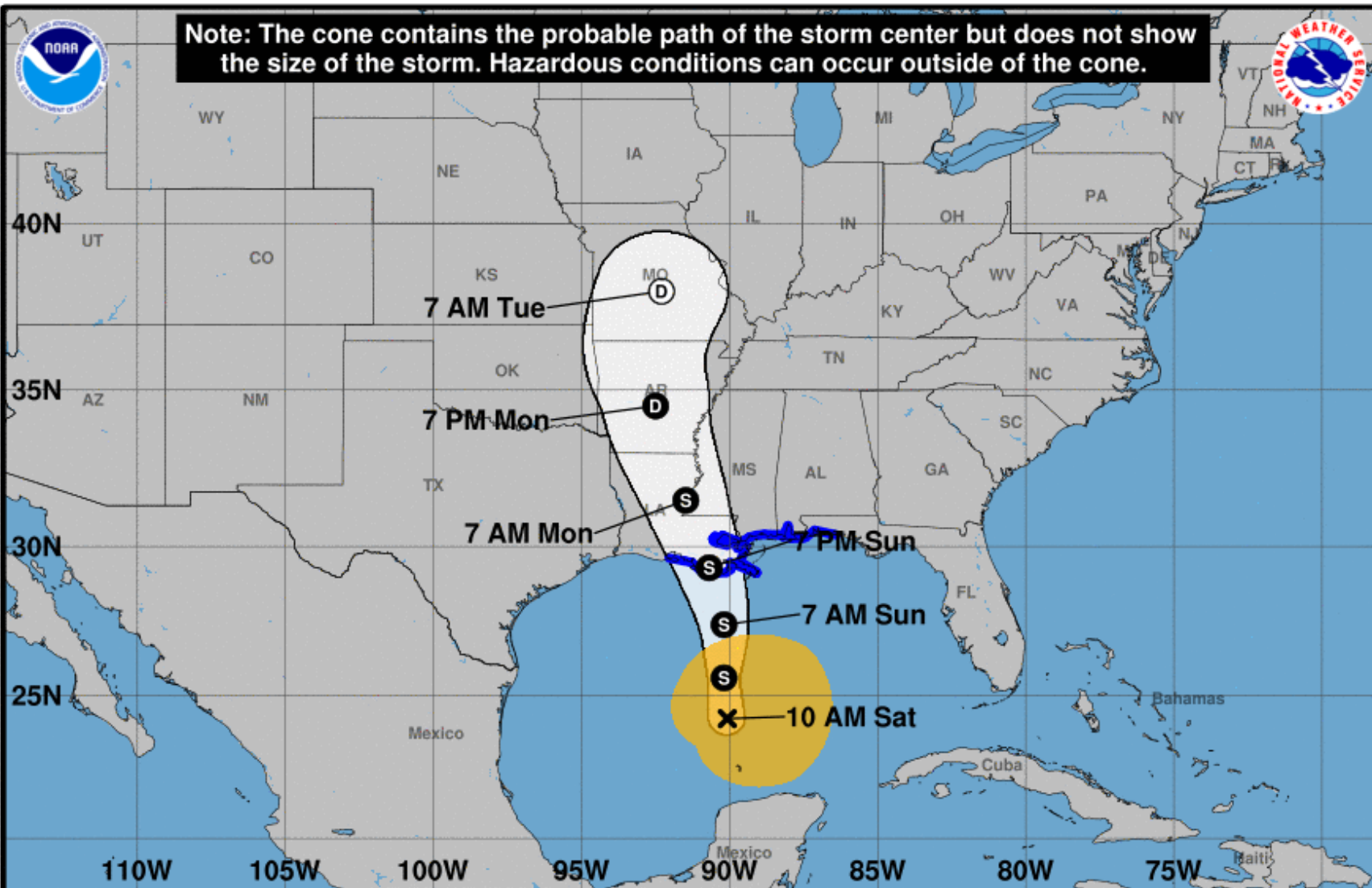
## Visible Satellite Imagery: Tropical Storm Cristobal

Cristobal is a large system with much of the thunderstorms (green circle) displaced well to the east of the center (black circle).

Cristobal is moving to the north over the Gulf of Mexico as it continues to gradually gain strength.







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.

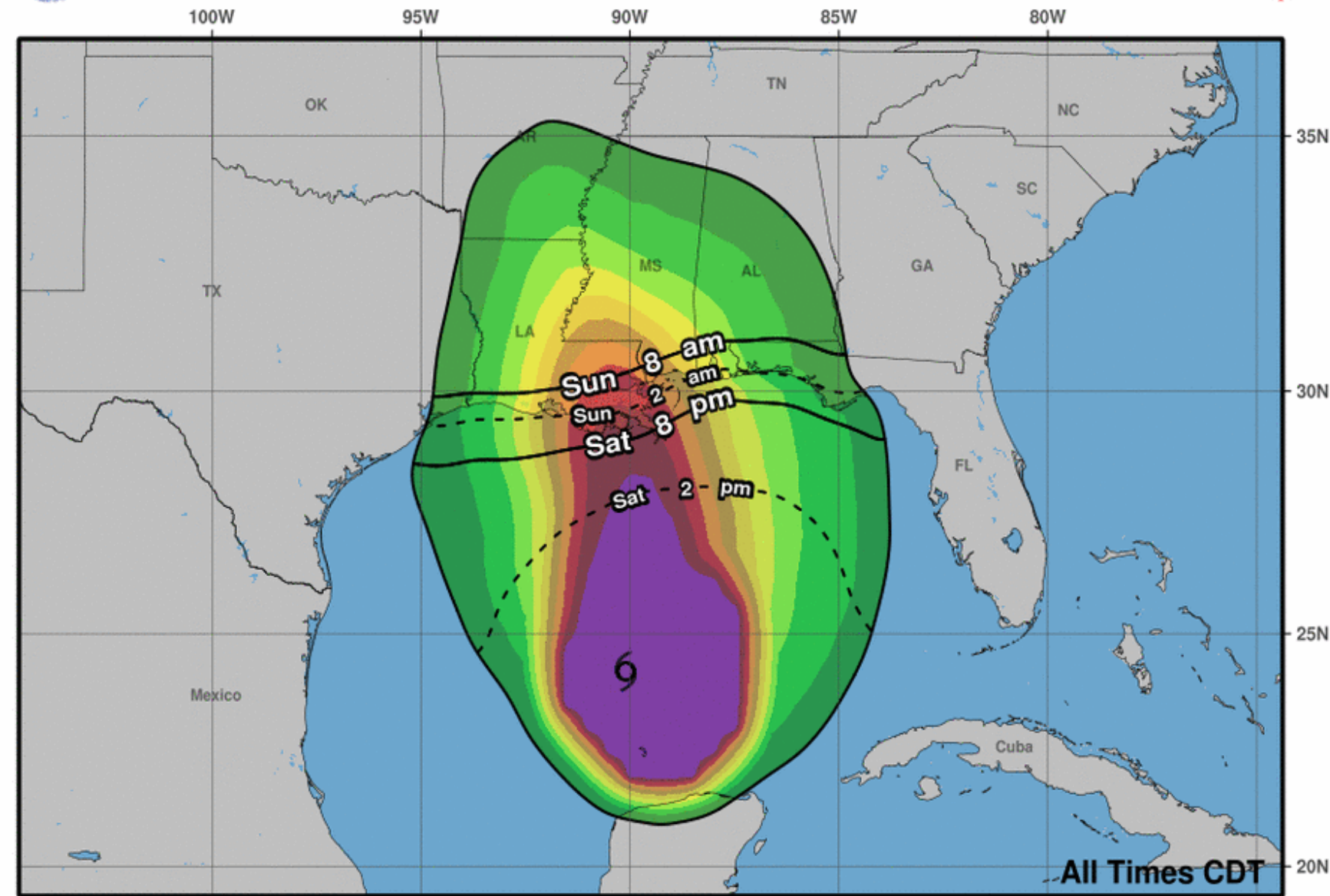
# Projected Path: Tropical Storm Cristobal

- The center of Cristobal is located about 345 miles south of the mouth of the Mississippi River, of 450 miles southwest of Pensacola, Florida.
- Maximum sustained winds are at 50 mph.
- Cristobal is moving north at 12 mph, and this general motion will continue through landfall.
- Some strengthening is possible until landfall
- Cristobal will likely make landfall along the Louisiana coast Sunday evening
- **Tropical Storm Warnings** are in effect for the western Panhandle.
- Flood Watches are in effect for much of the state.
- Storm Surge Watches have been cancelled and replaced with Coastal Flood Advisories.

<b>Tropical Storm Cristobal</b> Saturday June 06, 2020 10 AM CDT Advisory 20 NWS National Hurricane Center		<b>Current information: x</b> Center location 24.2 N 90.1 W Maximum sustained wind 50 mph Movement N at 12 mph		<b>Forecast positions:</b> ● Tropical Cyclone    ○ Post/Potential TC Sustained winds:    D < 39 mph S 39-73 mph    H 74-110 mph    M > 110 mph	
<b>Potential track area:</b> Day 1-3    Day 4-5		<b>Watches:</b> Hurricane    Trop Stm		<b>Warnings:</b> Hurricane    Trop Stm	
<b>Current wind extent:</b> Hurricane    Trop Stm					



# Earliest Reasonable Arrival Time of Tropical-Storm-Force Winds



## Chances for Sustained Tropical Storm Force Winds (39+ mph)

Pensacola NAS: 29%

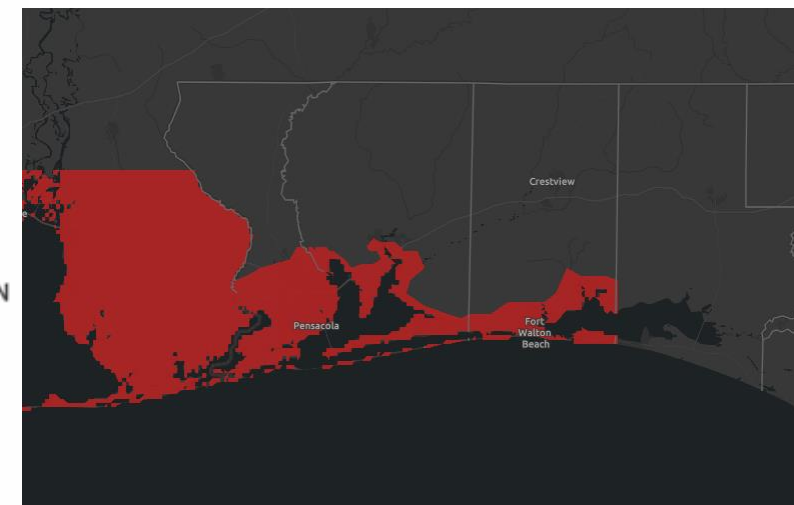
Milton: 16%

Panama City: 14%

Apalachicola: 11%

Tallahassee: 3%

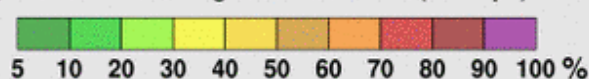
## Tropical Storm Warning



**Tropical Storm Cristobal**  
Sat. Jun. 6, 2020 10 am CDT  
Advisory 20

Storm Location & Wind Speed  
○ < 34 kt (39 mph)  
○ 34-63 kt (39-73 mph)  
● ≥ 64 kt (74 mph)

5-day chance of receiving sustained 34+ kt (39+ mph) winds







# Key Messages for Tropical Storm Cristobal

Advisory 20: 10:00 AM CDT Sat Jun 06, 2020



1. There is a danger of life-threatening storm surge outside of the Hurricane and Storm Damage Risk Reduction System from the Mouth of the Mississippi River to Ocean Springs, Mississippi, and a Storm Surge Warning is in effect for those areas. Life-threatening storm surge remains possible in other portions of southern and southeastern Louisiana where a Storm Surge Watch is in effect. Residents in these locations should follow advice given by local emergency officials.

2. Tropical storm force winds are expected by late tonight along the northern Gulf Coast from central Louisiana to the western Florida Panhandle, including metropolitan New Orleans, and a Tropical Storm Warning is in effect for this area. These winds will arrive well in advance of and extend well east of Cristobal's center.

3. Heavy rainfall will continue across west and north Florida today, spreading from east to west across the eastern and central Gulf Coast from the Florida Panhandle into Louisiana today into Sunday. This heavy rain will move into the Lower Mississippi Valley on Monday. Significant flooding will be possible on smaller streams, especially where heavier rainfall occurs over portions of the Gulf Coast and Lower Mississippi Valley.

4. Damaging and deadly flooding was already occurring in portions of Mexico and Central America. Additional rainfall from Cristobal will continue to slowly subside, however life-threatening flash floods and mudslides will still be possible through today. Refer to products from your local weather office for more information.



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



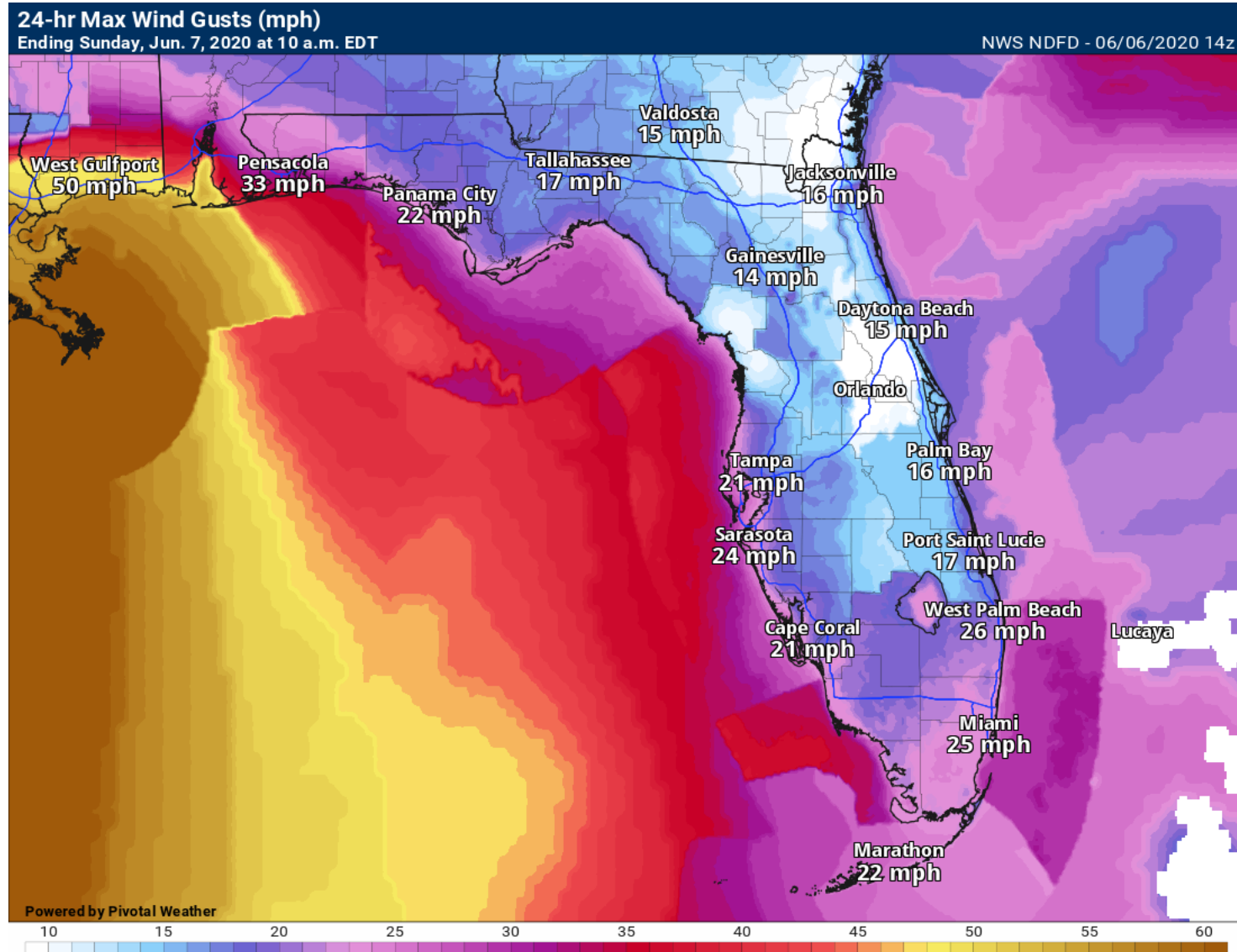
# Wind Gusts

## Next 24 Hours

Wind gusts to 25 mph are possible across much of the state today, from the south and east.

Higher gusts to 40 mph are possible Sunday in the western Panhandle.

**Tropical Storm Warnings are in effect for coastal Escambia, Santa Rosa, and Okaloosa County.**





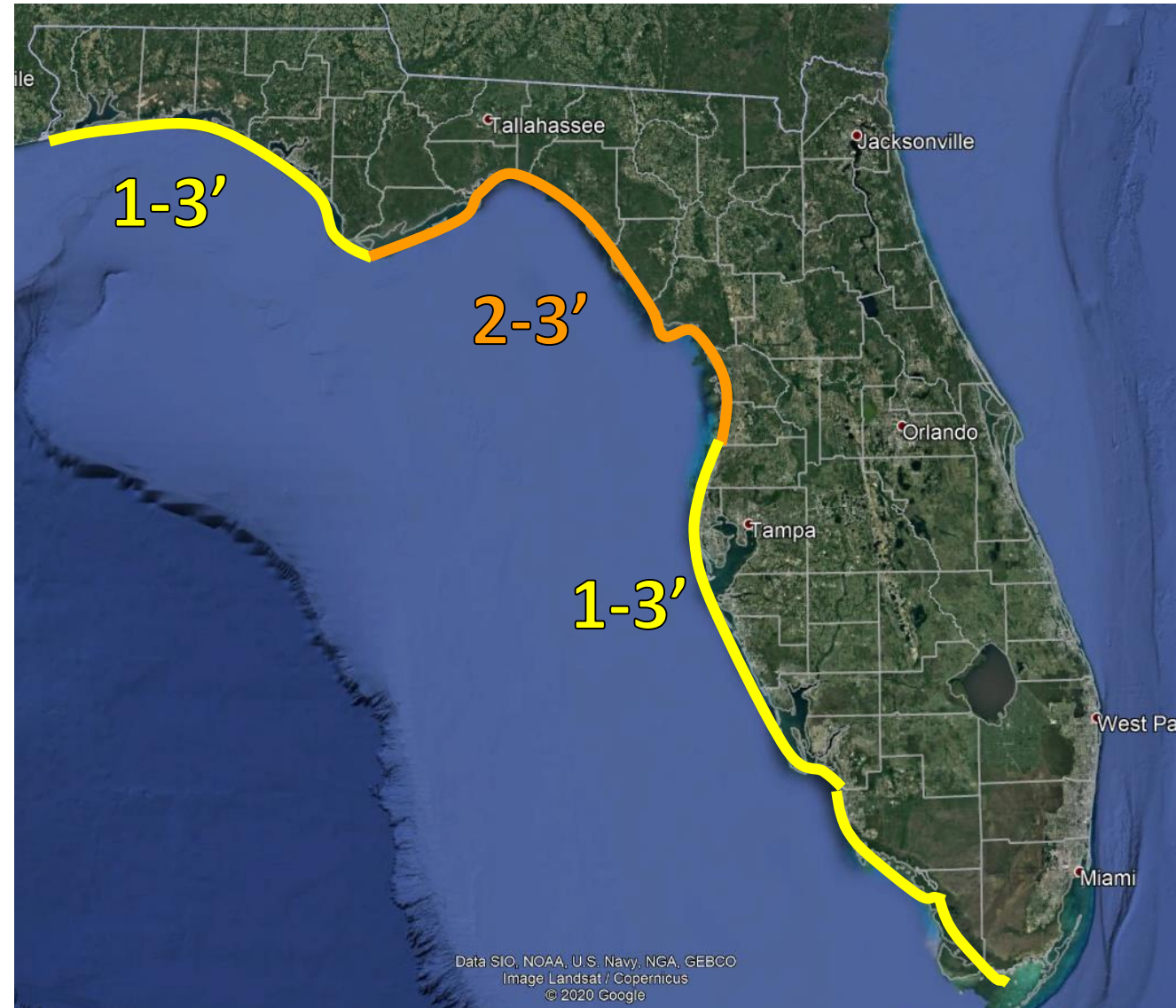


# Storm Surge Flooding

## This Weekend

Strengthening, prolonged south to southeast winds well ahead of Cristobal will result in some coastal Flooding along the Gulf Coast. Tides are already running 1-2' above normal in the Panhandle and will run 1-3' above normal along the entire Gulf Coast through Monday.

**Storm Surge Watches have been cancelled and replaced with Coastal Flood Advisories.**





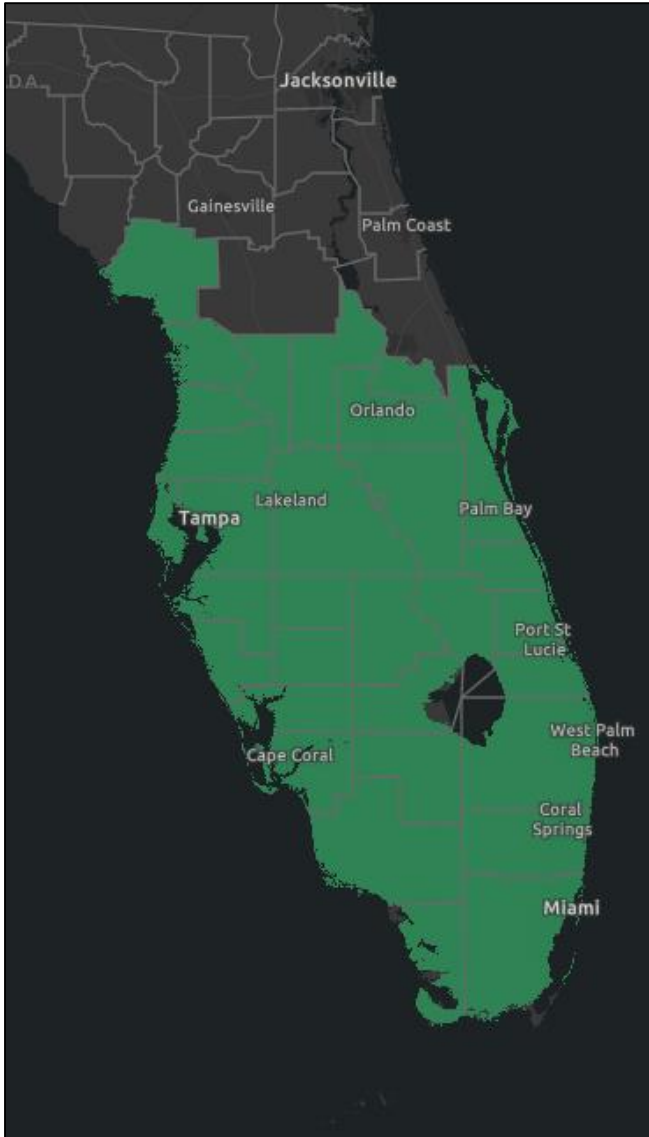
# Areal Flood Watches

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

Torrential downpours and wet to saturated soils will lead to some flooding, especially of urban, low-lying, or poor drainage areas. Average rainfall of 2-4" is expected across the Peninsula with localized amounts of 6-8" possible.

Some parts of the Peninsula have seen 10+" of rain locally. Additional rainfall could result in more flooding.

The Flood Watch expires at 8 PM ET TODAY for South Florida (NWS Miami Area) but continues until 8 PM ET SUNDAY for Central Florida (NWS Tampa/Melbourne Area)



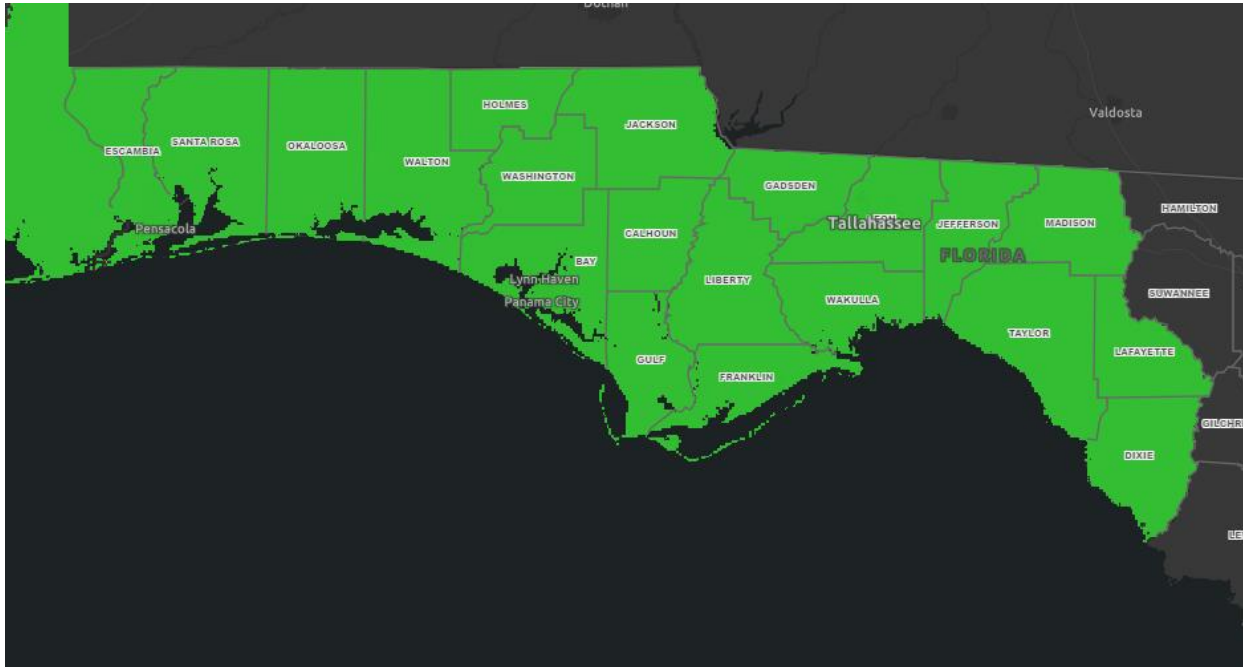




# Flash Flood Watches

Links: [NWS Mobile](#) | [NWS Tallahassee](#)

Training of rain bands over the same areas may lead to some flooding, especially of urban, low-lying or poor drainage areas. Average rainfall of 2-4" is expected across the Panhandle with localized amounts of 6-12" possible.

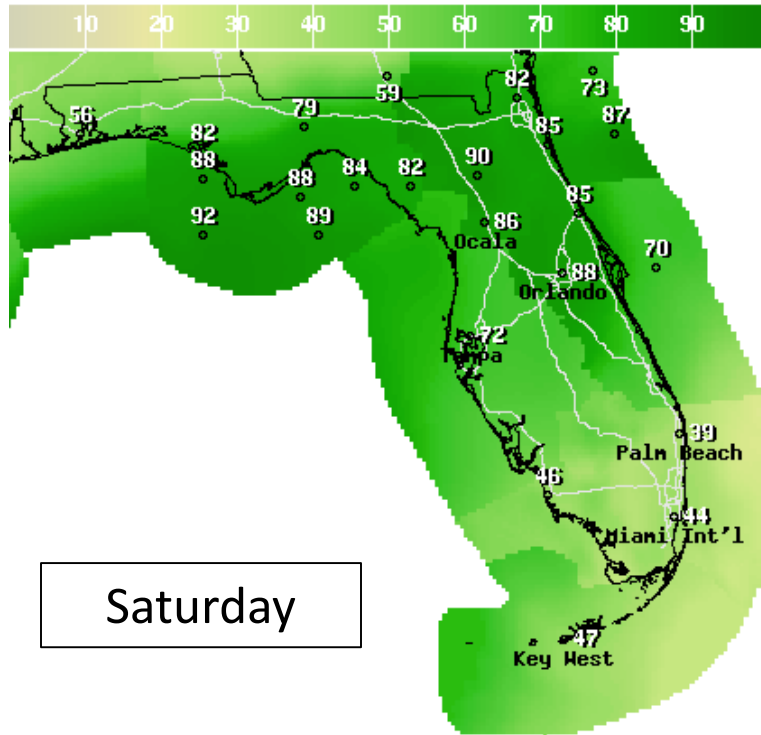


The Flash Flood Watch expires at 8 PM ET / 7 PM CT SUNDAY for the eastern Panhandle and Big Bend (NWS Tallahassee Area) and 7 PM CT MONDAY for the western Panhandle (NWS Mobile Area)



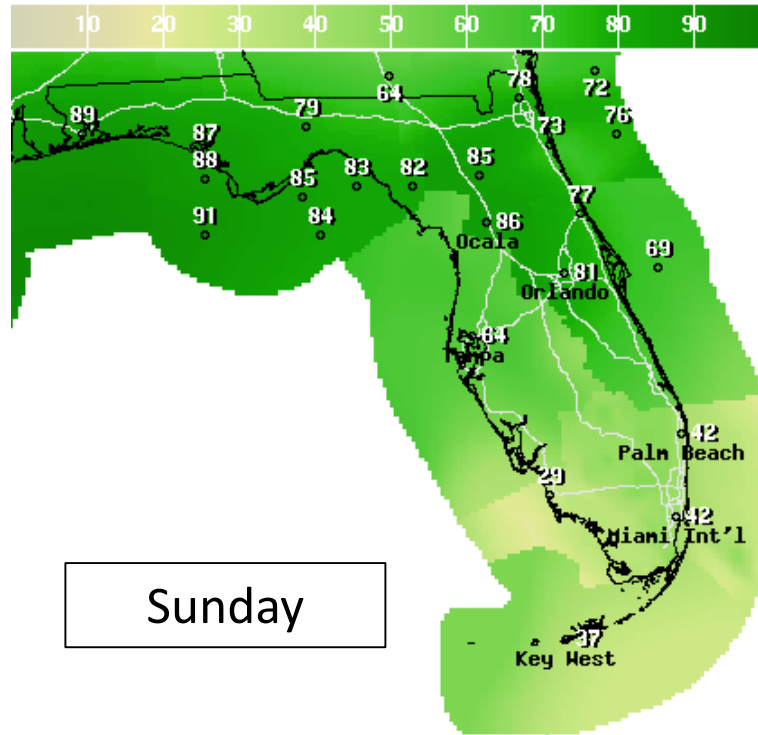
# Saturday - Monday

## Timing the Event – Cristobal Rainfall



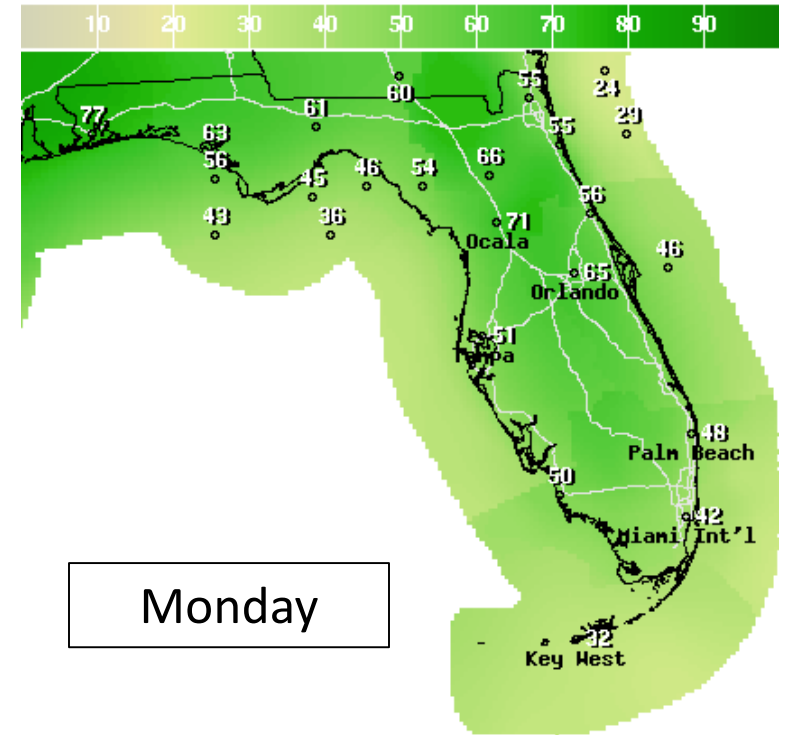
Saturday

12Hr Prob.Precip(%) Ending Sat Jun 06 2020 8PM EDT  
(Sun Jun 07 2020 00Z)  
National Digital Forecast Database  
14z issuance Graphic created-Jun 06 10:23AM EDT



Sunday

12Hr Prob.Precip(%) Ending Sun Jun 07 2020 8PM EDT  
(Mon Jun 08 2020 00Z)  
National Digital Forecast Database  
14z issuance Graphic created-Jun 06 10:24AM EDT



Monday

12Hr Prob.Precip(%) Ending Mon Jun 08 2020 8PM EDT  
(Tue Jun 09 2020 00Z)  
National Digital Forecast Database  
14z issuance Graphic created-Jun 06 10:24AM EDT

Widespread areas of rain are spreading over the state today. Heavier bands of rain will impact the Gulf Coast today and tonight, with scattered thunderstorms developing in Southeast Florida each afternoon. Additional rain bands will set up across North Florida on Sunday and Monday. **The threat for flash flooding remains into Monday.**





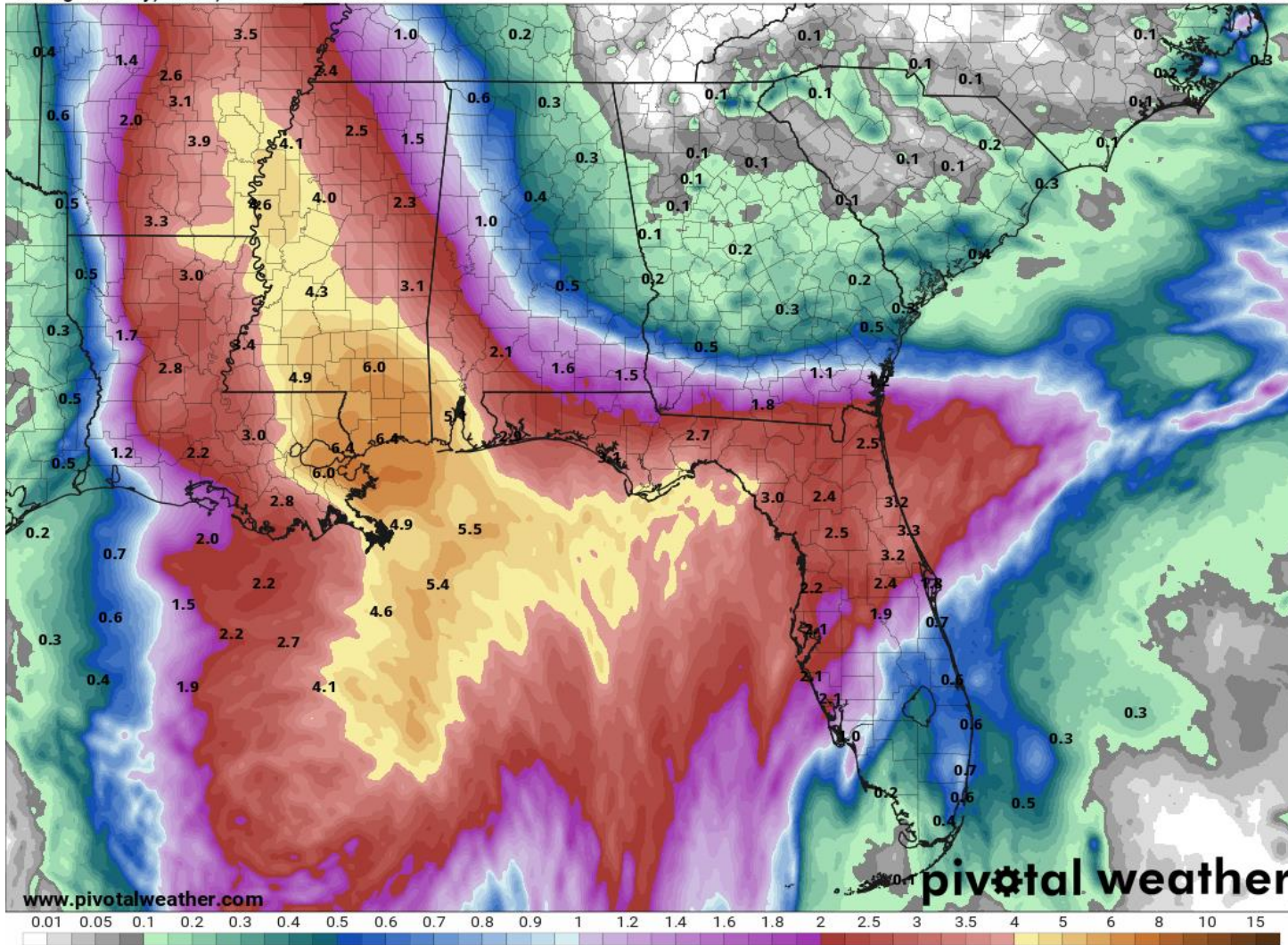
# Rainfall Totals Through Monday

## 72-Hour Rainfall Forecast Ending 8 AM ET Tuesday

72-Hour Precipitation (in)

Ending Tuesday, Jun. 9, 2020 at 8 a.m. EDT

Init: Sat 2020-06-06 12z WPC



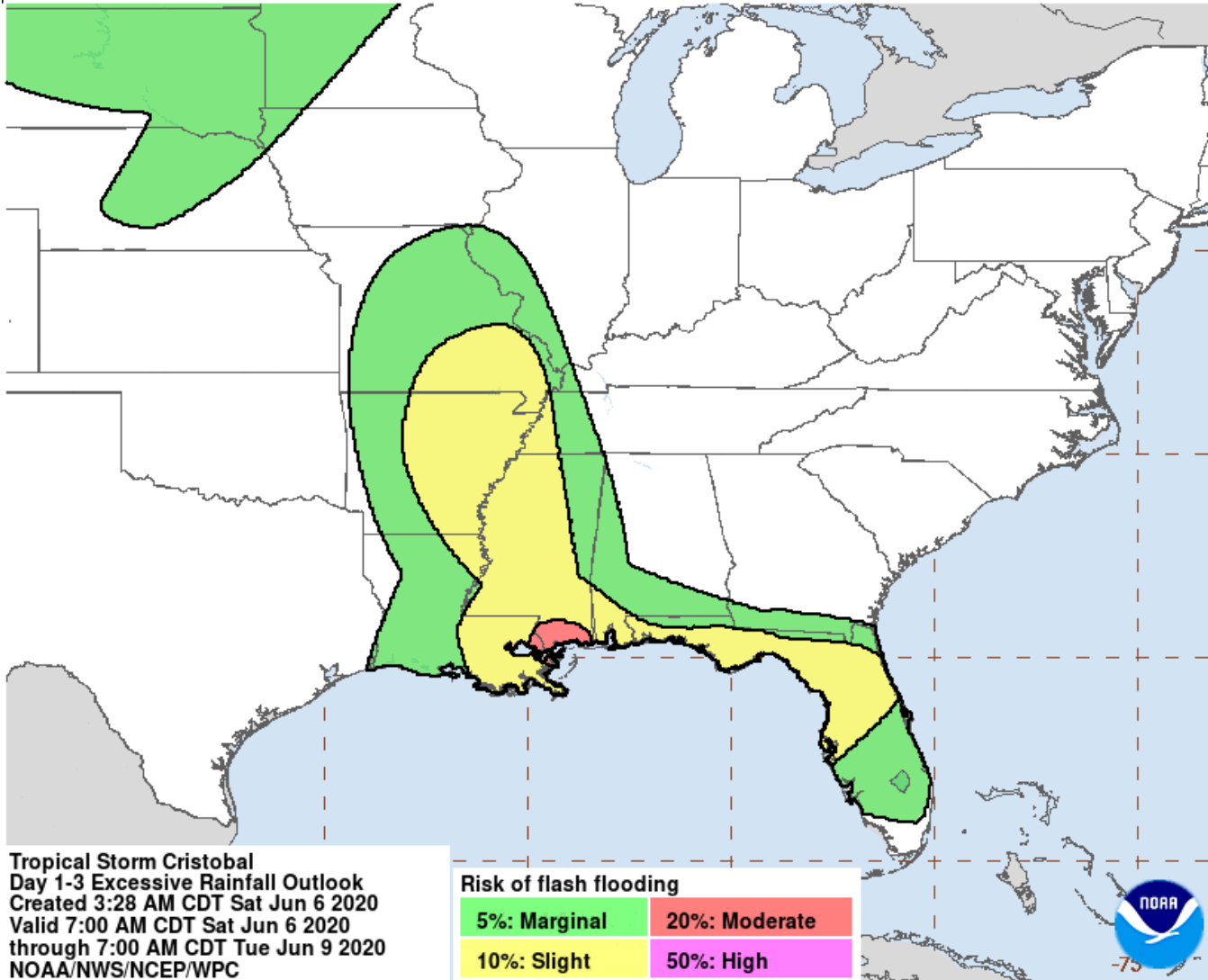
Through Monday night, widespread rainfall totals of 2-4" are expected across much of the state. Locally higher totals of 6-12" are possible, especially where heavier bands set up in the Big Bend.

This could result in flash flooding, especially in urban areas. Training rain bands will also increase the risk of flooding. River flooding will also be possible across North Florida this weekend into next week.



# Weekend Flash Flood Threat

Greatest Flash Flood Risk Over the Next 3 Days

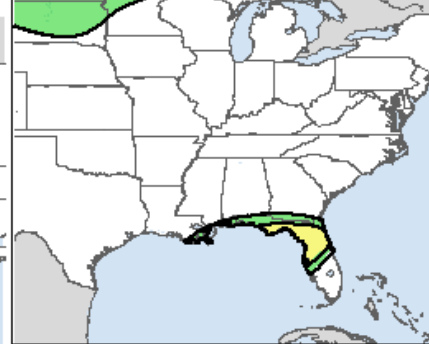


Tropical Storm Cristobal  
Day 1-3 Excessive Rainfall Outlook  
Created 3:28 AM CDT Sat Jun 6 2020  
Valid 7:00 AM CDT Sat Jun 6 2020  
through 7:00 AM CDT Tue Jun 9 2020  
NOAA/NWS/NCEP/WPC

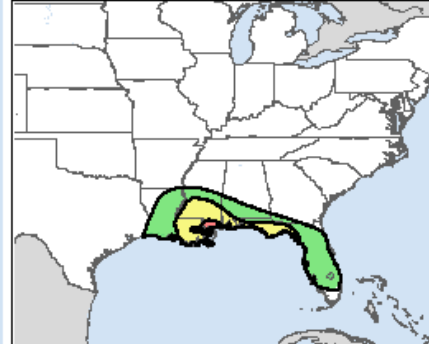
Risk of flash flooding

5%: Marginal	20%: Moderate
10%: Slight	50%: High

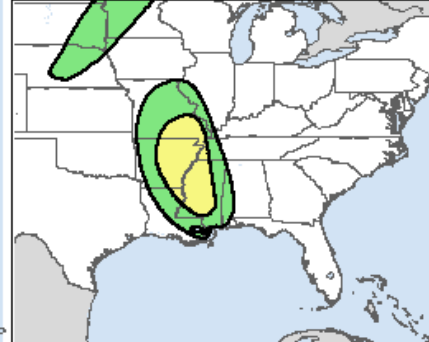
Day 1 Through Sunday morning



Day 2 Through Monday morning



Day 3 Through Tuesday morning



Most of the state will be under a Marginal to Slight Risk for flash flooding today and Sunday. Isolated to scattered flash floods are possible.










However, should heavier rainfall materialize, the risk for flash flooding may increase- particularly in North Florida once it becomes more clear where exactly heavier rain bands set up.





# Weekend Flash Flood Threat

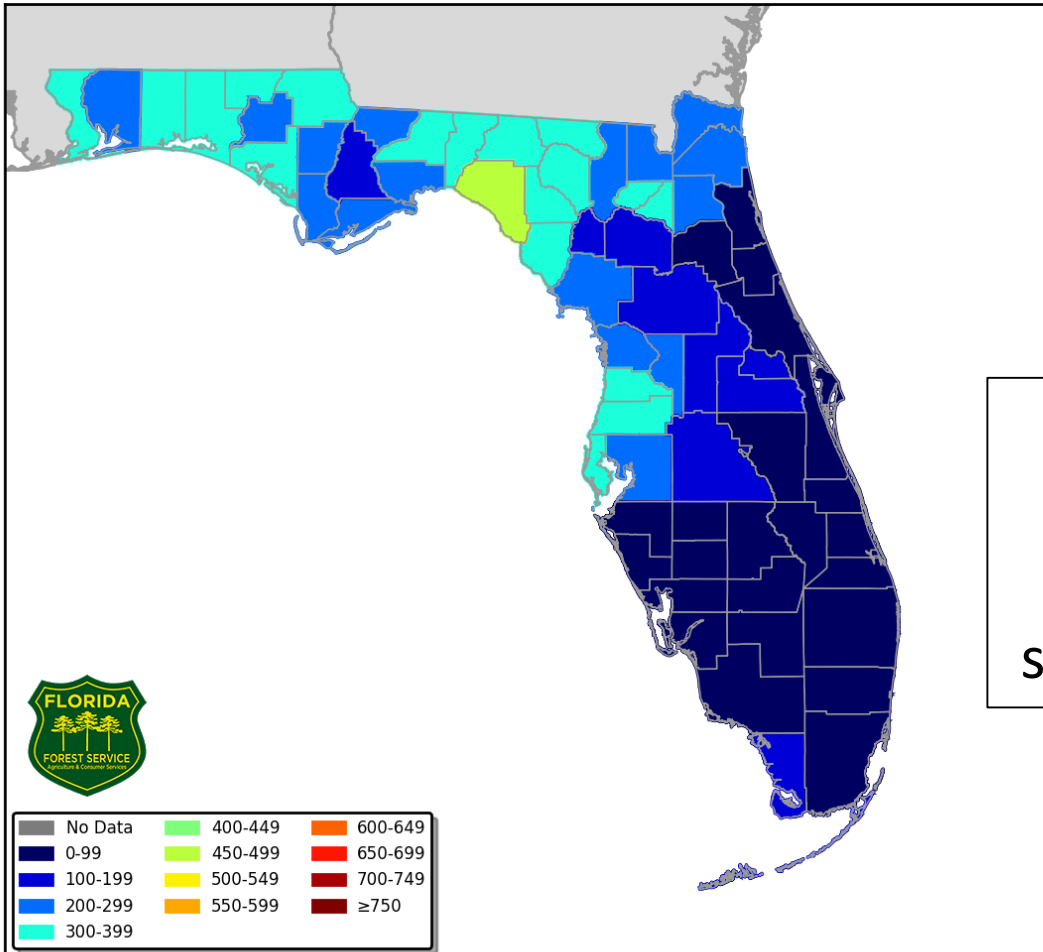
## Understanding WPC Excessive Rainfall Risk Categories

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

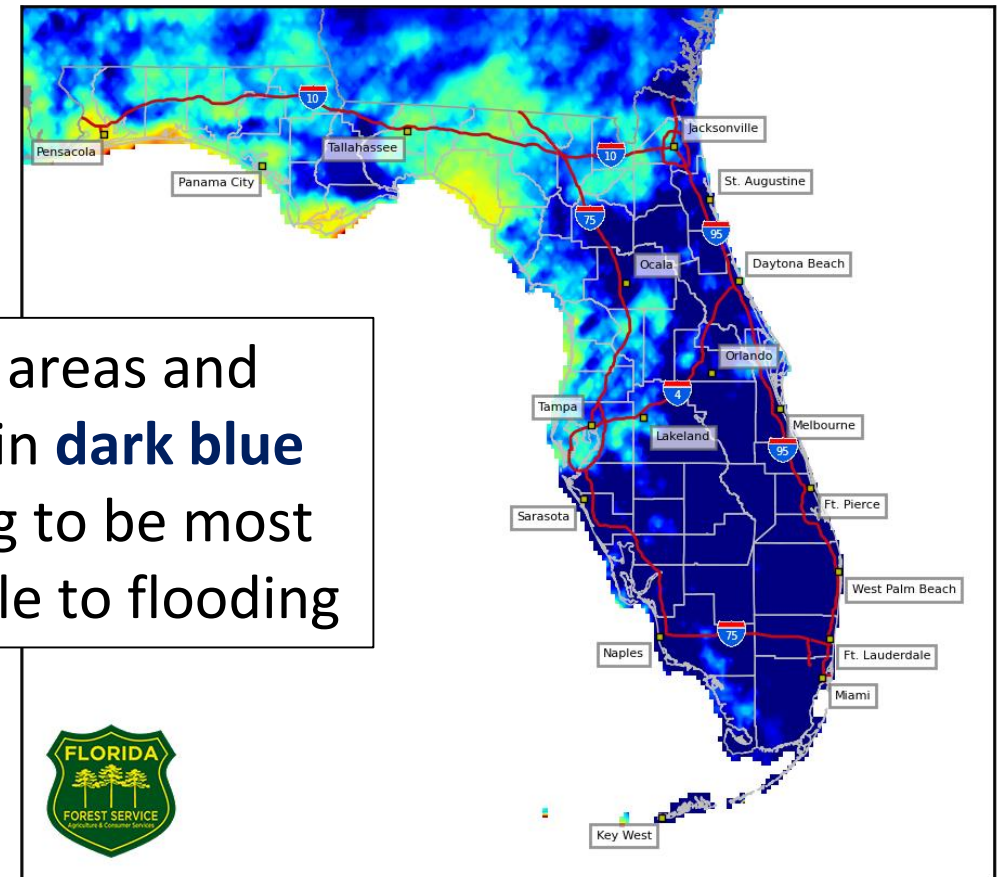


# Drought Index – Soil Moisture

Keetch Byram Drought Index (KBDI)  
County Averages for June 05, 2020

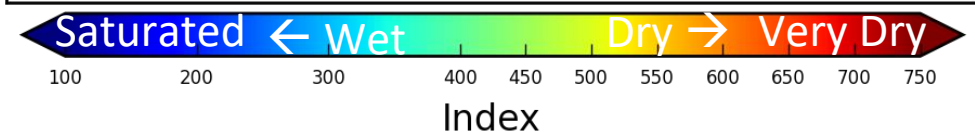


4 km Resolution KBDI  
Statewide  
June 05, 2020



Urban areas and  
regions in **dark blue**  
are going to be most  
susceptible to flooding

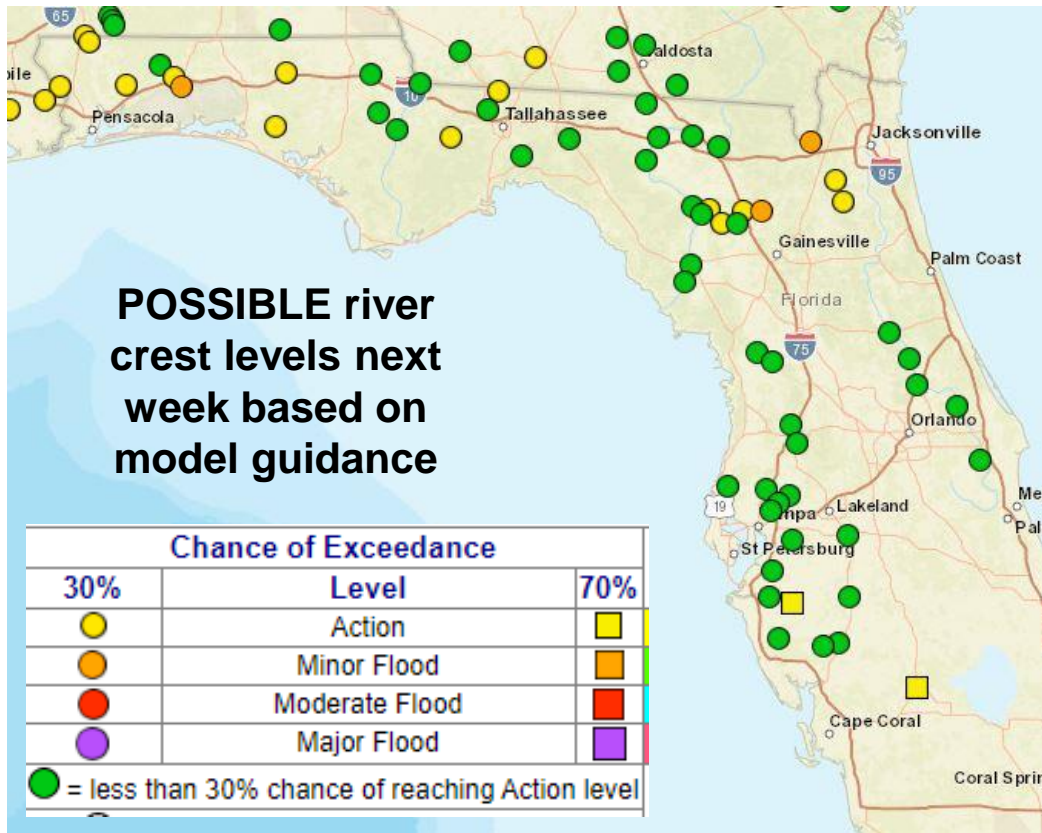
[KBDI – Full Report from the FFS](#)







# Possible River Flooding

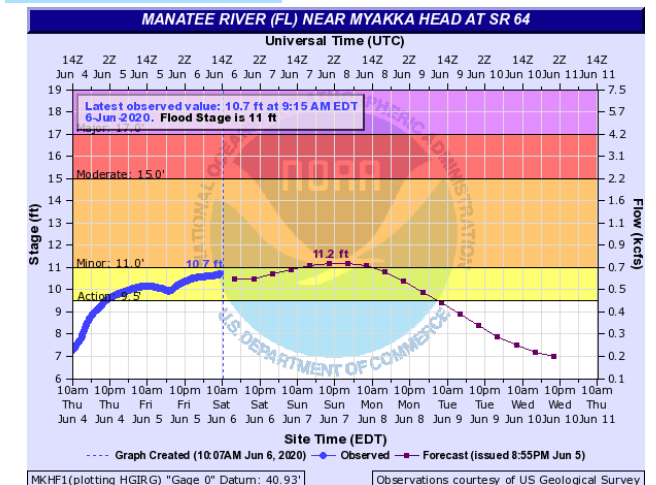
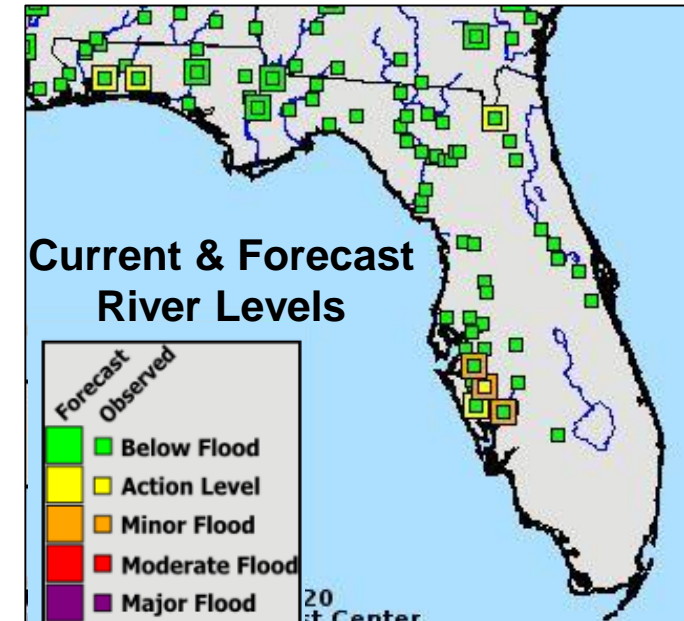


More details on river levels available at the [Southeast River Forecast Center website](#).

Some minor flooding is possible along some rivers, but it will depend on where exactly the heaviest rain falls.

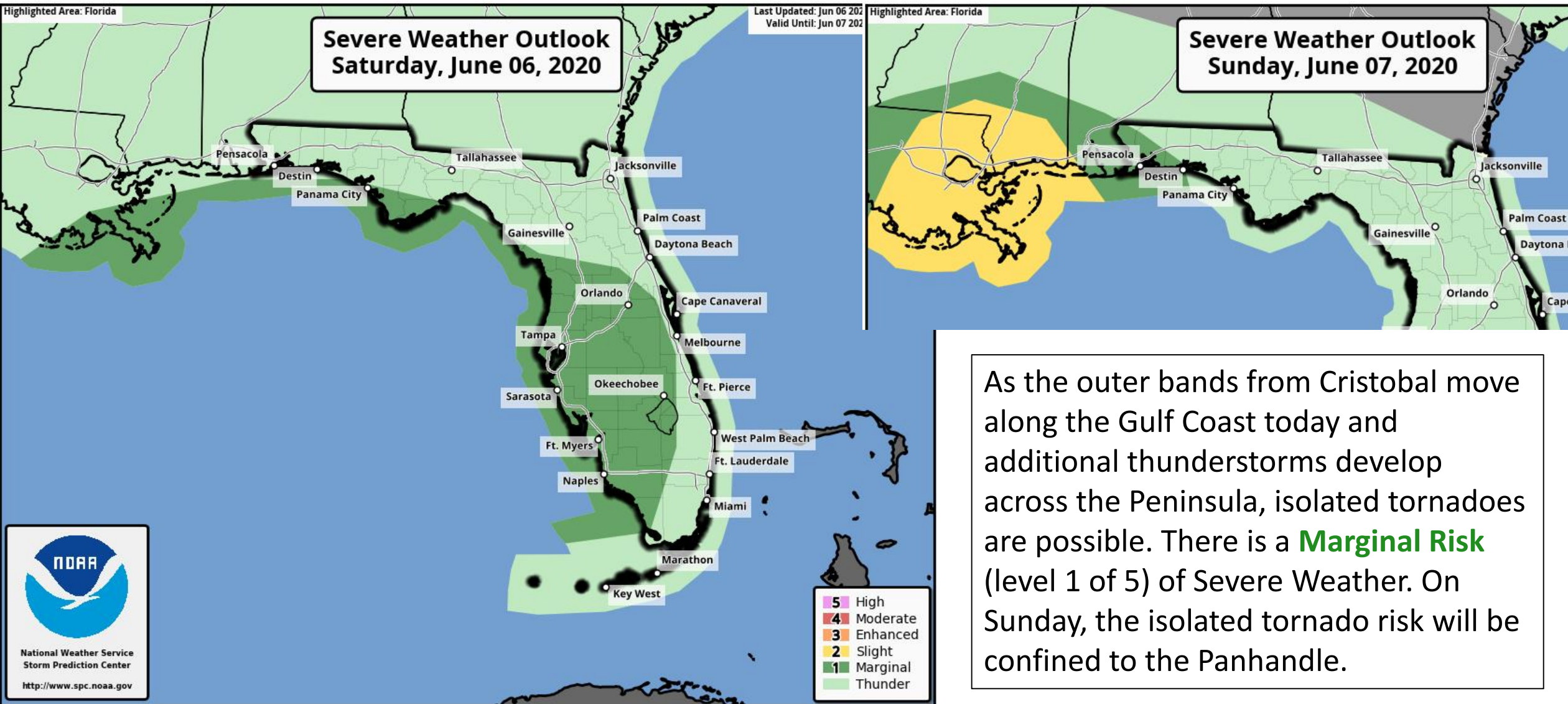
The [Manatee River at Myakka Head](#), [Little Manatee River near Wimauma](#), and [Horse Creek near Arcadia](#) is forecast for reach minor flood stage early next week.

Current low river levels across North Florida will help to minimize river impacts.





# Tornado Risk



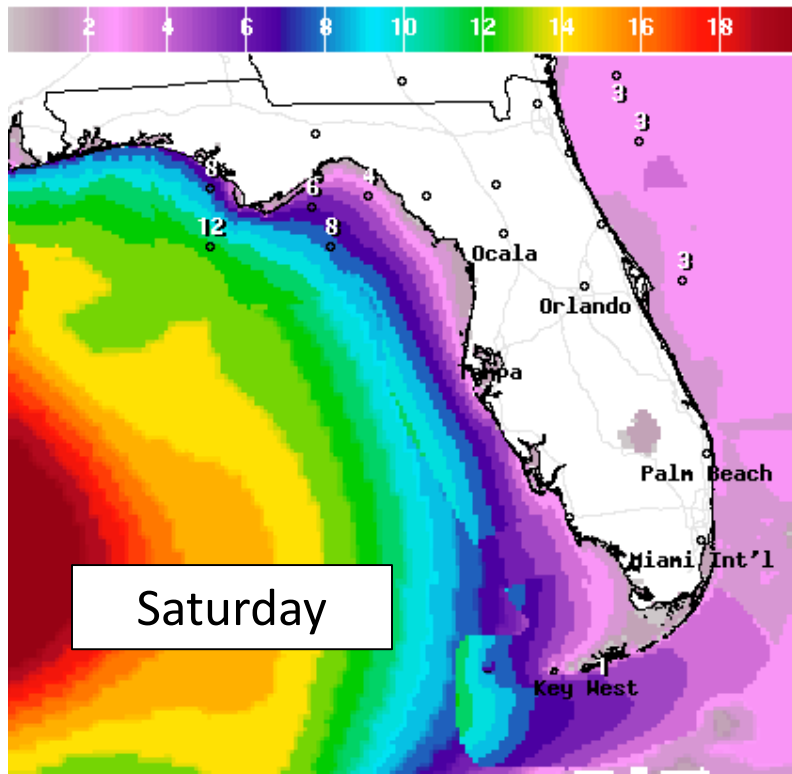
As the outer bands from Cristobal move along the Gulf Coast today and additional thunderstorms develop across the Peninsula, isolated tornadoes are possible. There is a **Marginal Risk** (level 1 of 5) of Severe Weather. On Sunday, the isolated tornado risk will be confined to the Panhandle.





# Forecast Wave Heights

## This Weekend



Saturday

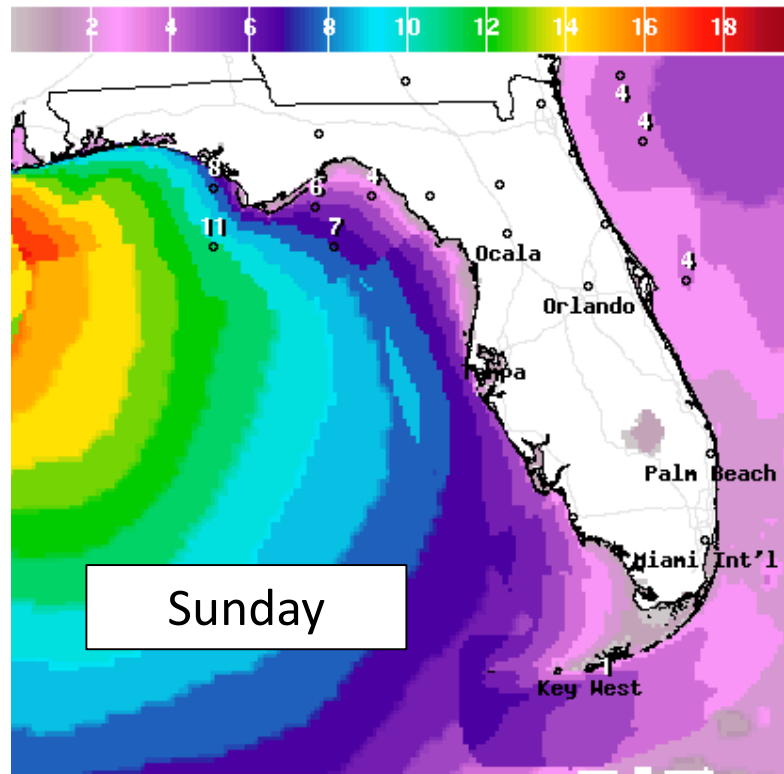
Wave Height(ft) Ending Sat Jun 06 2020 8PM EDT  
(Sun Jun 07 2020 00Z)



National Digital Forecast Database

13z issuance

Graphic created-Jun 06 9:28AM EDT



Sunday

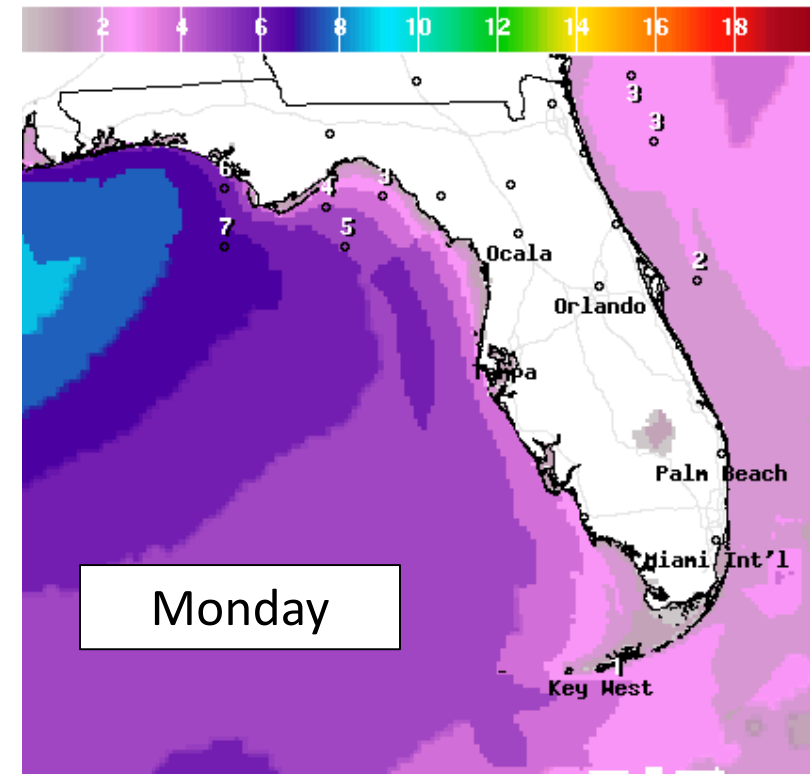
Wave Height(ft) Ending Sun Jun 07 2020 8PM EDT  
(Mon Jun 08 2020 00Z)



National Digital Forecast Database

13z issuance

Graphic created-Jun 06 9:29AM EDT



Monday

Wave Height(ft) Ending Mon Jun 08 2020 2PM EDT  
(Mon Jun 08 2020 18Z)



National Digital Forecast Database

13z issuance

Graphic created-Jun 06 9:29AM EDT



High surf of 6-12 feet will be possible at Panhandle Beaches with 4-8 feet along the West Coast. This will result in dangerous rip currents along all Gulf beaches. Minor beach erosion is also likely with a few spots of more significant erosion possible in the western Panhandle.



# Tropical Weather Outlook

## Development Areas Next 5 Days

**Bermuda Low:** An area of low pressure is expected to develop along a cold front a few hundred miles east or northeast of Bermuda by the middle of next week. Some development of this system is possible while it moves northwestward or west-northwestward over the western Atlantic. The system is expected to meander near Bermuda for the next several days and post no direct threat to the United States.

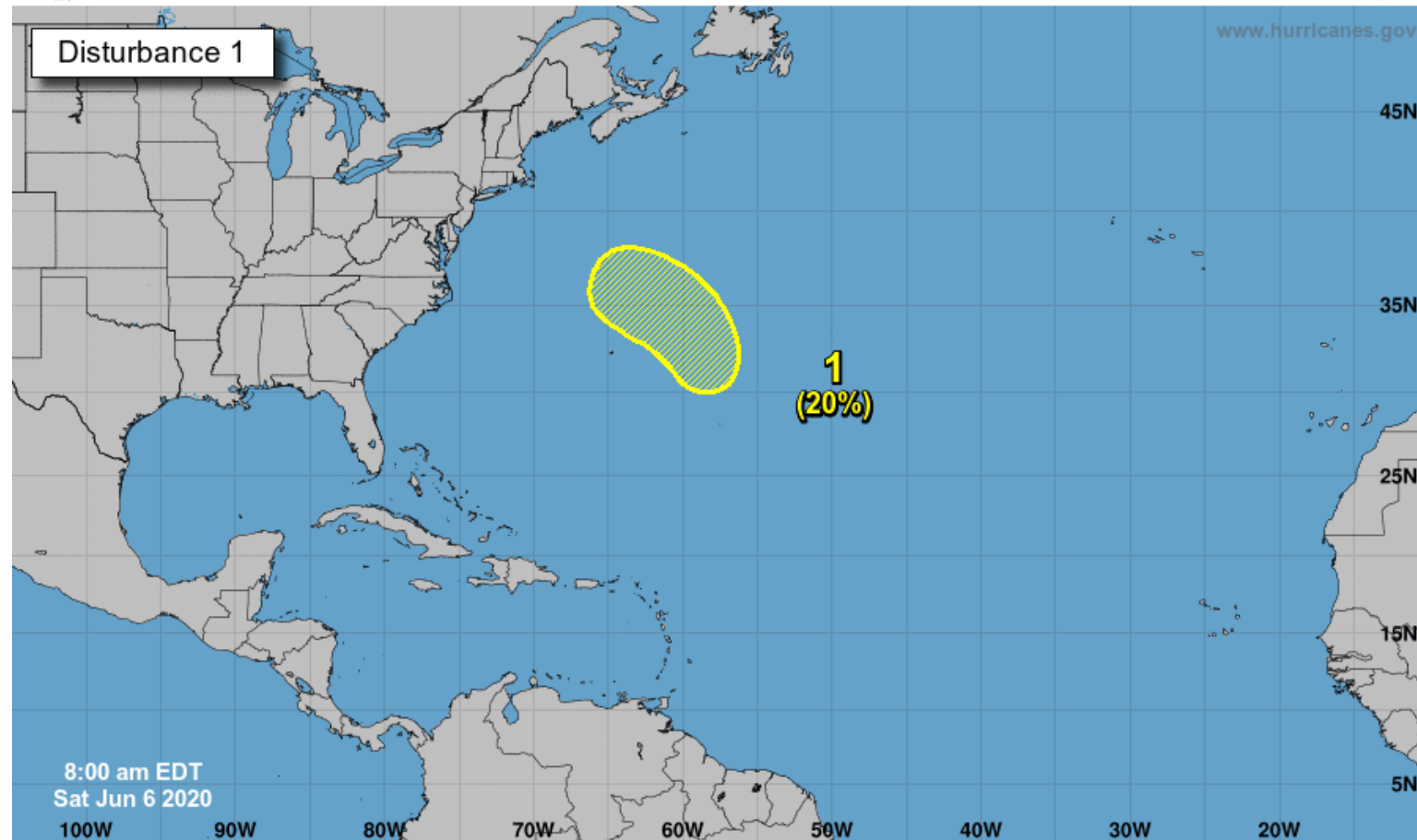
\*Formation chance through 48 hours...low...near 0 percent.

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



### 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



# Summary

## Tropical Storm Cristobal

- As of 11 AM ET, the center of Cristobal was located about 345 miles south of the mouth of the Mississippi River, or 450 miles southwest of Pensacola, Florida, moving north at 12 mph.
- Maximum sustained winds are near 50 mph. Some gradual strengthening is possible through landfall.
- Cristobal is expected to make landfall in Louisiana Sunday afternoon, but the system will be asymmetrical with much of the heavy rainfall well to the east of the center and where landfall occurs.

## Florida Outlook:

- A **Tropical Storm Warning** is in effect from the AL/FL border (Escambia County) to the Okaloosa/Walton County Line.
  - **Tropical Storm Warning:** Escambia, Santa Rosa, and Okaloosa Counties
- The **Storm Surge Watch** has been cancelled and replaced with a Coastal Flood Advisory/Statement. Tides will be running 1-3' above normal along the Gulf Coast through Monday.
- An **Areal Flood Watch** is in effect for much of the Peninsula.
  - **Flood Watch:** Levy, Citrus, Hernando, Pasco, Sumter, Seminole, Orange, Brevard, Osceola, Polk, Hillsborough, Pinellas, Manatee, Sarasota, Hardee, DeSoto, Highlands, Okeechobee, Indian River, St. Lucie, Martin, Palm Beach, Glades, Hendry, Charlotte, Lee, Collier, Broward, Miami-Dade, and Mainland Monroe.
- A **Flash Flood Watch** is in effect for much of the Panhandle.
  - **Flash Flood Watch:** Escambia, Santa Rosa, Okaloosa, Walton, Bay, Gulf, Franklin, Wakulla, Jefferson, Taylor, Dixie, Lafayette, Madison, Leon, Gadsden, Liberty, Calhoun, Jackson, Washington, and Holmes.
- A widespread 2-5" of rain is forecast to fall across the state over the few days. This will come from multiple rounds of rainfall over multiple days. Rain bands and training thunderstorms will result locally higher amounts, perhaps up to 6-12".
- Rain bands may train over the same areas across the state. This will create local maxima in rainfall totals and a flash flood threat.
- Gusty winds outside of the Tropical Storm Warning, perhaps to tropical storm force, will still be possible in some of the rain bands.
- Isolated tornadoes may be possible in some of the outer bands, and the Storm Prediction Center has outlined much of the state in a Marginal Risk for severe weather (level 1 of 5) today, and the Panhandle on Monday.
- Dangerous rip currents and beach erosion are expected at Gulf Coast beaches.

The next briefing packet will be sent out Saturday evening with the 5 PM 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:

Michael Spagnolo, Deputy State Meteorologist

[Michael.Spagnolo@em.myflorida.com](mailto:Michael.Spagnolo@em.myflorida.com)

State Meteorological Support Unit

Florida Division of Emergency Management

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