

TROPICAL UPDATE

FDF



Sunday, August 23, 2020 Tropical Storm Laura – Near Haiti Hurricane Marco – Central Gulf of Mexico

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.

Tropical Storm Laura Sunday, August 23



Overview/Recent Changes:

Slight shift west in the forecast track continued today. Threats continue to remain the same for South Florida and the Keys gusty winds to tropical storm force, locally heavy rainfall in squalls, and isolated tornadoes. Storm surge will remain less than 3'. Impacts to Northwest Florida in terms of wind, rain, and surge are decrease. Dangerous surf conditions are expected along the entire Gulf Coast.

Hurricane Marco Sunday, August 23



Overview/Recent Changes:

Marco strengthened as expected to a Category 1 Hurricane today with maximum sustained winds of 75 mph. No changes to the forecast track or intensity today. While no watches or warnings are currently in effect for Marco in Florida, gusty winds, isolated tornadoes, and heavy rainfall will be possible in the Panhandle from the outer rain bands starting tonight.





GOES-16 Channel 2 (visible) Reflectance at 20:07Z Aug 23, 2020 ROPICALTIDBITS.COM Bahamas Cuba Dominican Republic Haiti Jamaica

76°W

74°W

80°W

78°W

72°W

70°W

Tropical Storm Laura continues to produce robust thunderstorms across Haiti. The center has moved back over water but may back onshore over Southeast Cuba tonight.



Official Forecast Track

From the National Hurricane Center – Tropical Storm Laura



- The center of Tropical Storm Laura is located about 50 miles south of Guantanamo, Cuba, or about 550 miles southeast of Key West, Florida.
- Maximum sustained winds have increased to 60mph.
 Laura's strength should remain nearly steady as it passes near or over Cuba followed by significant strengthening over the Gulf of Mexico.
- Laura is moving toward the west-northwest at 21 mph, and a west-northwestward motion should continue for the next few days.
- Laura will likely make its closest approach to the lower Florida Keys on Monday evening. A Tropical Storm Watch is in effect for the Lower and Middle Keys.
- Once in the Gulf of Mexico, a strengthening hurricane is forecast to turn north towards Texas and Louisiana.



Damaging Wind Threat Overview

Tropical Storm Laura

The greatest wind threat is across the lower Florida Keys, where sustained winds of 40-55 mph. Only gusts to tropical storm force are currently forecast across the rest of the Florida Keys.

It is too early to determine the wind threat to Northwest Florida due to Laura, if there is any at all.

> https://www.weather.gov/srh/tropical?office=mfl Click on "Threats and Impacts" Tab







Wind Watches and Warnings

In Effect Until Further Notice

Tropical Storm Watches are in effect for the Lower and Middle Florida Keys – including– The Dry Tortugas, Key West, and Marathon.

It has been cancelled for the Upper Keys, including Key Largo.



Tropical Storm & Hurricanes Watches Versus Warnings





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

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

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





ther.gov/mob

TS Laura: Time of Arrival & Wind Speed Probabilities

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



Key West: 18% (-1) Marathon: 12% (+1) Naples: 9% (-0) Pensacola: 7% (-4)

Tropical storm force winds may begin on Monday morning in the Florida Keys, but most likely later in the day.

Chances for Tropical Storm Force winds have decreased in the western Panhandle from Laura as the track continues to shift west.



Maximum Wind Gusts

Next 24 Hours

Wind gusts to 45 mph are possible across far South Florida and the Florida Keys tonight and Monday from Tropical Storm Laura.

Gusts to 30 mph are possible across the rest of the Peninsula.

Tropical Storm Watches are in effect for the Florida Keys, were gust are likely to be more frequent!

In the western Panhandle, gusts to 35 mph are possible tonight and Monday.

Higher gusts are possible in heavy shower or thunderstorms possible.



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Flood Threat Overview

Tropical Storm Laura

The greatest flood threat is across far South Florida and the Florida Keys, where a localized flash flood is possible as some outer rain bands move through the area on Monday.

A widespread 1" of rain is expected with localized areas picking up 3-4"

https://www.weather.gov/srh/tropical? office=mfl Click on "Threats and Impacts" Tab

> 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





Tornado Threat Overview

From the Storm Prediction Center - Tropical Storm Laura

Isolated tornadoes are possible in the outer bands of Laura across far South Florida and the Florida Keys on Monday.



THUNDERSTORMS	1 - MARGINAL	2 - SLIGHT	3 - ENHANCED	4 - MODERATE	5 - HIGH
(no label)	(MRGL)	(SLGT)	(ENH)	(MDT)	(HIGH)
No severe*	Isolated severe	Scattered	Numerous	Widespread	Widespread
thunderstorms	thunderstorms	severe storms	severe storms	severe storms	severe storms
expected	possible	possible	possible	likely	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.



https://www.weather.gov/srh/tropical? office=mfl Click on "Threats and Impacts" Tab



National Weather Service





Storm Surge Threat Overview

Tropical Storm Laura

...<u>COASTAL FLOOD WATCH IN EFFECT...</u>

* WHAT...The passage of Tropical Storm Laura to our west Monday and Monday night will result in strong southeast breezes across the Florida Keys. Tidal anomalies are running about three quarters of a foot above normal, and Laura could result in one to two additional feet of saltwater flooding, especially along south facing shorelines and canals.

* WHERE...Upper Florida Keys, Middle Florida Keys and Lower Florida Keys.

* WHEN...From this evening through late Monday night, especially at the times of high tide. High tides are twice a day over the next two days, with the highest tide occurring a few hours after midnight.

* IMPACTS...Some roads may be closed. Low-lying property including homes, businesses, docks, seawalls and some critical infrastructure may be inundated. Some shoreline erosion may occur.

It is too early to determine the surge threat, if any, in Northwest Florida due to Laura.

https://www.weather.gov/srh/tropical? <u>office=mfl</u> Click on "Threats and Impacts" Tab



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



GOES-16 Channel 2 (visible) Reflectance at 20:12Z Aug 23, 2020 TROPICALTIDBITS Louisiana Florida

88°W

86°W

84°W

Marco continues to have a small core of thunderstorms around the center, but it did strengthen to a hurricane. More showers and thunderstorms continue to be located on the north and eastern side of the system.



26°N

92°W

90°W

Official Forecast Track

From the National Hurricane Center – Hurricane Marco



- The center of Marco is located about 300 miles south-southwest of Pensacola, Florida.
- Maximum sustained winds are near 75 mph, making Marco a Category 1 Hurricane.
- Marco is moving toward the NNW at 13 mph. A turn toward the northwest is expected on Monday as it nears the coast of Louisiana.
- **Wind shear is keeping most of the showers and thunderstorms east of the center. Even as the storm turns west, numerous rain bands are expected in the western Panhandle on Monday**

Hurr Marco: Time of Arrival & Wind Speed Probabilities

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



Pensacola: 5% (-3)

Chances for tropical storm force winds from Tropical Storm Marco have decreased across the western Panhandle and are only going to be possible in gusts in any strong thunderstorms on Monday.

Tornado Threat Overview

From the Storm Prediction Center – Hurricane Marco

Isolated tornadoes are possible in the outer bands of Marco across coastal sections of the Panhandle tonight and through the day on Monday.

The threat may spread inland Monday afternoon.



Understanding Severe Thunderstorm Risk Categories

THUNDERSTORMS	1 - MARGINAL	2 - SLIGHT	3 - ENHANCED	4 - MODERATE	5 - HIGH
(no label)	(MRGL)	(SLGT)	(ENH)	(MDT)	(HIGH)
No severe*	Isolated severe	Scattered	Numerous	Widespread	Widespread
thunderstorms	thunderstorms	severe storms	severe storms	severe storms	severe storms
expected	possible	possible	possible	likely	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
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https://www.weather.gov/srh/tropical? office=mob Click on "Threats and Impacts" Tab

Sarasota

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National Weather Service www.spc.noaa.dov

ightning and the potential for flooding. Categories are also tied to the probability of a severe weather event within 25 miles of your location



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Flood Threat Overview

Hurricane Marco

The greatest flood threat is across the far western Panhandlein the urban areas of Pensacola. Outer rain bands may train over the same area on Monday and poses a flash flood threat.

A widespread 2-4" of rain is expected with localized areas picking up 6".

Flash Flood Watch for southern Escambia County through Tuesday morning.





https://www.weather.gov/srh/tropical? <u>office=mob</u> Click on "Threats and Impacts" Tab Flooding Rain ThreatPotential for extreme flooding rainPotential for major flooding rainPotential for moderate flooding rainPotential for localized flooding rainLittle to no potential for flooding rain

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 lineHIGH: > 50%SLGT: 10%-20%MDT: 20%-50%MRGL: 5%-10%

An isolated case of flash flooding is possible across the Florida Panhandle starting later today and continuing through Tuesday. A more focused flash flood threat is expected in Pensacola on Monday as Marco makes landfall to the west.



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
www.wpc.ncep.noaa.gov @NWSWPC	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.
Flash Flooding flooding near me? NO Flash Flooding	1 < 1 < 1	$\{1,2,3,4,1\}$	inter a list	
WEATHER PREDICTION CENTER	withi HIG		ling flash flood gu bint to the right of SLGT: 10%-209 MRGL: 5%-109	a line



Model Forecast Radar

Only Model Guidance – Time & Position Will Vary*



Even with Hurricane Marco remaining west of Florida towards Louisiana and Mississippi, the system remains lopsided with plenty of rain bands well east of the center. Gusty winds and heavy rainfall will move through the western Florida Panhandle this evening, tonight, and throughout the day on Monday.



Storm Surge Threat Overview

Hurricane Marco

...<u>COASTAL FLOOD ADVISORY</u> IN EFFECT...

*WHAT...Minor coastal flooding.

* WHERE...In Florida, Escambia Coastal, Santa Rosa Coastal and Okaloosa Coastal Counties.

* WHEN...until 7 PM CDT Wednesday.

* IMPACTS...Minor flooding of lots, parks, and roads with only isolated road closures expected. Dangerous swimming and surfing conditions and localized beach erosion.

* ADDITIONAL DETAILS...For coastal flooding, water levels along the Alabama and the western Florida panhandle coasts are expected to range from 1 to 3 feet above normally dry ground, especially around the time that Hurricane Marco makes landfall to the west of our area on Monday afternoon and then again around the times of astronomical high tides on Tuesday and Wednesday as Hurricane Laura moves northwest across the Gulf. This will produce minor coastal flooding at the normally flood prone areas along the coast.



1-2' the rest of the Panhandle and Apalachee Bay



Forecast Wave Heights

Early This Week





High Surf Advisory from midnight tonight to midnight Tuesday.

High surf of 7-9 feet is expected at Panhandle Beaches with 4-8 feet along the Atlantic. High wave heights will continue through mid-week as Marco departs and Laura moves into the Gulf. Minor beach erosion is likely with a few spots of more significant erosion possible in the western Panhandle.



Rip Current Outlook



Elevated rip current risk statewide tomorrow, with the greatest threat in the Panhandle and Southeast Florida.





Forecast Rainfall Totals Next 5 Days

- A widespread 2-4" expected in the Panhandle with 1-2" elsewhere.
- Locally 6-8" in the western Panhandle.
- Storms will be very efficient rainfall producers, and could produce 2-4" of rain within an hour.





Overall Summary

<u>Tropical Storm Laura – Near Haiti</u>

- The center of Tropical Storm Laura is located about 50 miles south of Guantanamo, Cuba, or about 550 miles southeast of Key West, Florida.
- Maximum sustained winds have increased to 50 mph. Laura's strength should remain nearly steady as it passes near or over Haiti and Cuba.
- Laura is moving toward the west-northwest at 18 mph, and a west-northwestward motion should continue for the next few days.
- Laura will likely make its closest approach to the lower Florida Keys on Monday evening.
- Once in the Gulf of Mexico, there is uncertainty regarding where Laura will track and how much Marco could influence that track. Changes to the track are possible. For now a strengthening hurricane is forecast to turn north towards Texas and Louisiana in a few days.

Hurricane Marco – Central Gulf of Mexico

- The center of Marco is located about 300 miles south-southwest of Pensacola, Florida, moving to the north-northwest at 13 mph.
- A turn towards the northwest is expected on Monday as it nears the coast of Louisiana.
- Maximum sustained winds are near 75 mph, making Marco a Category 1 Hurricane.
- Wind shear is keeping most of the showers and thunderstorms east of the center, hence the tropical storm watches and warnings for Mississippi and Alabama. Rain bands are already nearing the central U.S. Gulf Coast.



Florida Summary

Florida Outlook:

- Tropical Storm Laura:
 - A Tropical Storm Watch is in effect for the Lower and Middle Florida Keys. It has been cancelled for the Upper Keys.
 - Tropical storm force winds could begin on Monday in the Florida Keys, with gusts general 35-55 mph in squalls.
 - Storm surge in the Keys will likely remain 2.5' or less at high tide. If combined with heavy rainfall, then some flooding may occur.
 - Isolated tornadoes are possible in any outer bands across South Florida and the Keys Monday.
 - Locally heavy rainfall may lead to isolated flash flooding in urban areas of far South Florida and the Keys on Monday.
 - Dangerous rip currents and high surf are expected at all Florida beaches from Laura and Marco. Minor to locally significant beach erosion is expected. Wave heights 4-8' along Atlantic beaches.
- Hurricane Marco:
 - Even with the center going west of Florida, rainfall extends well east of the center and will impact the Panhandle tonight and Monday.
 - Flash Flood Watch for coastal Escambia County until midnight Tuesday.
 - Locally heavy rainfall may lead to isolated flash flooding, especially where outer bands train over the same areas in the western Panhandle. 2-4" of rain are forecast, with localized totals of 6-8".
 - Depending on how much rain falls, minor river flooding is possible over the next few days.
 - Storm surge of 1-2' is expected currently in the Panhandle/Big Bend, which should result in only minor coastal flooding at high tides.
 - Isolated tornadoes are possible in any other bands across the Florida Panhandle tonight and throughout Monday, especially along the immediate coast. The threat may spread inland on Monday.
 - Dangerous rip currents and high surf are expected at all Florida beaches from Laura and Marco. Minor to locally significant beach erosion is expected. Wave heights 7-9' in the western Panhandle on Monday.
- The next briefing packet will be issued late Monday morning with the 11 AM advisory. For the latest information on the tropics, please visit the National Hurricane Center website at <u>www.hurricanes.gov</u>.



TROPICAL UPDATE



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