

## TROPICAL UPDATE



5:00 PM EDT Monday, October 5, 2020 Tropical Depression Gamma & Tropical Storm Delta

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.



#### Satellite Imagery Tropical Storm Delta – Central Caribbean

GOES-16 Channel 2 (visible) Reflectance at 19:25Z Oct 05, 2020

FDEM



Delta continues to organize and has formed a small but well-defined core. The small size of the system makes it easier to intensify and periods of rapid intensification are possible overnight.



## Official Forecast Track

#### From the National Hurricane Center – Tropical Storm Delta



- Tropical Storm Delta continues to organize today and is nearing hurricane strength. Maximum sustained winds are now near 70 mph.
- The center of Delta is located about 150 miles southwest of Jamaica, and moving to the west at 8 mph.
- Delta will continue to strengthen (possibly rapidly at times) and is forecast to be a Category 3 Major Hurricane as it moves across the central Gulf of Mexico.
- Later this week, the system will approach the northern Gulf Coast after it has a complicated interaction with the remnants of Gamma and an approaching cold front.



### Wind Shear

Is the environment favorable for the systems?

Color denotes the amount of wind shear and the lines denote how it have changed over the last 24 hours (dotted lines show decreasing shear and solid lines show increasing.

Gamma is experiencing high wind shear across the Gulf of Mexico, which continues to weaken the storm.

Delta is experiencing little to no wind shear and is in a very favorable environment. This favorable environment will continue until the system reaches the northern Gulf of Mexico later in the week.



## Dry Air & Saharan Dust

#### Is the environment favorable for the systems?

Color denotes concentration of Saharan Dust or dry, stable air.

Very Dry

Very dry air behind a cold front has moved into the western Gulf of Mexico and is wrapping into the circulation of Gamma. Delta is in an area of high moisture favorable for development until later in the week when it reaches the northern Gulf of Mexico.

#### Very Dry

#### Gamma

Delta

LESS <----- DRY AIR (LOW/MID-LEVEL) AND/OR DUSTY SAL AIRMASS -----> MORE

### Sea Surface Temperatures & Anomalies

#### Is the ocean favorable for the system?

Water temperatures are supportive for tropical development across the entire Caribbean, with very warm, deep water. The recent stretch of storms and cold fronts has cooled waters in the northern Gulf of Mexico, but they remain warm enough to support a hurricane.

Analysis Time: 12z Oct 05 2020

20N



### FDEM CF OF THE GOVERNON

### Key Messages

#### From the National Hurricane Center – Tropical Storm Delta

#### Key Messages for Tropical Storm Delta Advisory 5: 5:00 PM EDT Mon Oct 05, 2020



1. Dangerous storm surge and hurricane conditions are expected within portions of the northern Yucatan Peninsula of Mexico and are possible in extreme western Cuba beginning Tuesday night, and a Hurricane Warning is in effect.

2. Heavy rainfall will affect portions of Jamaica, the Cayman Islands, western Cuba and the northern Yucatan Peninsula during the next few days. This rainfall could lead to significant flash flooding and mudslides.

3. Tropical storm conditions are expected in portions of the Cayman Islands beginning tonight or early Tuesday, and a Tropical Storm Warning is in effect.

4. Delta is forecast to approach the northern Gulf Coast late this week as a hurricane. While there is large uncertainty in the track and intensity forecasts, there is an increasing risk of dangerous storm surge, wind, and rainfall hazards along the coast from Louisiana to the western Florida Panhandle beginning Thursday night or Friday. Residents in these areas should ensure they have their hurricane plan in place and monitor updates to the forecast of Delta.



#### Time of Arrival & Wind Speed Probabilities

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



Tallahassee: 7% (-5) Apalachicola: 11% (-8) Panama City: 15% (-10) Destin: 21% (-7) Pensacola: 28% (-6) Pensacola NAS: 31% (-10)

Tropical storm force winds are not expected in the Florida Keys.

In the Panhandle, if winds were to occur, they are most likely to start Friday evening, but could start as early as Friday morning along the coast.



### Hurricane Wind Speed Probabilities

#### Probabilities of Sustained Hurricane Force Winds (>74 mph)



Apalachicola: <1% (-1) Panama City: 1% (-1) Destin: 1% (-1) Pensacola: 3% (+0) Pensacola NAS: 3% (-2)

The current odds of hurricane force winds in Florida are very low (near or less than 5%).

However, it is early in the forecast and the trends in these numbers should be monitored.



## Flash Flood Outlook for Tuesday

From the Weather Prediction Center (LINK)



• The heavy rain threat returns to South Florida and the Keys on Tuesday as moisture associated with Delta moves into the region.

#### **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 near me?	2 + 2 + 3	(1, 2, 3)	$C \in \{1, 2\}$	$235.9$ $\odot$
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%				
MD.	T: 20%-50%	6 MRGL:	5%-10%	ŀ

# PRICE OF THE GOVERNOT

## Current & Forecast River Flooding

Southeast River Forecast Center

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

- <u>St. Johns River at Astor</u>- Moderate
- <u>Peace River at Bartow</u>- Minor
- Peace River at Arcadia- Minor
- Minor coastal flooding at high tide in Northeast Florida, including the tidal St. Johns River and its tributaries.
- Additional river flooding is not forecast in the Peninsula from forecast rainfall totals.

More details on river levels available at the <u>Southeast River Forecast Center website</u>.





## Rainfall Totals Next 7 Days

ll Change Based on Track Shifts – Based on Perfect Forecast into LA – Heaviest Rain East of Landfall\*



- Little to no rainfall across the Panhandle and western Big Bend through mid-week
- Locally heavy rainfall in the Peninsula each afternoon
- An additional round of heavy rainfall is possible in South Florida and the Keys Tuesday related to Delta (1-3").
- A heavy rainfall event is possible Thursday-Saturday in the Florida Panhandle as Delta makes landfall (4-6").

### Forecast Wave Heights

Mid-Week – Tropical Storm Delta



Wave heights will increase in the Gulf of Mexico starting on Wednesday from Delta. High surf will create beach erosion and minor coastal flooding, particularly in locations that experienced significant beach/dune damage from Hurricane Sally a few weeks ago.



## Rip Current Outlook



Swells from Gamma along the Gulf Coast and breezy northeast winds along the East Coast will elevate the rip current risk today.



## Official Forecast Track

#### From the National Hurricane Center – Tropical Dep. Gamma



- The center of Tropical Depression Gamma is located about 50 miles north of the Yucatan Peninsula, or about 450 miles southwest of Key West, FL.
- Maximum sustained winds are only at 35 mph and weakening continues.
- Increasing wind shear and dry air will result in the dissipation of Gamma as early as tonight.
- The remnants of Gamma may be absorbed into the circulation of Delta later this week as it weakens to a depression and drifts back north.



GOES-16 Channel 2 (visible) Reflectance at 20:02Z Oct 05, 2020 26°N പ്രസിഉ Yucatan Peninsula (Mexico) 92°W 90°W 86°W

Gamma remains void of any showers or thunderstorms and continues to weaken.



## **Tropical Weather Outlook**

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

FDF





## **Overall Summary**

#### **Tropical Depression Gamma**

- The center of Tropical Depression Gamma is located about 50 miles north of the Yucatan Peninsula, or about 450 miles southwest of Key West, FL.
- Maximum sustained winds are only 35 mph and weakening continues.
- Increasing wind shear and dry air will result in the dissipation of Gamma as early as tonight.
- The remnants of Gamma may be absorbed into the circulation of Delta later this week as it weakens to a depression and drifts back north.

#### **Tropical Storm Delta**

- Tropical Storm Delta continued to organize today and is nearing hurricane strength.
- Maximum sustained winds are now around 70 mph.
- The center of Delta is located about 150 miles southwest of Jamaica, and moving to the west at 8 mph.
- Delta will continue to strengthen (possibly rapidly at times) and is forecast to be a Category 3 Major Hurricane as it moves across the central Gulf of Mexico.
- Later this week, the system will approach the northern Gulf Coast after it has a complicated interaction with the remnants of Gamma and an approaching cold front.



## Florida Outlook

#### Florida Outlook:

- Tropical Storm Delta poses a direct threat to the Florida Panhandle and should be monitored closely.
- The western Florida Panhandle is in the 5-day forecast cone for where the center of the storm could be.
- Changes in the track forecast are possible over the next couple of days as Delta interacts with Gamma, interacts with an approaching cold front, and experiences rapid changes in intensity.
- Moisture from the system could make its way into South Florida and the Keys on Tuesday. This could bring another round of heavy rainfall and isolated flash flooding.
- Swells from Gamma and Delta will result in a high rip current risk at Gulf Coast beaches this week.
- High surf of 4-8' in the Panhandle may result in beach erosion and some coastal flooding in locations with damaged dune lines from recent Hurricane Sally.
- Direct impacts to the Florida Panhandle are possible- including storm surge, damaging wind, heavy rainfall, and tornadoes. However, it is too early to determine the extent of these impacts. The further west the storm tracks, the less the impacts to Florida.
- Tropical Depression Gamma poses no threat to Florida.

The next briefing packet will be issued Tuesday Morning with the 8AM advisory. For the latest information on the tropics, please visit the National Hurricane Center website at <u>www.hurricanes.gov</u>.



### TROPICAL UPDATE



#### Created by:

#### Michael Spagnolo, Deputy State Meteorologist

#### Michael.Spagnolo@em.myflorida.com

#### State Meteorological Support Unit Florida Division of Emergency Management

Users wishing to subscribe (approval pending) to this distribution list, register at: <u>https://public.govdelivery.com/accounts/FLDEM/subscriber/new?topic\_id=SERT\_Met\_Tropics</u>. Other reports available for subscription are available at: <u>https://public.govdelivery.com/accounts/FLDEM/subscriber/new?preferences=true</u>