



TROPICAL UPDATE



11:00 AM EDT

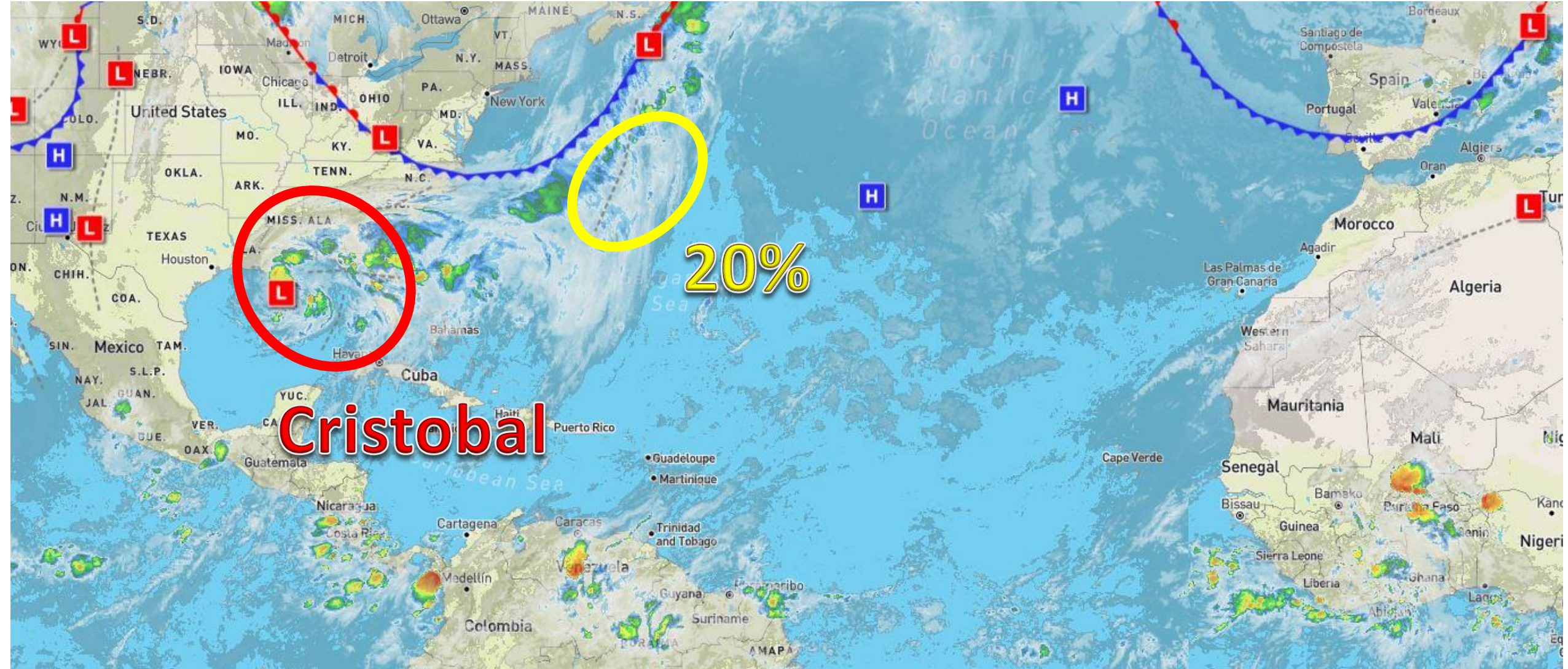
Sunday, June 7, 2020

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.

Atlantic Basin Satellite Image

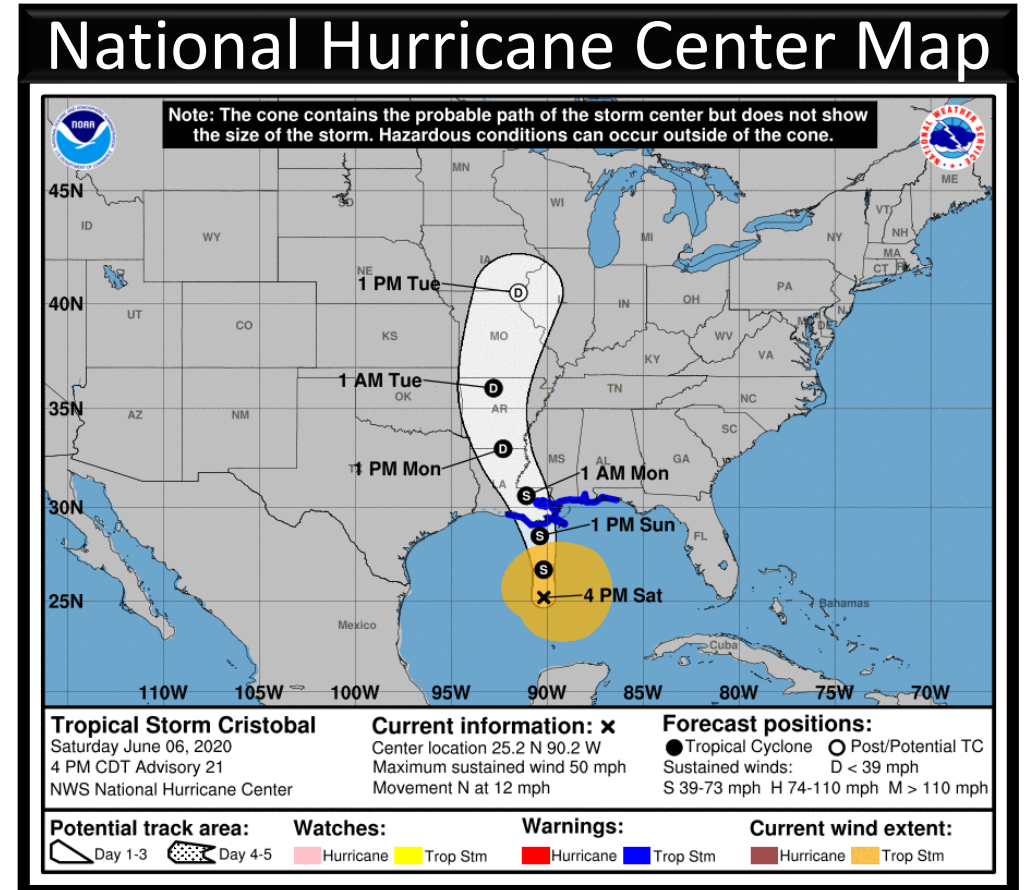
Chance of development: — None — Low — Medium — High



Tropical Storm Cristobal Saturday, June 6

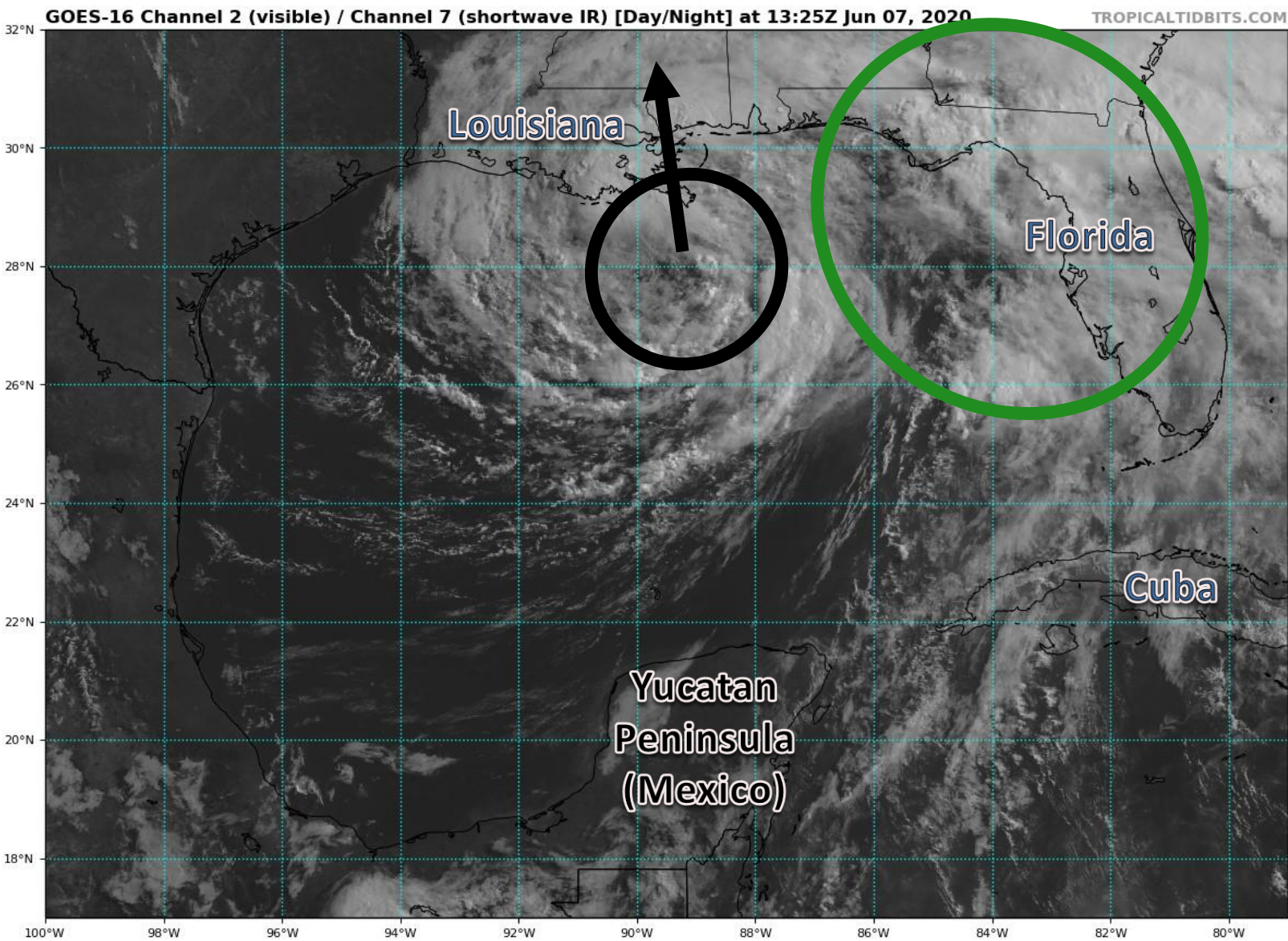
	MINIMAL	Low	MODERATE	HIGH	EXTREME
 WINDS					
 STORM SURGE					
 FLASH FLOODING					
 TORNADOES					

	Low	MODERATE	HIGH
 RIP CURRENTS			



Tropical Weather Overview:

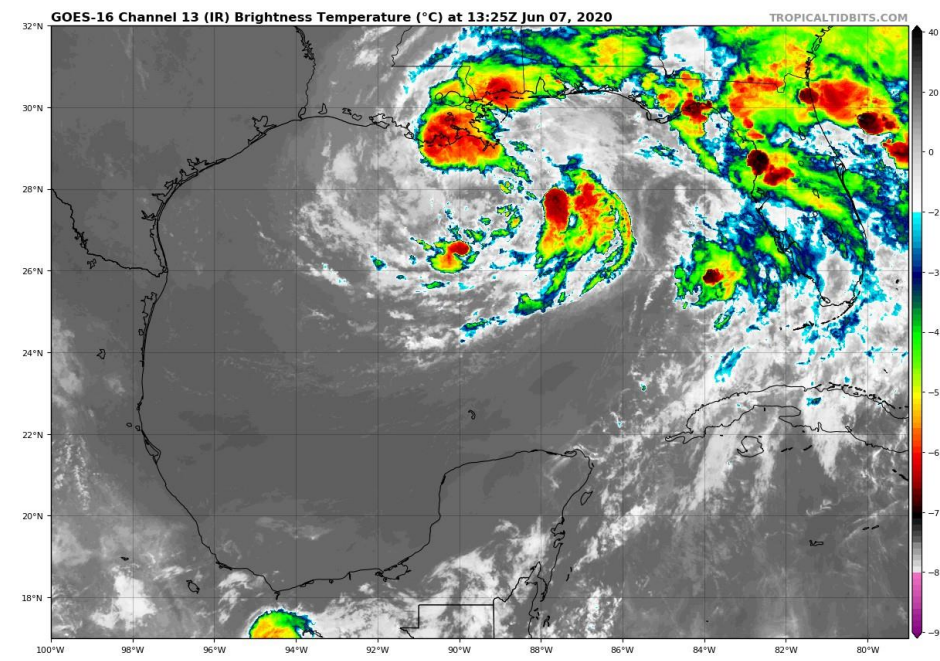
No significant changes overnight and the forecast remains on track. The main threat from Cristobal continues to be heavy rainfall. Flash Flood Watches continue for the Panhandle and Big Bend with the threat shifting to just the western Panhandle tonight. Isolated strong thunderstorms today across the Peninsula.



Visible Satellite Imagery: Tropical Storm Cristobal

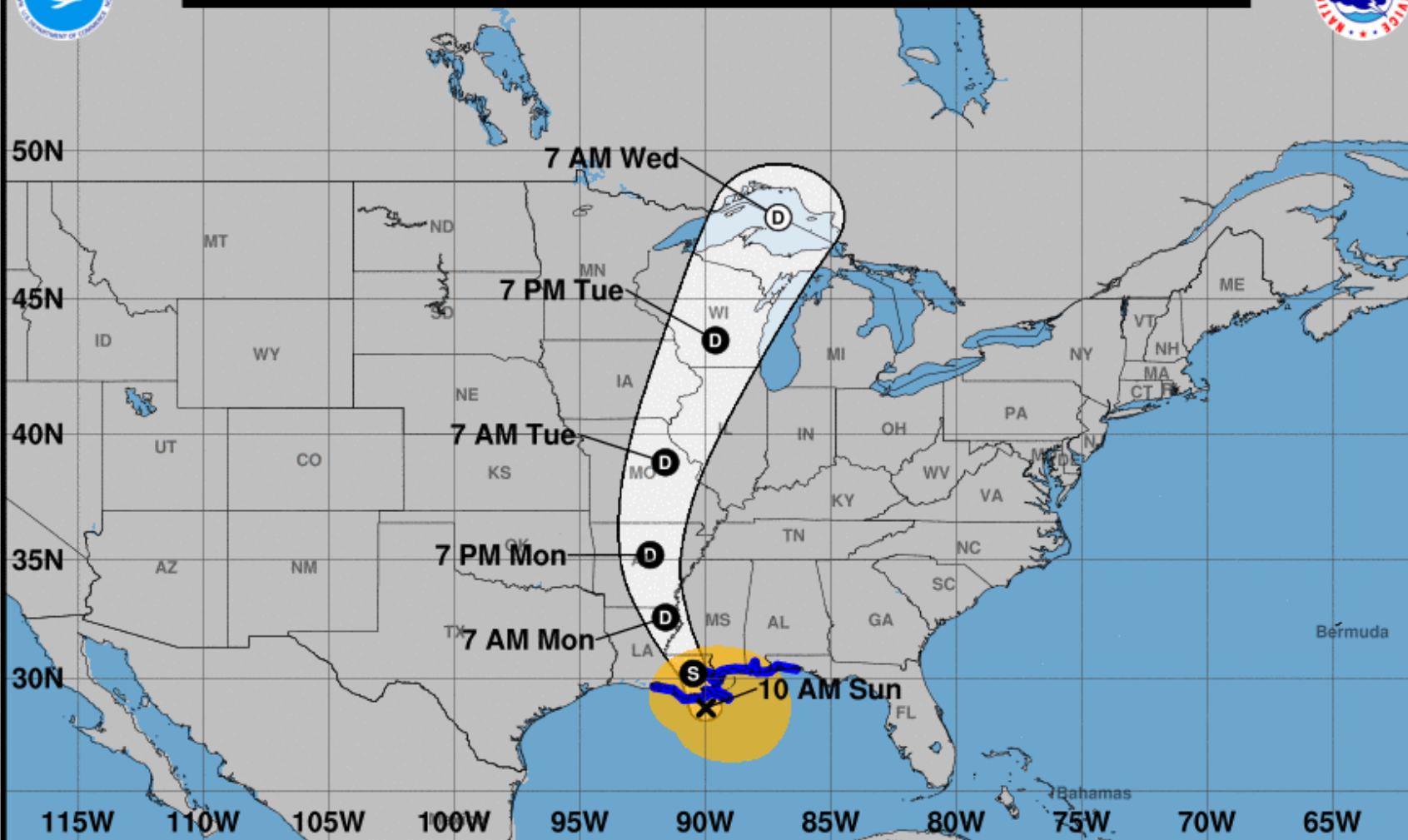
Cristobal is a large system with much of the thunderstorms (green circle) displaced well to the east of the center (black circle).

Cristobal is moving to the north and will make landfall in southeastern Louisiana over the next few hours.





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 Cristobal

Sunday June 07, 2020
10 AM CDT Advisory 24
NWS National Hurricane Center

Current information: x

Center location 28.7 N 90.0 W
Maximum sustained wind 50 mph
Movement N at 12 mph

Forecast positions:

● Tropical Cyclone ○ Post/Potential TC
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 Stm

Warnings:

Hurricane Trop Stm

Current wind extent:

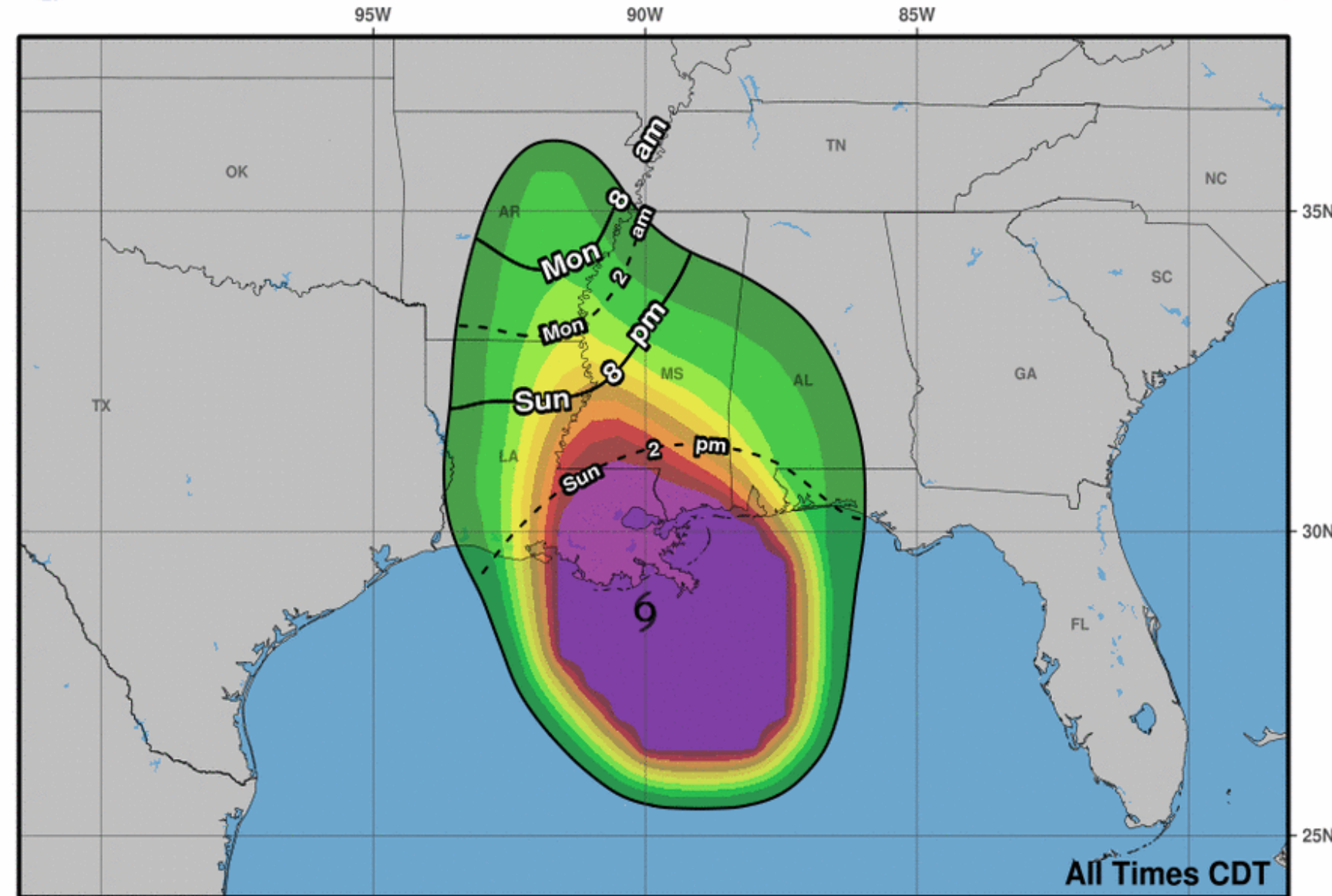
Hurricane Trop Stm

Projected Path: Tropical Storm Cristobal

- The center of Cristobal is located about 90 miles south of New Orleans, or about 200 miles west-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 later today.
- **Tropical Storm Warnings** are in effect for the western Panhandle.
- **Flood Watches** are in effect for much of the state through this evening and the western Panhandle into Monday.
- **Coastal Flood Advisories** are in effect for the Gulf Coast.



Most Likely Arrival Time of Tropical-Storm-Force Winds

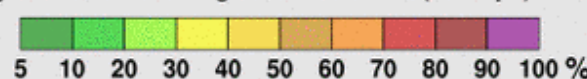


Tropical Storm Cristobal
Sun. Jun. 7, 2020 10 am CDT
Advisory 24

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



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

Pensacola NAS: 18%

Milton: 13%

Destin: 8%

Panama City: 3%

Tropical Storm Warning





Wind Gusts

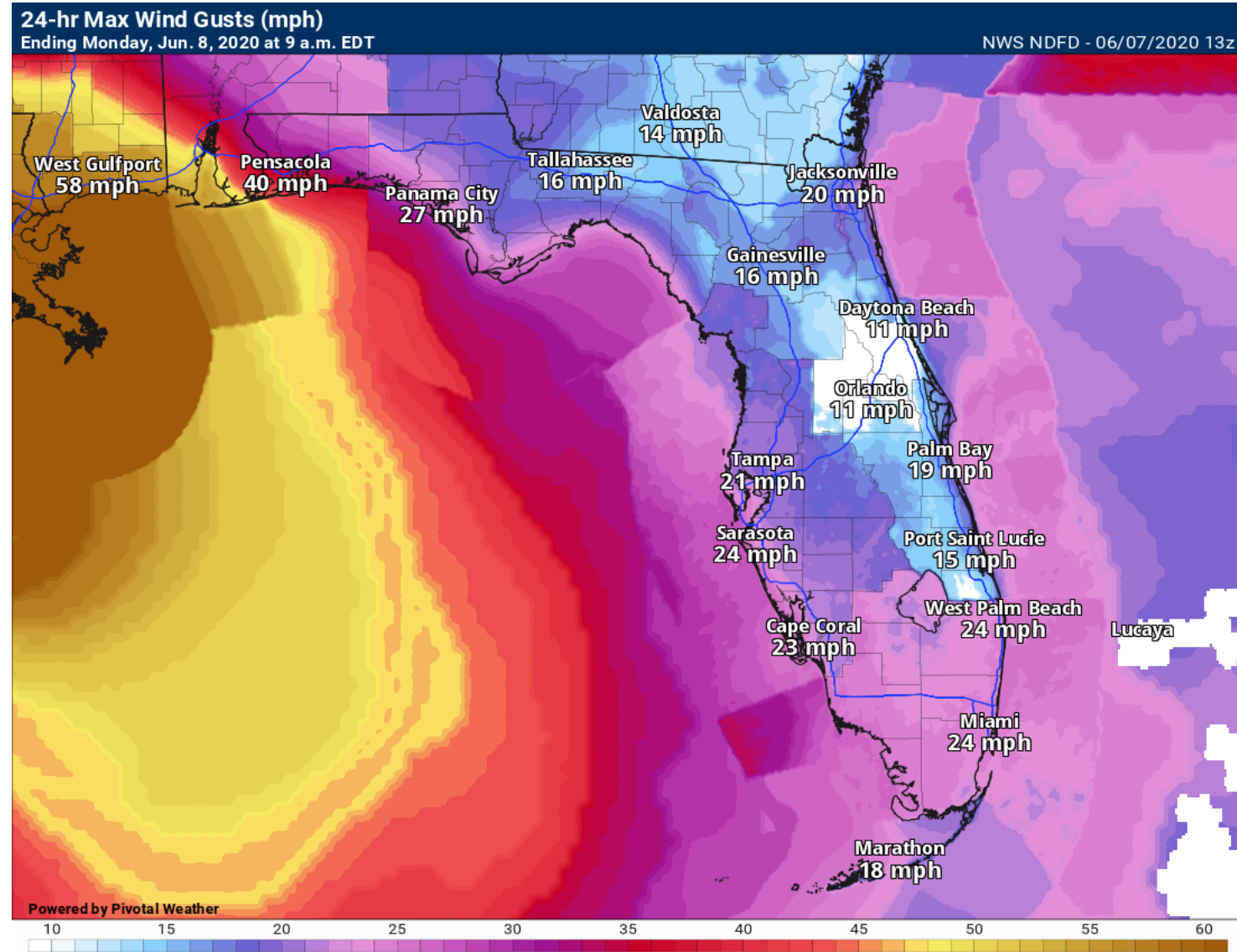
Next 24 Hours

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

Higher gusts are likely in any heavy thunderstorms statewide.

Higher gusts to 45 mph are possible this afternoon and tonight in the western Panhandle, with sustained winds 30-35 mph.

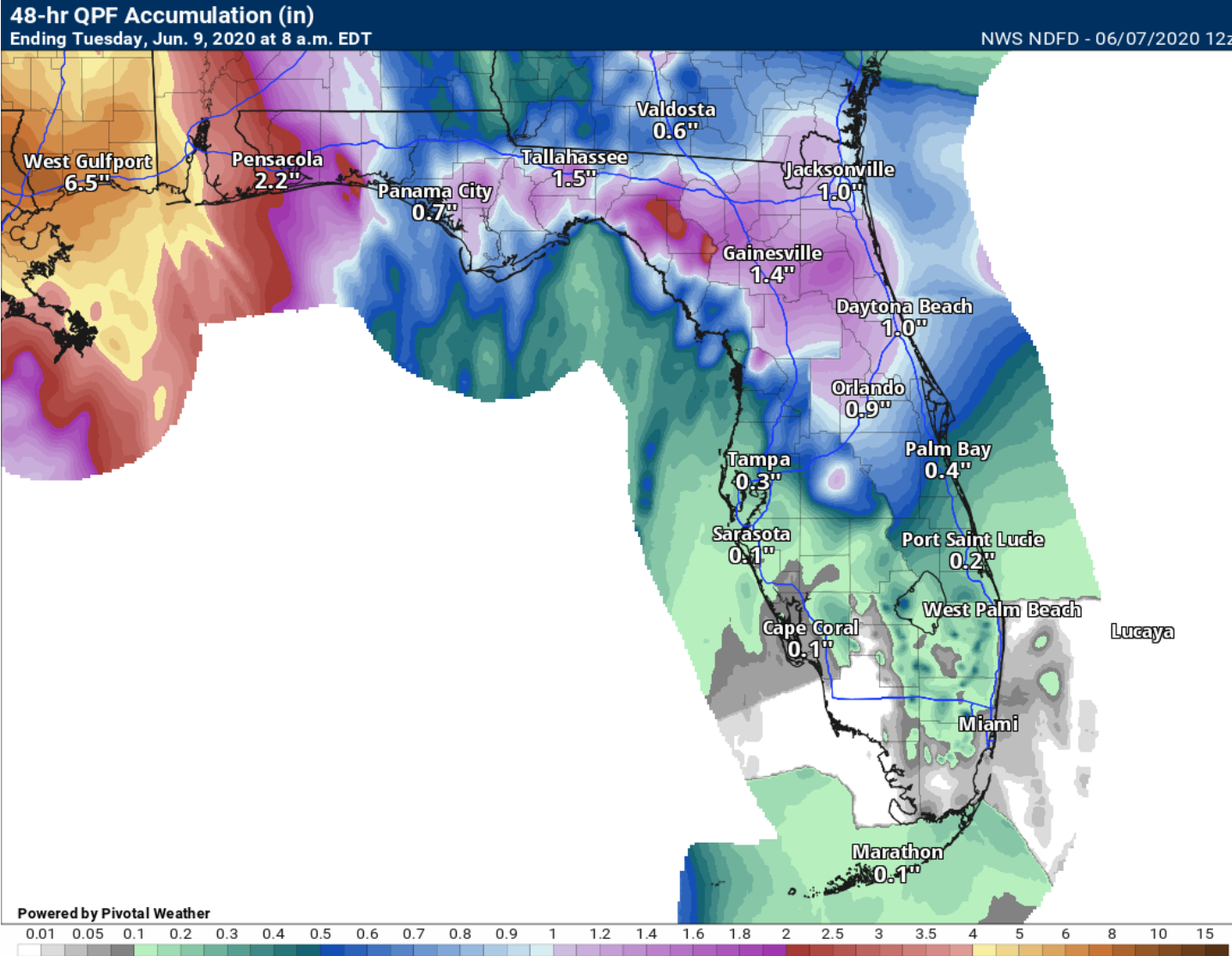
Tropical Storm Warnings are in effect for coastal Escambia, Santa Rosa, and Okaloosa County.





Rainfall Totals Next 48 Hours

Ending 2 PM ET Monday



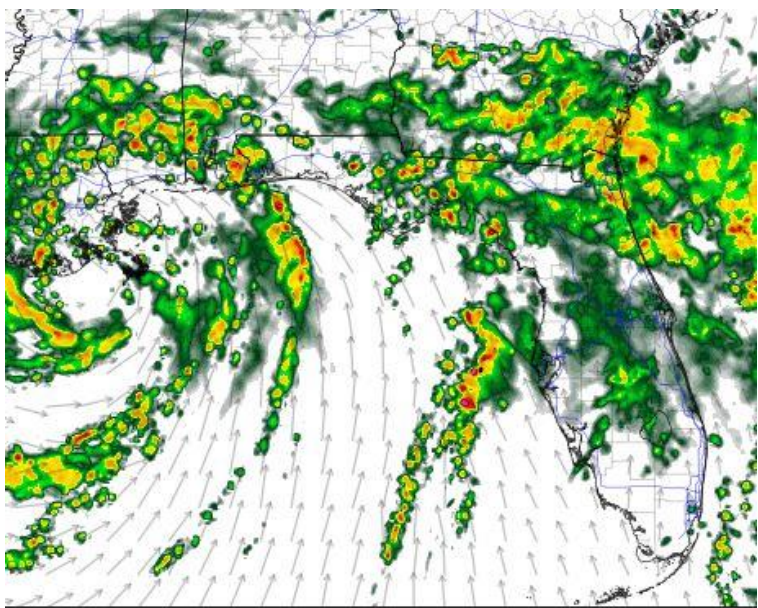
Through Monday afternoon, widespread rainfall totals of 1-3" are expected across North and Central Florida. **Locally higher totals of 6-12" are possible**, especially where heavier bands set up in the Panhandle and Big Bend.

Training rain bands may set up tonight in the western Panhandle, keeping the flash flood threat elevated from Pensacola to Panama City.

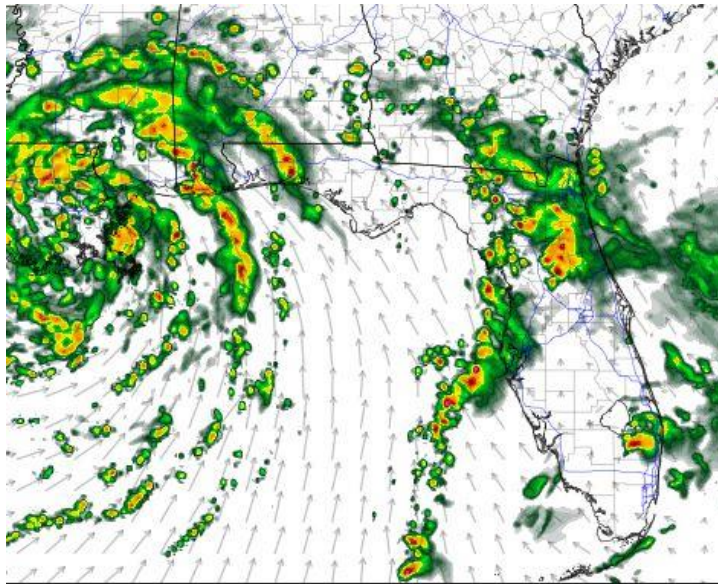


Model Forecast Radar

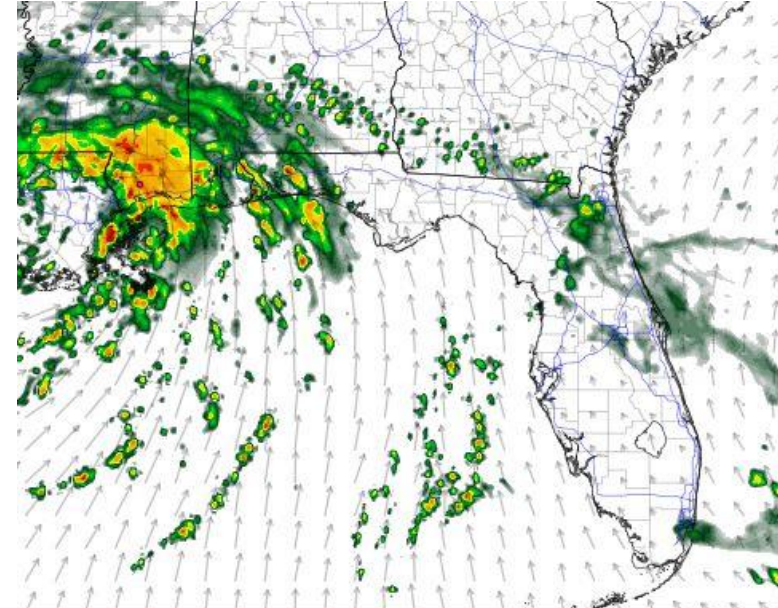
*****Only Model Guidance – Time & Position Will Vary*****



2 PM ET / 1 PM CT
Sunday



8 PM ET / 7 PM CT
Sunday



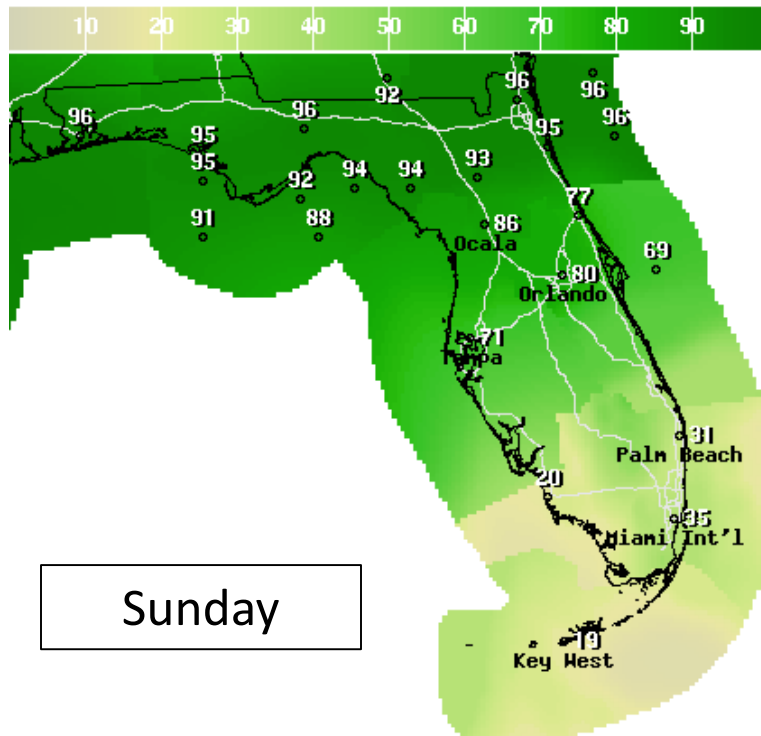
2 AM ET / 1 AM CT
Monday

Widespread rainfall will continue across North Florida and the West Coast today with more scattered activity elsewhere. Tonight, more focused rain banding may set up in the western Panhandle. Isolated tornadoes and flash flooding will remain possible tonight.

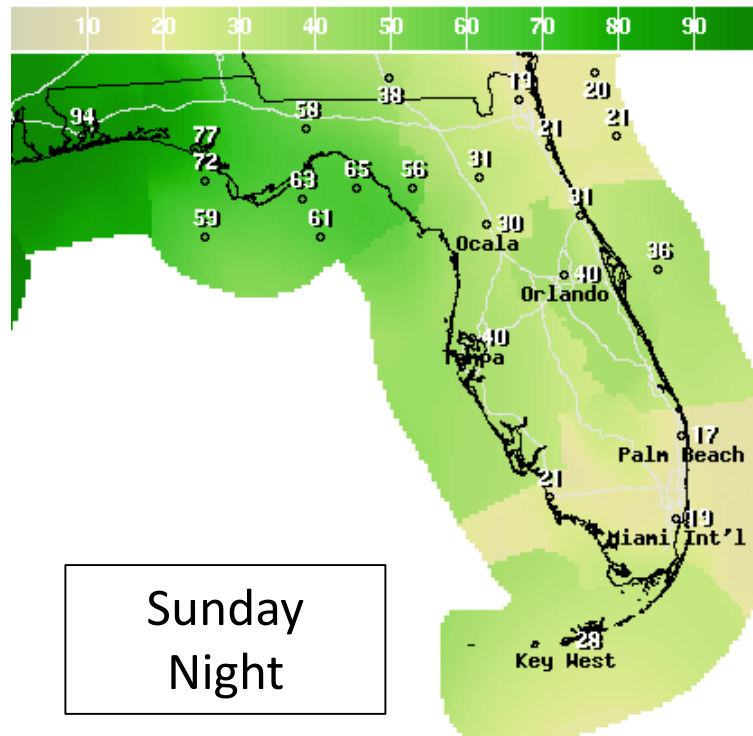


Sunday - Monday

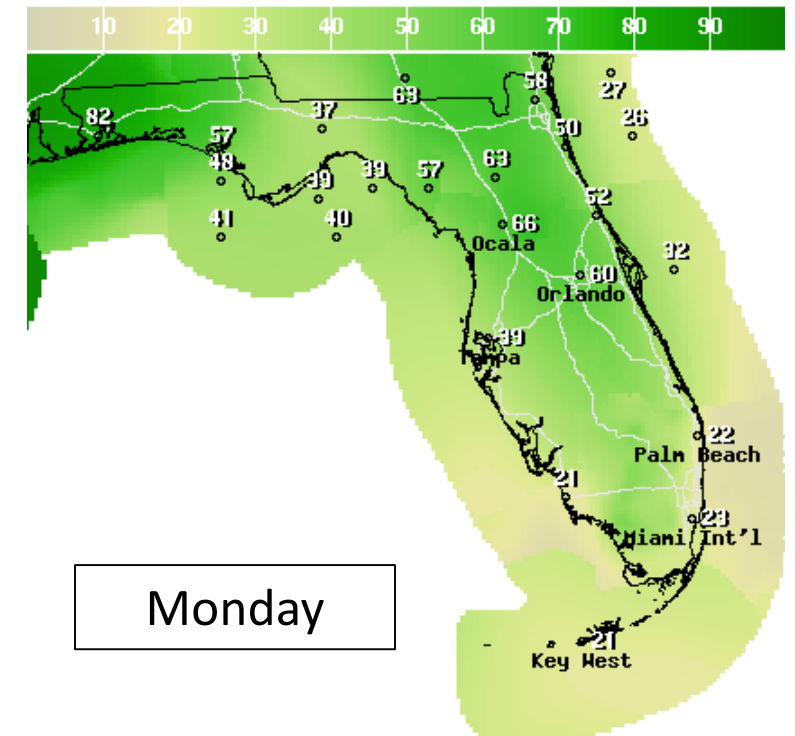
Timing the Event – Cristobal Rainfall



12Hr Prob.Precip(%) Ending Sun Jun 07 2020 8PM EDT
(Mon Jun 08 2020 00Z)
National Digital Forecast Database
10z issuance Graphic created-Jun 07 6:34AM EDT



12Hr Prob.Precip(%) Ending Mon Jun 08 2020 8AM EDT
(Mon Jun 08 2020 12Z)
National Digital Forecast Database
13z issuance Graphic created-Jun 07 9:34AM EDT



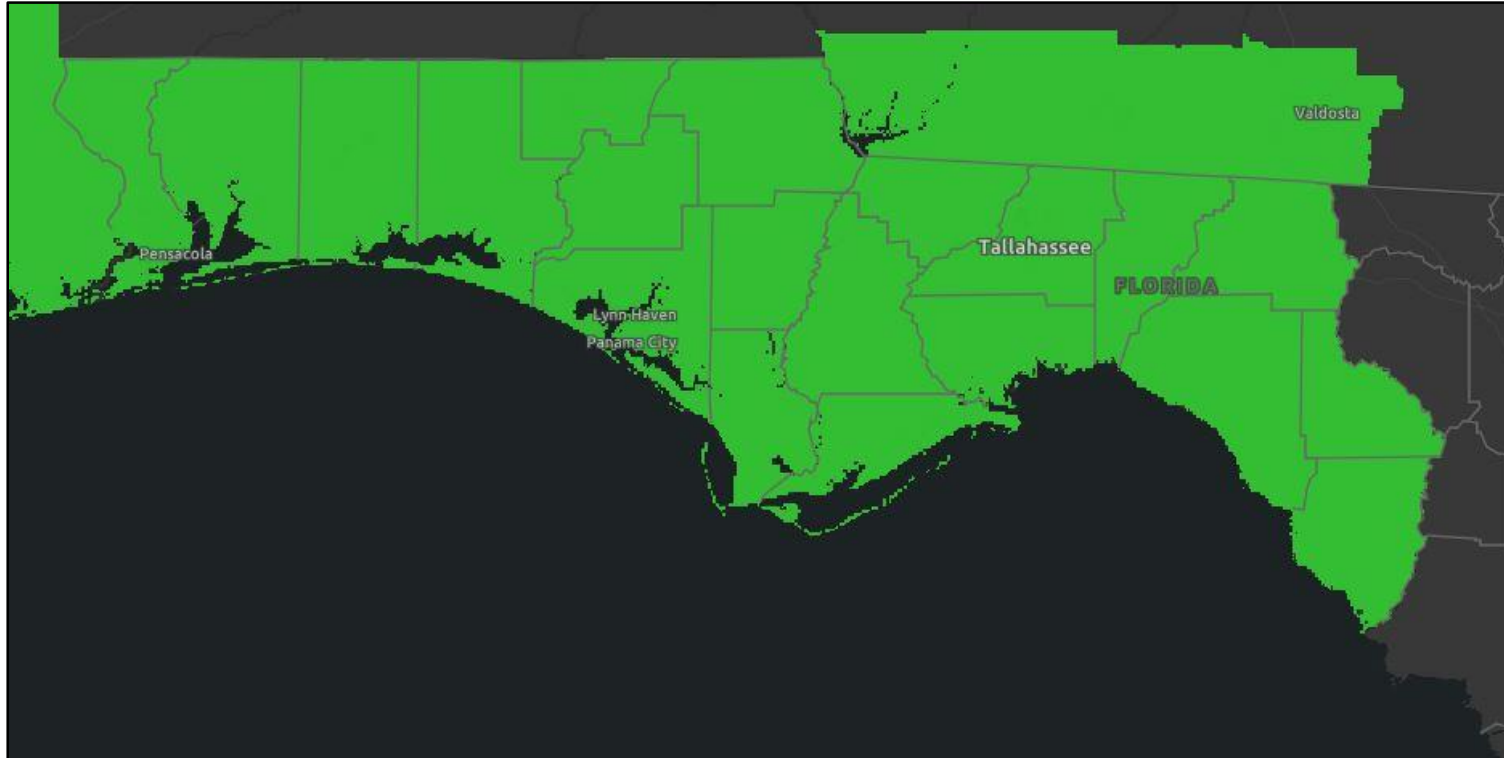
12Hr Prob.Precip(%) Ending Mon Jun 08 2020 8PM EDT
(Tue Jun 09 2020 00Z)
National Digital Forecast Database
13z issuance Graphic created-Jun 07 9:34AM EDT

Widespread rainfall will continue across North Florida and the West Coast today. Tonight, more focused rain banding may set up in the western Panhandle. On Monday, rain bands continue in the Panhandle with scattered thunderstorms across the rest of the state in the afternoon.



Flash Flood Watches

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



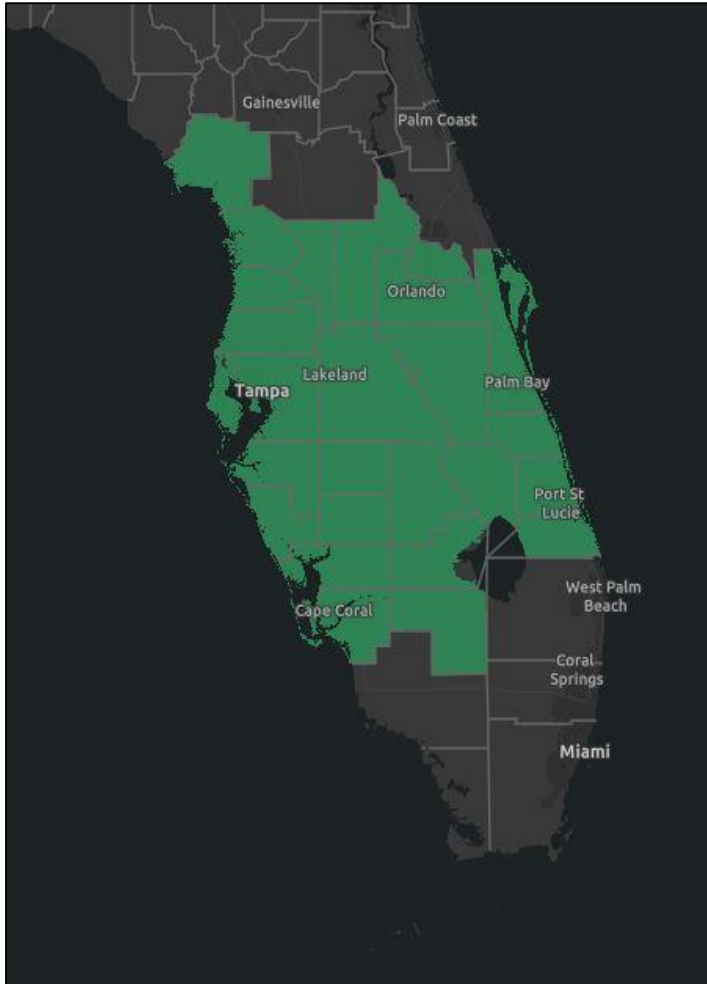
The Flash Flood Watch expires at 8 PM ET / 7 PM CT SUNDAY for the eastern Panhandle and Big Bend (NWS Tallahassee Area).

It expires at 7 PM CT MONDAY for the western Panhandle including Escambia, Santa Rosa, and Okaloosa County (NWS Mobile Area).



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.

Some parts of the Peninsula have seen 10+” of rain locally over the last few days. Additional rainfall could result in more flooding.

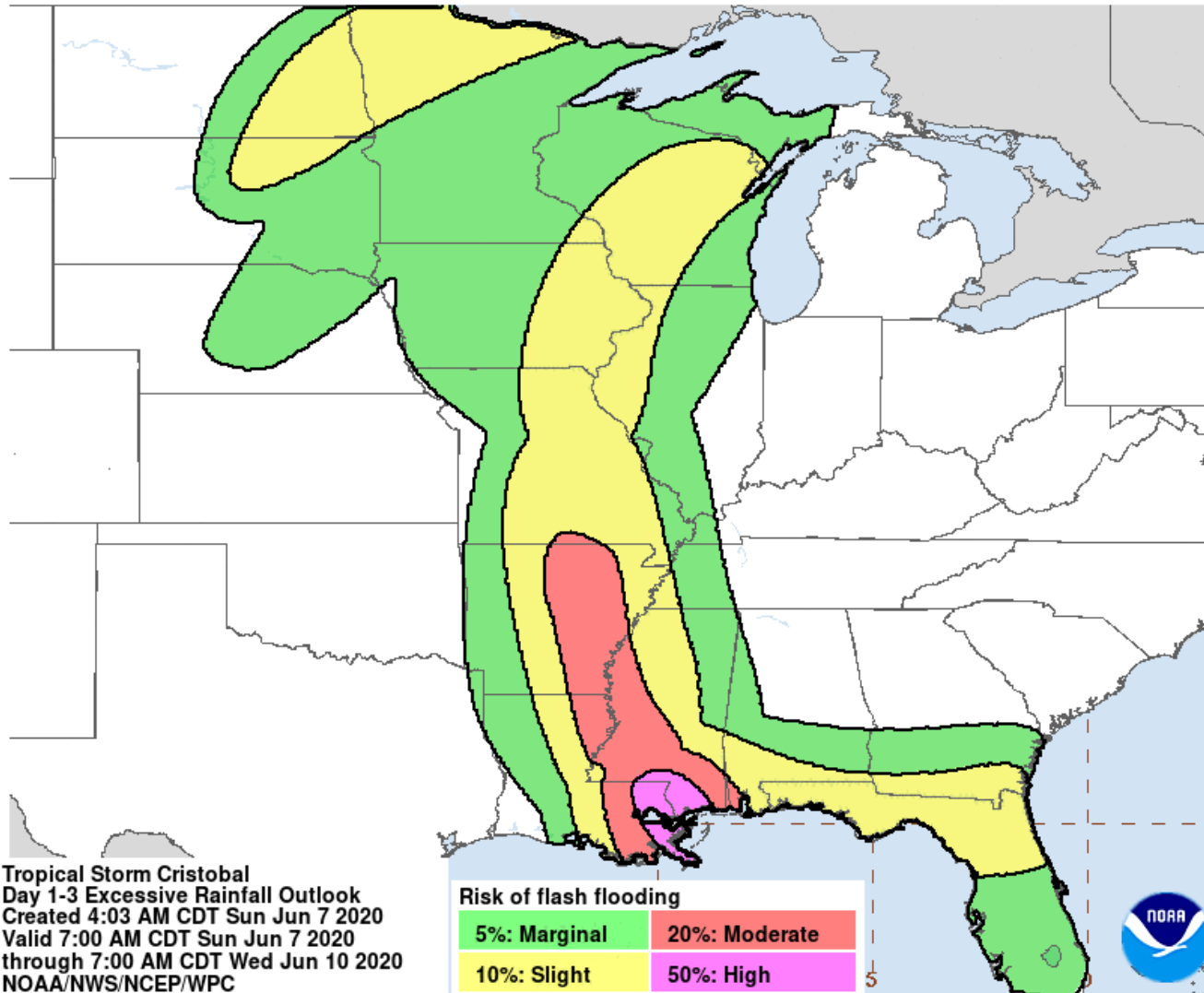
The Flood Watch expires at 8 PM ET today.



Weekend Flash Flood Threat

Flash Flood Outlook

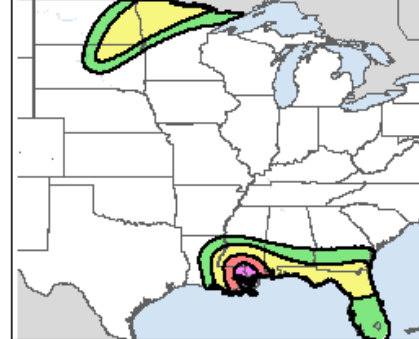
Greatest Flash Flood Risk Over the Next 3 Days



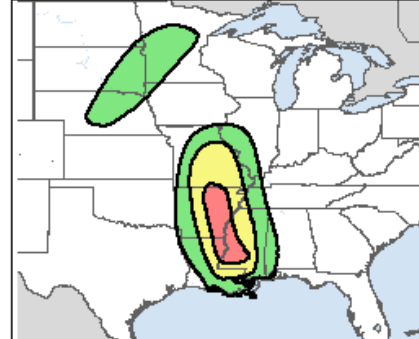
Tropical Storm Cristobal
Day 1-3 Excessive Rainfall Outlook
Created 4:03 AM CDT Sun Jun 7 2020
Valid 7:00 AM CDT Sun Jun 7 2020
through 7:00 AM CDT Wed Jun 10 2020
NOAA/NWS/NCEP/WPC

Risk of flash flooding			
5%: Marginal	20%: Moderate		
10%: Slight	50%: High		

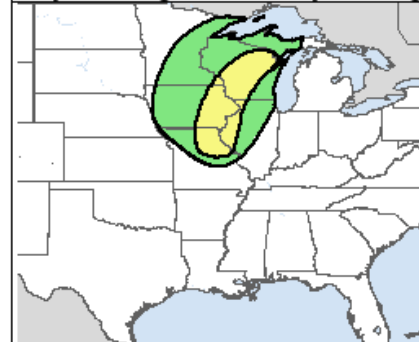
Day 1 Through Monday morning



Day 2 Through Tuesday morning



Day 3 Through Wednesday morning



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







The focus will shift to the western Panhandle tonight and Monday morning.



Weekend Flash Flood Threat

Flash Flood Outlook Key

Understanding WPC Excessive Rainfall Risk Categories

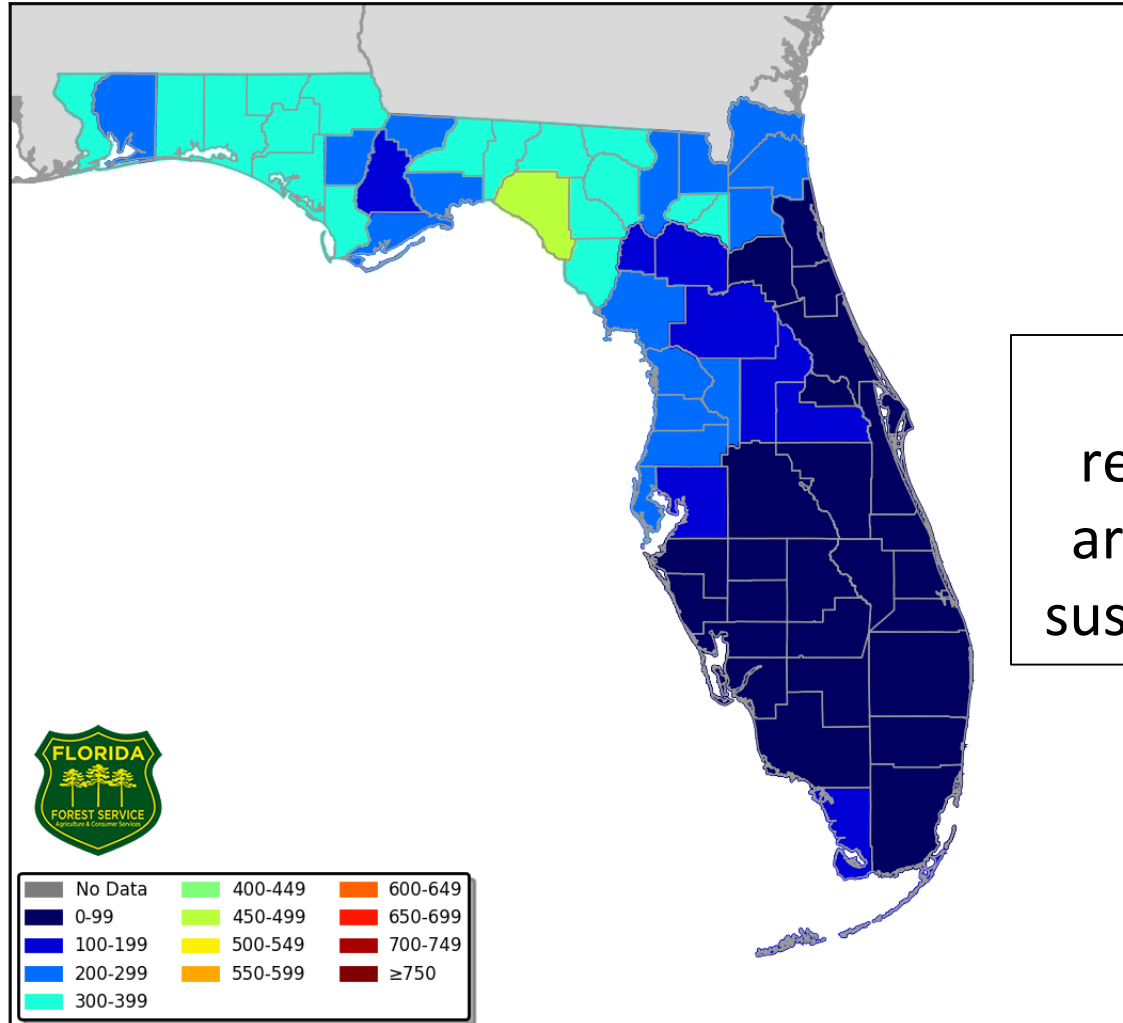
No Area/Label	MARGINAL (MRGL)	SLIGHT (SLGT)	MODERATE (MDT)	HIGH (HIGH)
Flash floods are generally not expected.	Isolated flash floods possible	Scattered flash floods possible	Numerous flash floods likely	Widespread flash floods expected
Localized and primarily affecting places that can experience rapid 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.	
www.wpc.ncep.noaa.gov @NWSWPC				
Flash flooding near me?	Flash Flooding			
NO Flash Flooding				
  WEATHER PREDICTION CENTER				



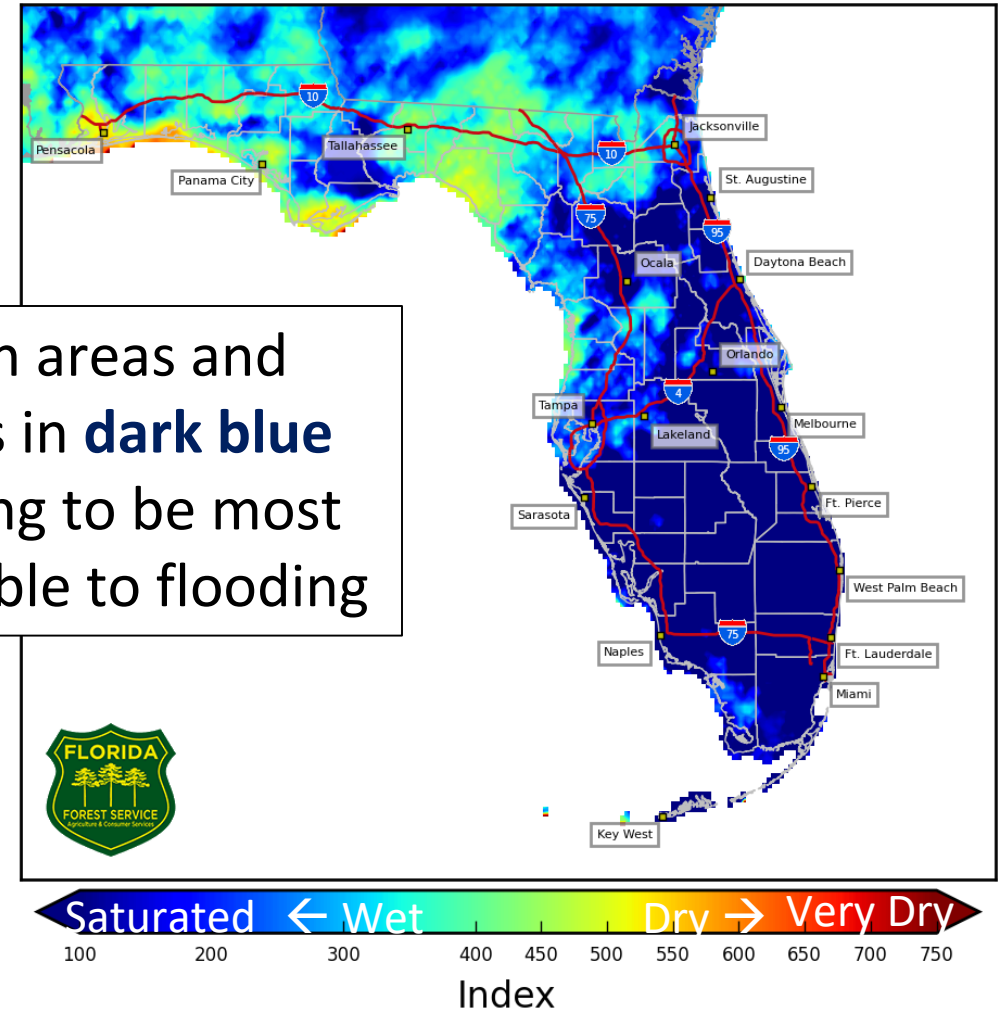
Drought Index – Soil Moisture

KBDI – Full Report from the Florida Forest Service

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



4 km Resolution KBDI
Statewide
June 06, 2020





Possible River Flooding

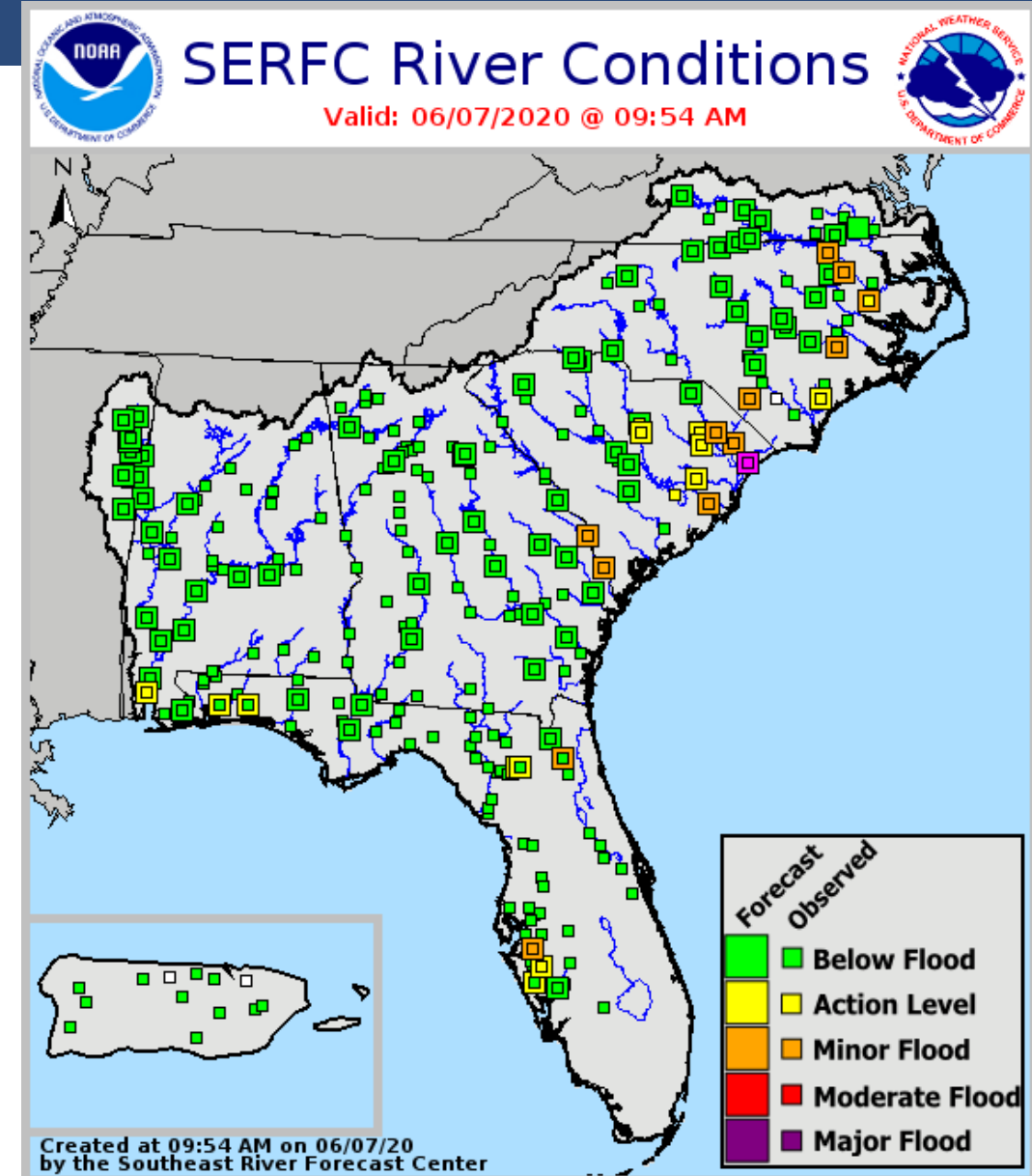
Some minor flooding is possible along some rivers, but it will depend on where exactly the heaviest rain falls.

The [Little Manatee River near Wimauma](#) is in minor flood stage. All other West Coast rivers have crested below flood stage.

Flash flooding is developing across some smaller creeks in Northeast Florida.

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

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



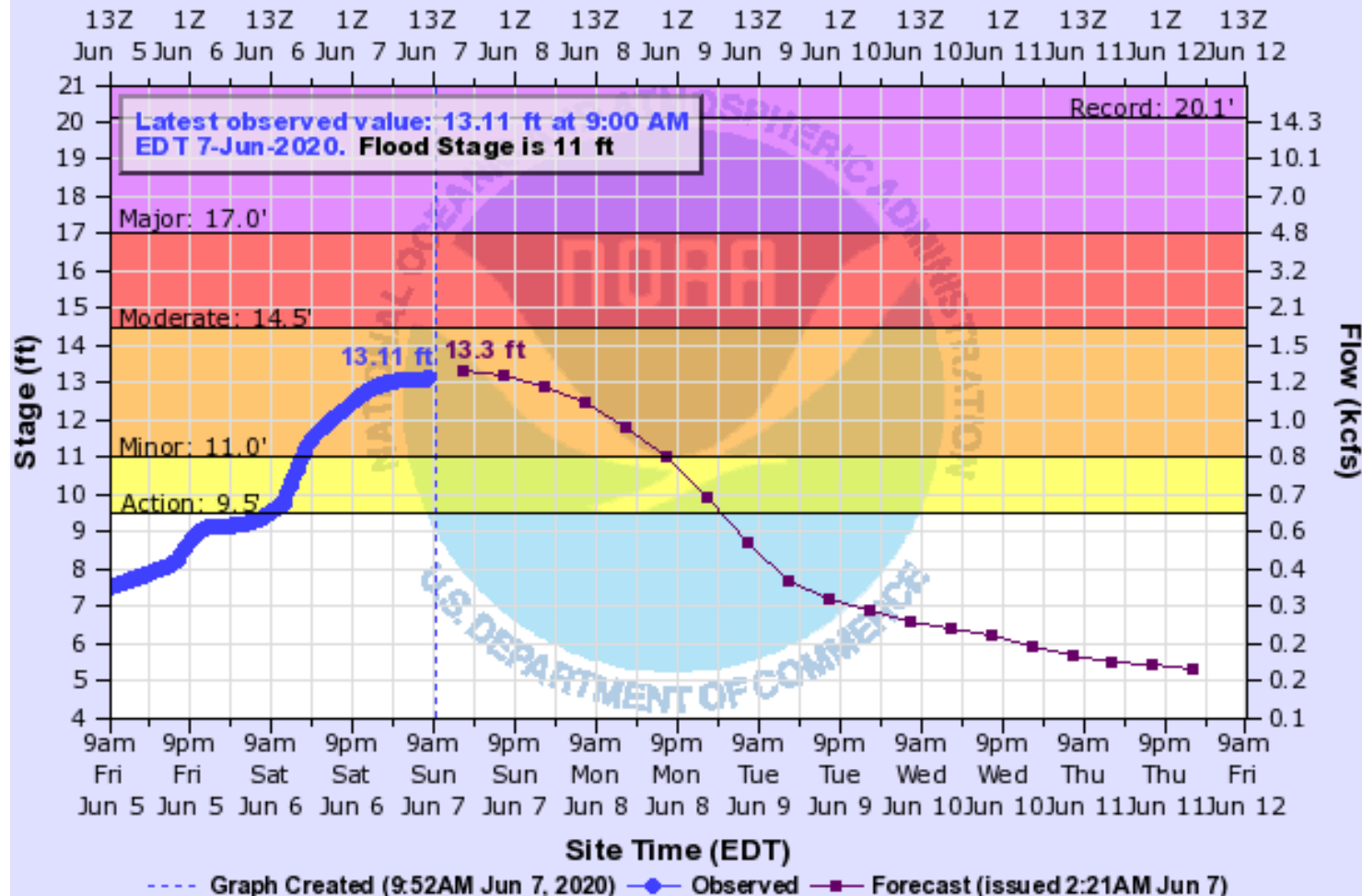


Little Manatee River at Wimauma

[Hydrograph Link](#)

LITTLE MANATEE RIVER (FL) NEAR WIMAUMA AT US 301

Universal Time (UTC)



14.5 Flooding of several houses begins near 32nd and 33rd streets in Ruskin.

13 The canoe rental area floods.

11 The river overflows its banks.

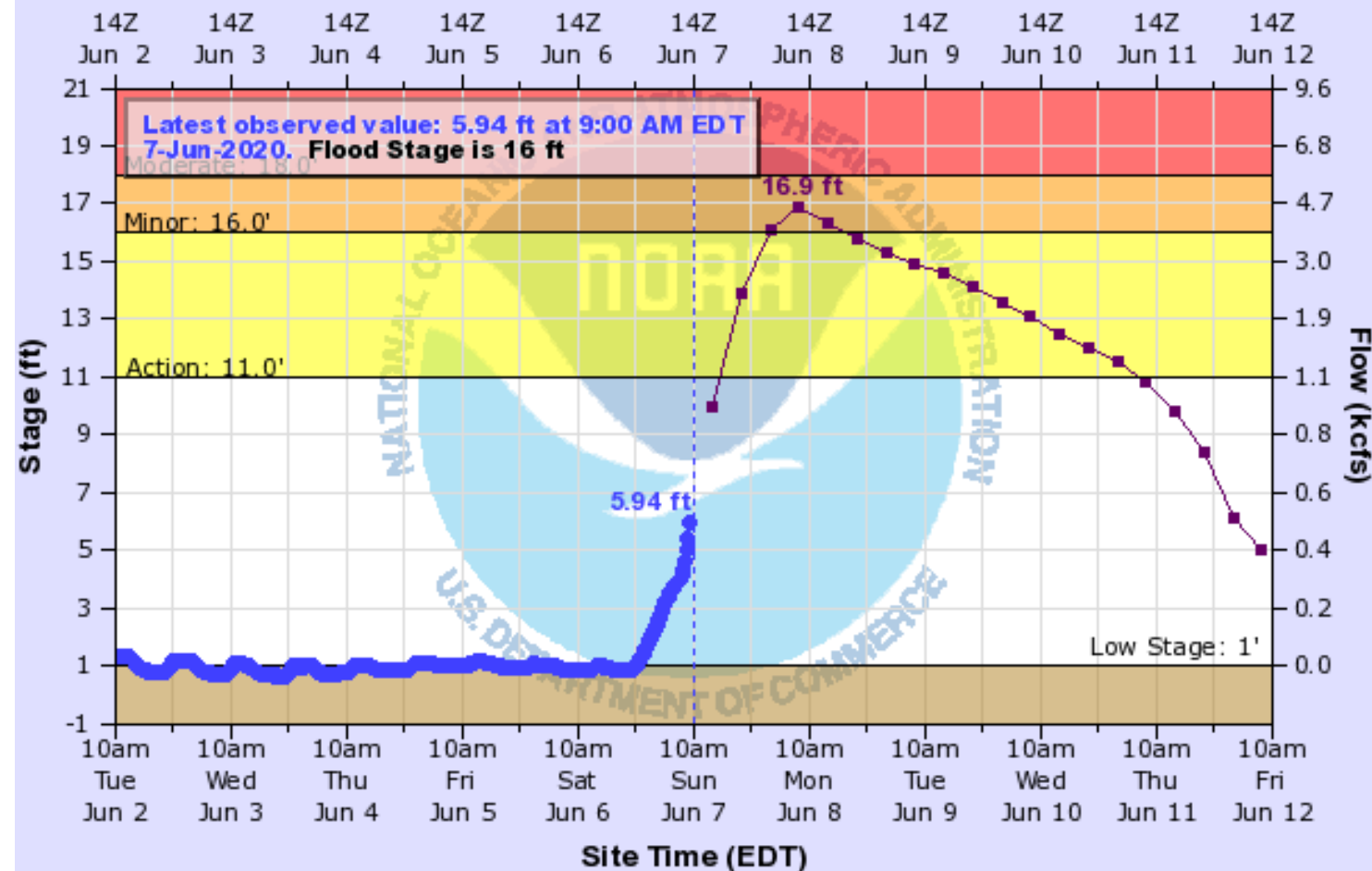


N. Fork Black Creek near Middleburg

[Hydrograph Link](#)

NORTH FORK BLACK CREEK NEAR MIDDLEBURG

Universal Time (UTC)



22 Significant flooding of homes occurs.

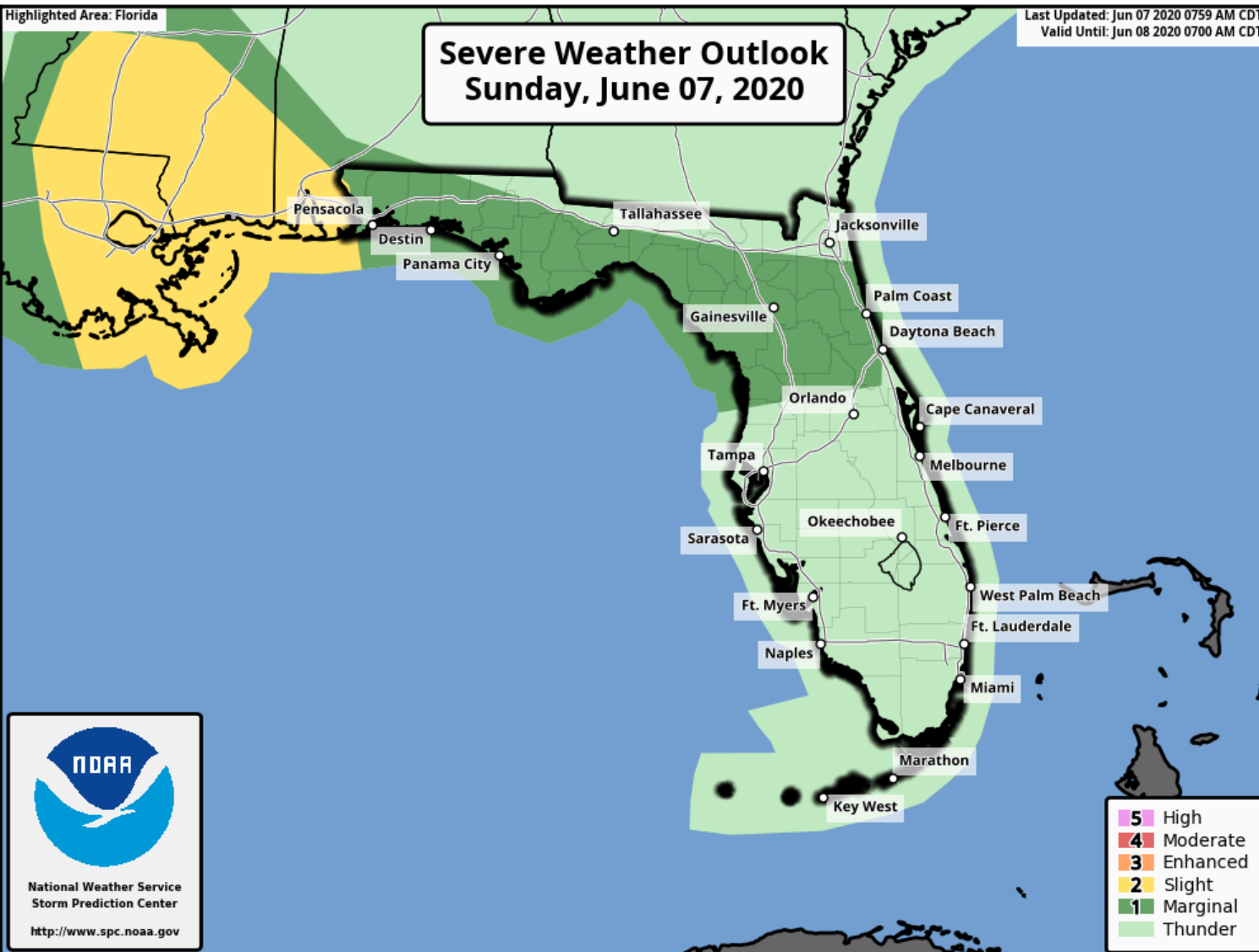
19 Water begins to move into homes.

16 Lazy Acre Road begins to flood.
Lowlands flood and boat docks are affected.

The Creek is forecast to at least reach minor flood stage which is 16'. It will need to be monitored for additional rises if additional heavy rain moves across Northeast Florida later today.



Tornado Risk



As the outer bands from Cristobal move along the Gulf Coast and North Florida today, isolated tornadoes are possible. There is a **Marginal Risk** (level 1 of 5) of Severe Weather.


Tonight, the tornado threat will be confined to the western Panhandle.



Tornado Risk

Severe Weather Outlook Key

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



Severe Thunderstorm Risk Categories

**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"



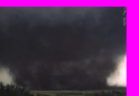
**3 Enhanced Risk
(ENH)** Numerous severe storms possible
More persistent and/or widespread, a few intense
A few tornadoes
Several wind damage reports
Damaging hail, 1"-2"



**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



*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.weather.gov - www.spc.noaa.gov



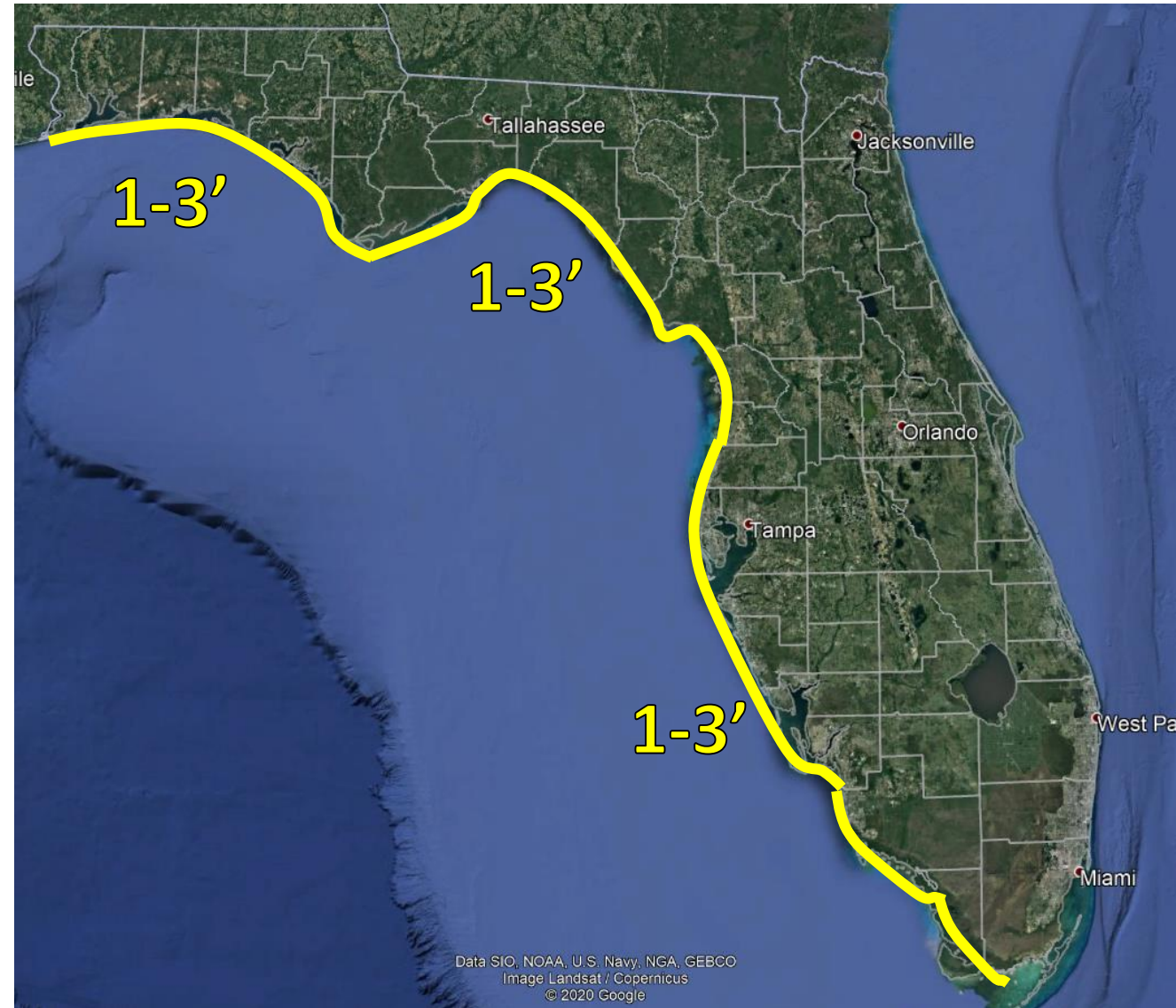
Storm Surge Flooding

This Weekend

Onshore winds associated with Cristobal will result in some minor coastal flooding along the Gulf Coast. Tides are running 1-3' above normal along the entire Gulf Coast, and will continue into tonight.

Please see the numerous Coastal Flood Advisories and Coastal Flood Statements from the local NWS offices for details.

Includes Pensacola Bay and Tampa Bay

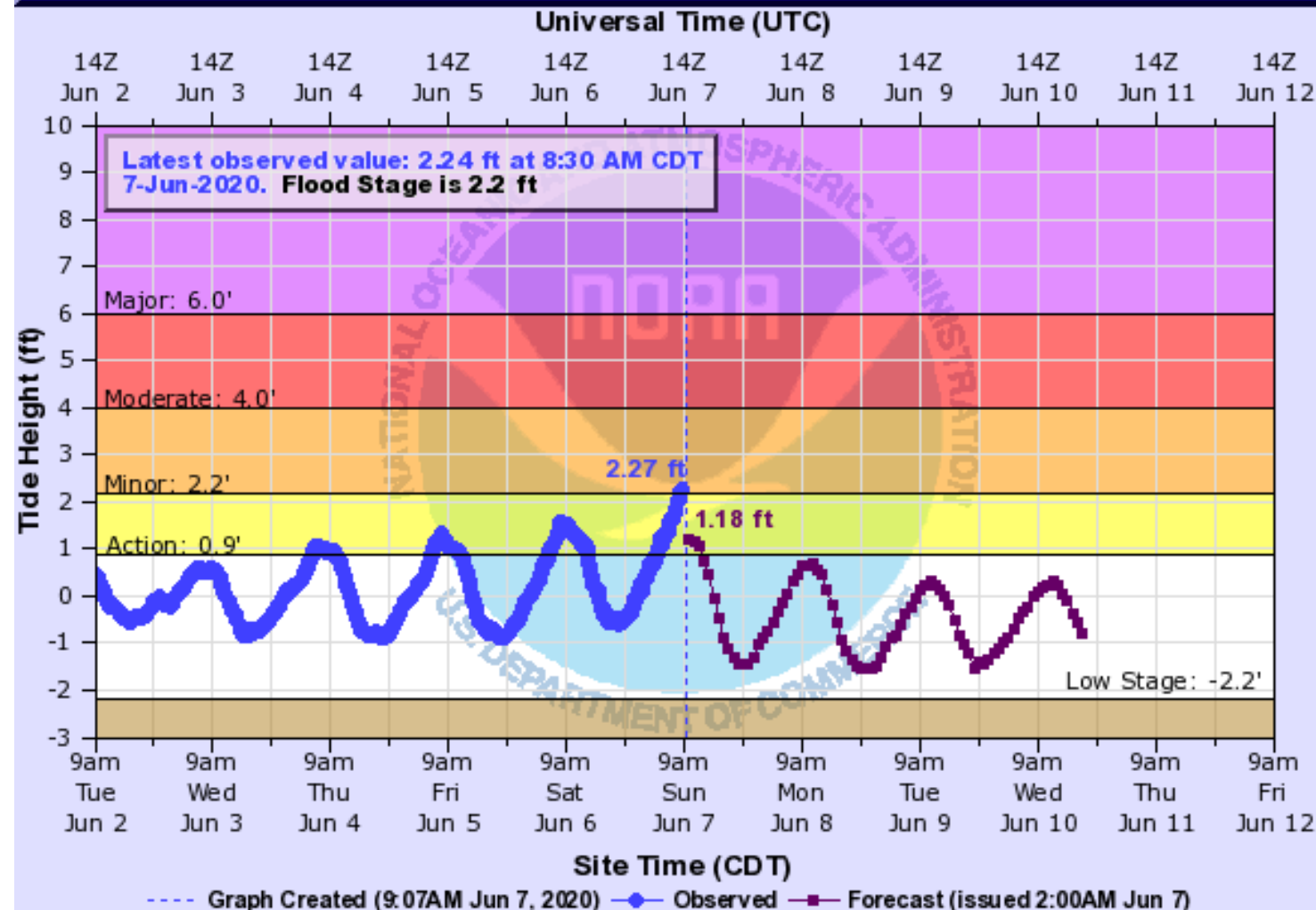




Gulf of Mexico at Panama City Beach

[Hydrograph Link](#)

GULF OF MEXICO TIDE GAUGE AT PANAMA CITY BEACH (IN MHHW)



3 Water begins to flood low lying areas in Camp Helen State Park and on south facing portions of Powell Lake in Bay County. Areas near beach access continue to flood. Erosion from wave action begins along the Bay County Beaches.

2.2 Where breaks in the dune line to beach access exist, water begins to flood access areas from Inlet Beach to St Andrews State Park in Panama City Beach.

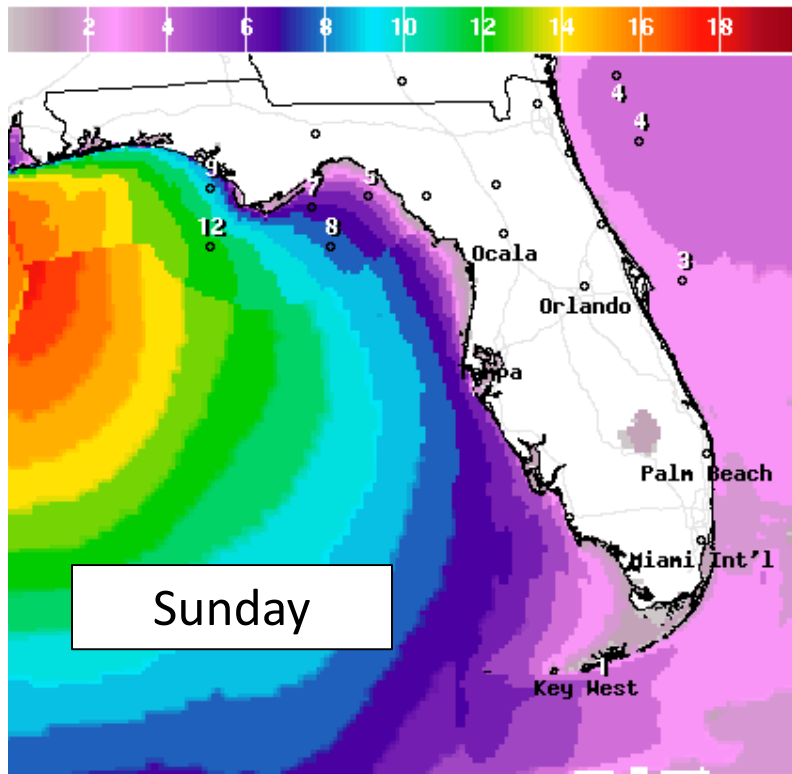
1.7 Water reaches the dune line in several places along the Bay County Beaches.

High tide this morning and again this evening may result in minor flooding.



Forecast Wave Heights

Early This Week



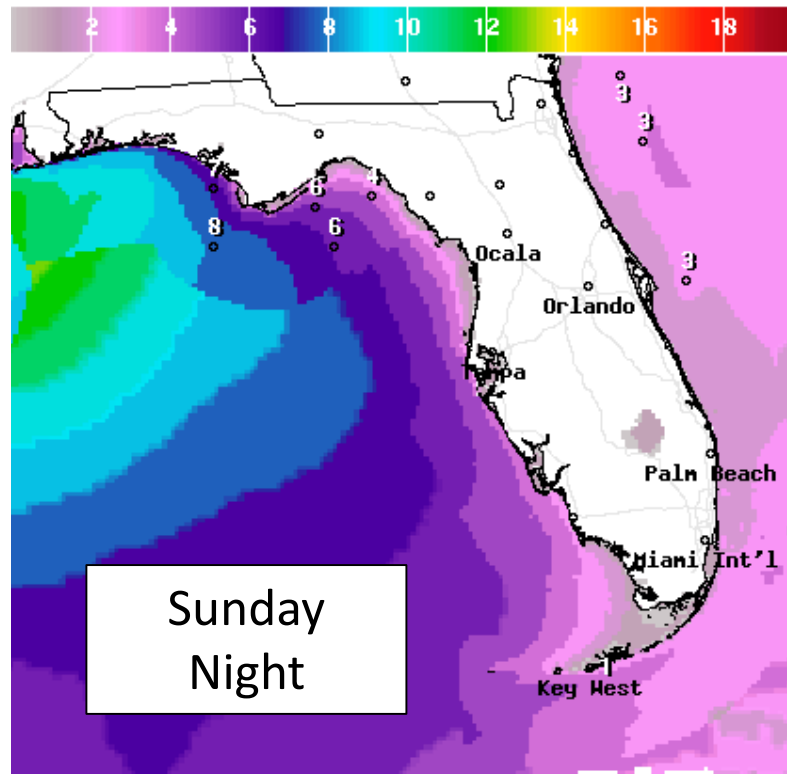
Wave Height(ft) Ending Sun Jun 07 2020 8PM EDT
(Mon Jun 08 2020 00Z)



National Digital Forecast Database

13z issuance

Graphic created-Jun 07 9:28AM EDT



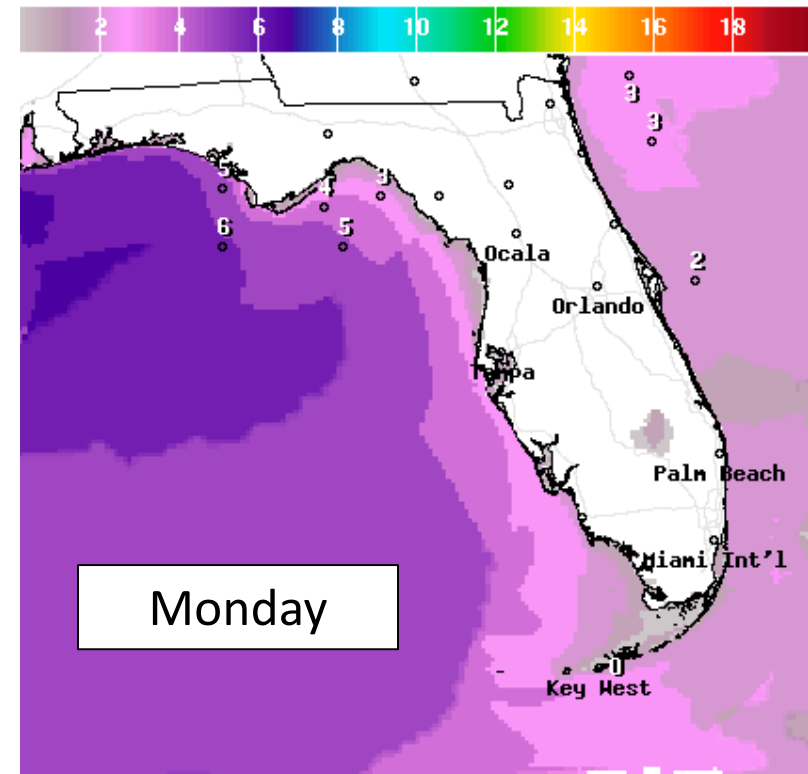
Wave Height(ft) Ending Mon Jun 08 2020 8AM EDT
(Mon Jun 08 2020 12Z)



National Digital Forecast Database

13z issuance

Graphic created-Jun 07 9:28AM EDT



Wave Height(ft) Ending Mon Jun 08 2020 8PM EDT
(Tue Jun 09 2020 00Z)



National Digital Forecast Database

13z issuance

Graphic created-Jun 07 9:29AM EDT



High surf of 8-11 feet is expected at western Panhandle Beaches with 4-8 feet along the rest of the Gulf 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: A non-tropical area of low pressure is expected to form a few hundred miles east or northeast of Bermuda within a couple of days. This system could then acquire some subtropical characteristics by mid-to-late week while the low meanders over the western Atlantic. This system is not expected to pose a direct threat to the United States.

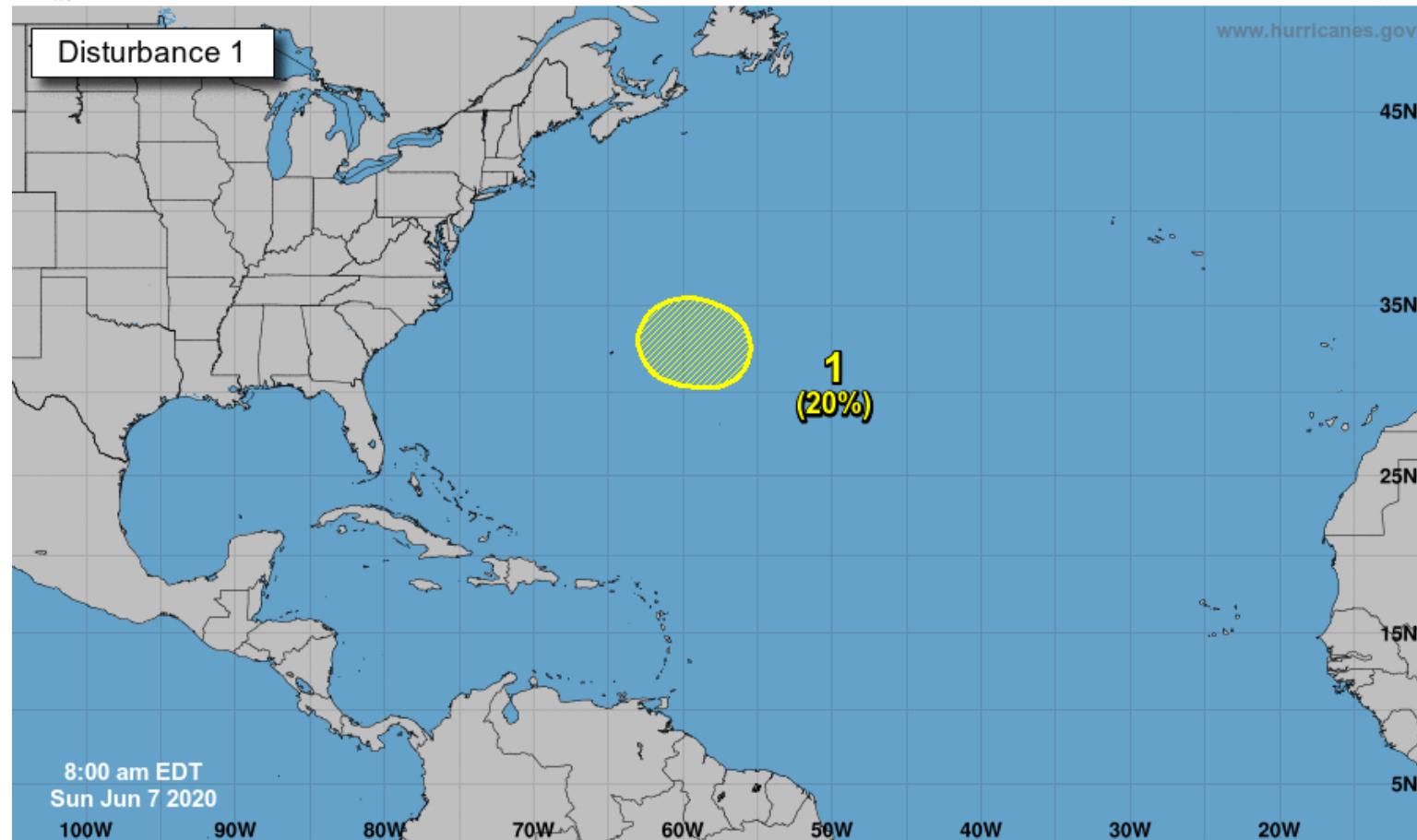
*Formation chance through 48 hours...low...near 0 percent.

*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 90 miles south of New Orleans, Louisiana, or about 200 miles west-southwest of Pensacola, Florida.
- Cristobal is expected to make landfall in Louisiana over the next few hours as it moves to the north at 12 mph. The system remains asymmetrical with much of the heavy rainfall well to the east of the center and where landfall occurs.
- Maximum sustained winds are near 50 mph. No change in strength is expected before landfall later today.

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 meanders near Bermuda for the next several days.
- This system is not expected to pose a direct threat to the United States at this time.
- The odds of development over the next 48 hours is near 0%, but 20% (low chance) over the next 5 days.

Florida Outlook:

- A **Tropical Storm Warning** is in effect from the AL/FL border (Escambia County) to the Okaloosa/Walton County Line. While sustained tropical storm force winds are not expected elsewhere, gust up to 50 mph are possible in heavier showers/thunderstorms.
 - **Tropical Storm Warning:** Escambia, Santa Rosa, and Okaloosa Counties
- Tides will be running 1-3' above normal along the Gulf Coast. Coastal Flood Advisories/Statements are in effect through Sunday evening for the entire Gulf Coast.
- An **Areal Flood Watch** is in effect for much of Central Florida.
 - **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, Glades, Hendry, Charlotte, and Lee
- A **Flash Flood Watch** is in effect for the Panhandle and Big Bend.
 - **Flash Flood Watch:** Escambia, Santa Rosa, Okaloosa, Walton, Bay, Gulf, Washington, Holmes, Calhoun, Jackson, Franklin, Calhoun, Gadsden, Leon, Wakulla, Jefferson, Taylor, Dixie, Lafayette, and Madison.
- Rain bands and training thunderstorms will result in locally heavy rainfall in North Florida today, and some locations may see over 10" of rain. This is most likely to occur in the Big Bend and Northeast Florida today and the western Panhandle tonight.
- Minor river flooding is ongoing along the Little Manatee River. Additional rivers are likely to see rises as well, especially in Northeast Florida and the Panhandle.
- Isolated tornadoes will be possible in some of the outer bands, and the Storm Prediction Center has outlined North Florida in a Marginal Risk for severe weather (level 1 of 5) today, with the threat shifting to the western Panhandle tonight.
- Dangerous rip currents and beach erosion are expected at Gulf Coast beaches. Breaking waves of 8-11' are forecast in the western Panhandle and 4-8' across the rest of the Gulf Coast.

The next briefing packet will be sent out Sunday 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.



TROPICAL UPDATE



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State Meteorological Support Unit

Florida Division of Emergency Management

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