



Tropical Update



5:30 PM EDT

Saturday, September 24, 2022

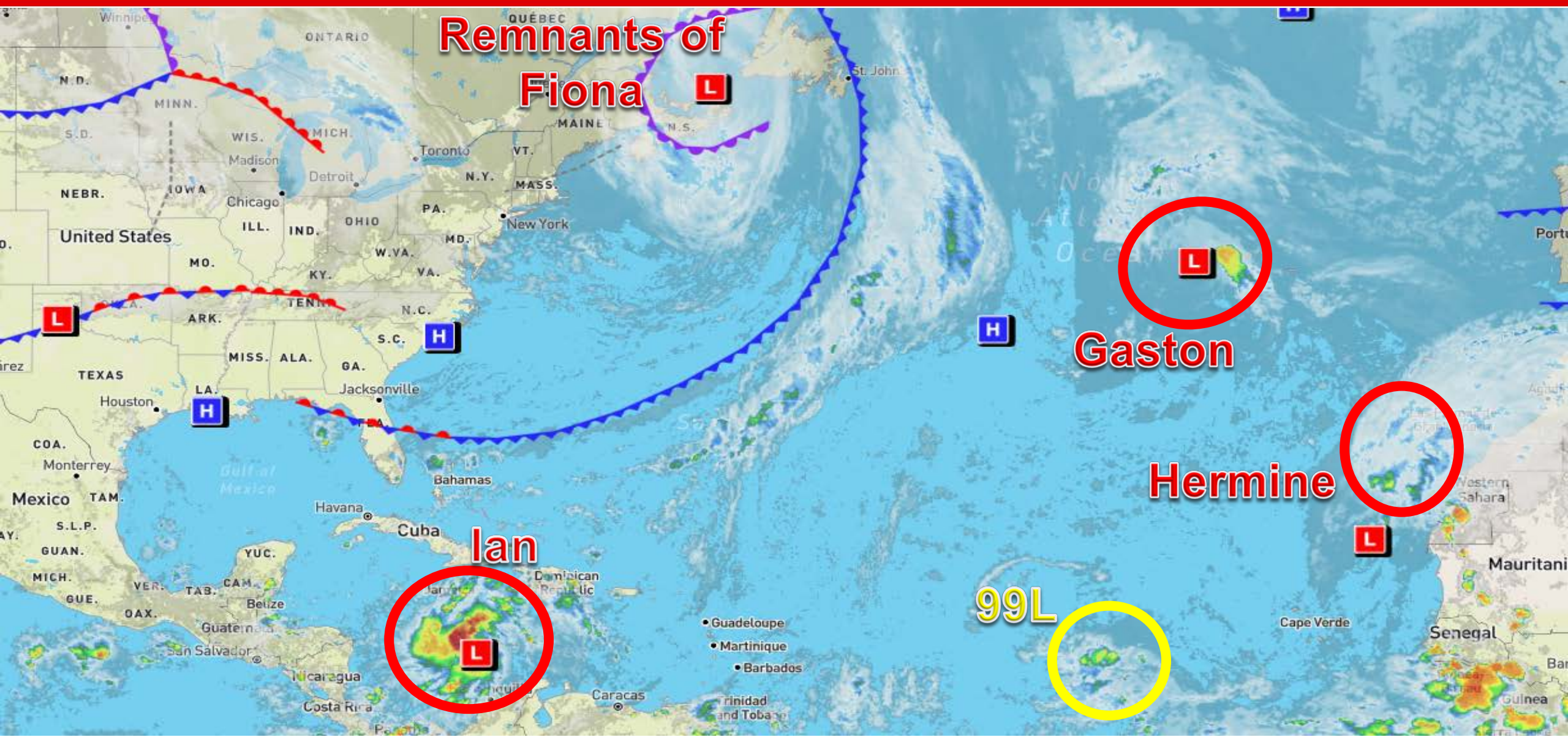
Tropical Storm Ian, Tropical Storm Gaston, & Tropical Depression Hermine

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

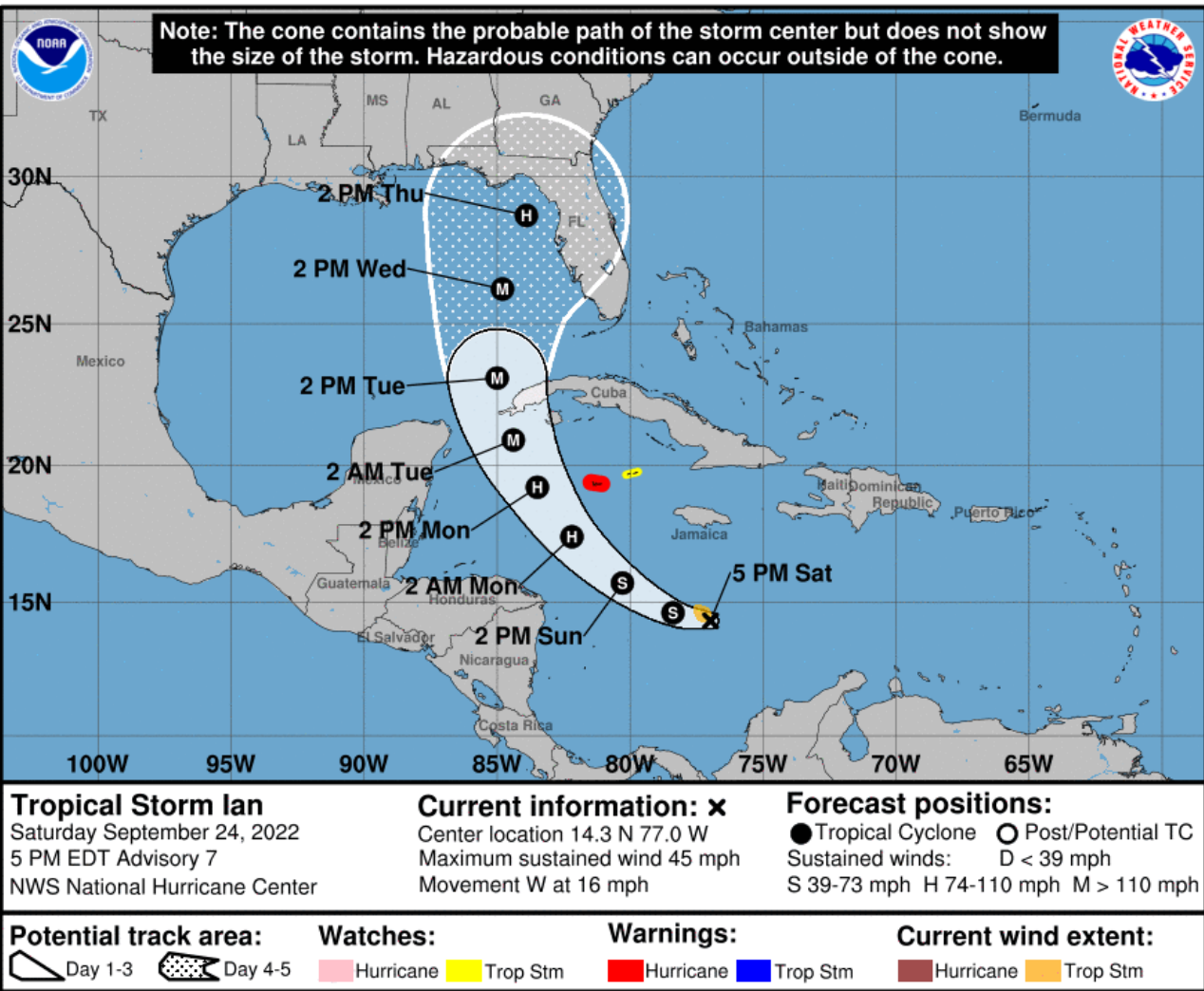
Chance of development: — None — Low — Medium — High





Forecast Cone

Tropical Storm Ian ([LINK](#))



- **Location:** 255 miles south of Kingston, Jamaica or about 775 miles south-southeast of Key West, Florida
- **Maximum Sustained Winds:** 45 mph
- **Current Movement:** W at 16 mph
- **FL Watches/Warnings:** None

A turn toward the northwest and north-northwest is forecast on Sunday and Monday, followed by a northward motion on Tuesday. On the forecast track, the center of Ian is forecast to pass well southwest of Jamaica on Sunday, and pass near or west of the Cayman Islands Sunday night and early Monday. Ian will then move near or over western Cuba late Monday and emerge over the southeastern Gulf of Mexico on Tuesday. maximum sustained winds remain near 45 mph with higher gusts. Significant strengthening is forecast during the next few days. Ian is forecast to become a hurricane by late Sunday and a major hurricane by late Monday or early Tuesday.

The latest NHC track forecast is once again adjusted westward, and further adjustments may be needed given the increased uncertainty in the day 3-5 period.

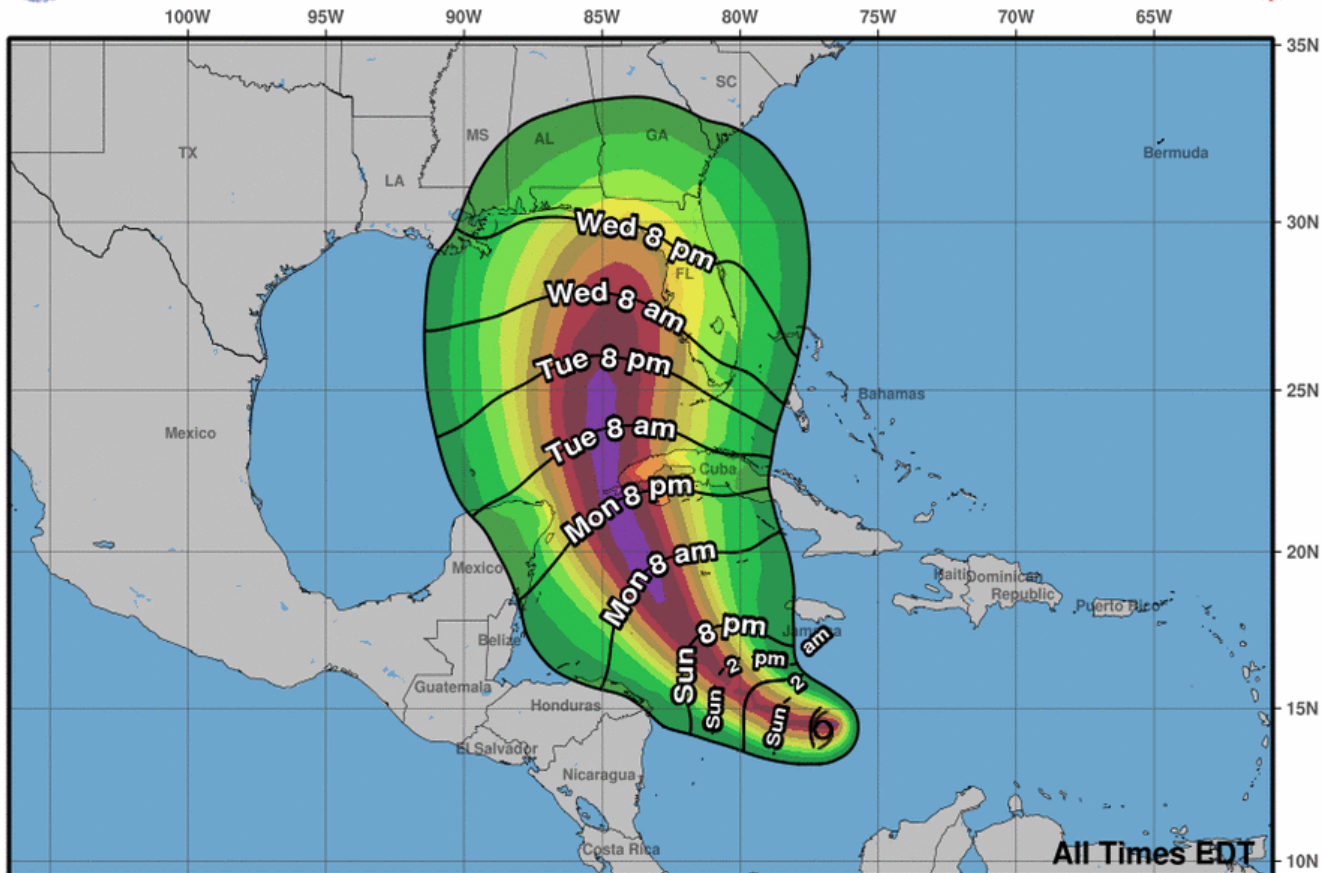


Tropical Storm-Force Wind Probabilities

Tropical Storm Ian ([LINK](#))



Most Likely Arrival Time of Tropical-Storm-Force Winds



Tropical Storm Ian
Sat. Sep. 24, 2022 5 pm EDT
Advisory 7

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
5 10 20 30 40 50 60 70 80 90 100 %

Key West – 43% (-26%)
Naples – 49% (-19%)
Miami – 18% (-18%)
West Palm Beach – 24% (-20%)
Tampa – 60% (-5%)
Orlando – 34% (-17%)
Cedar Key – 58% (+4%)
Tallahassee – 36% (+16%)
Apalachicola – 54% (+25%)
Jacksonville – 27% (-5%)

The numbers in parenthesis show the change in probability since the last briefing packet.

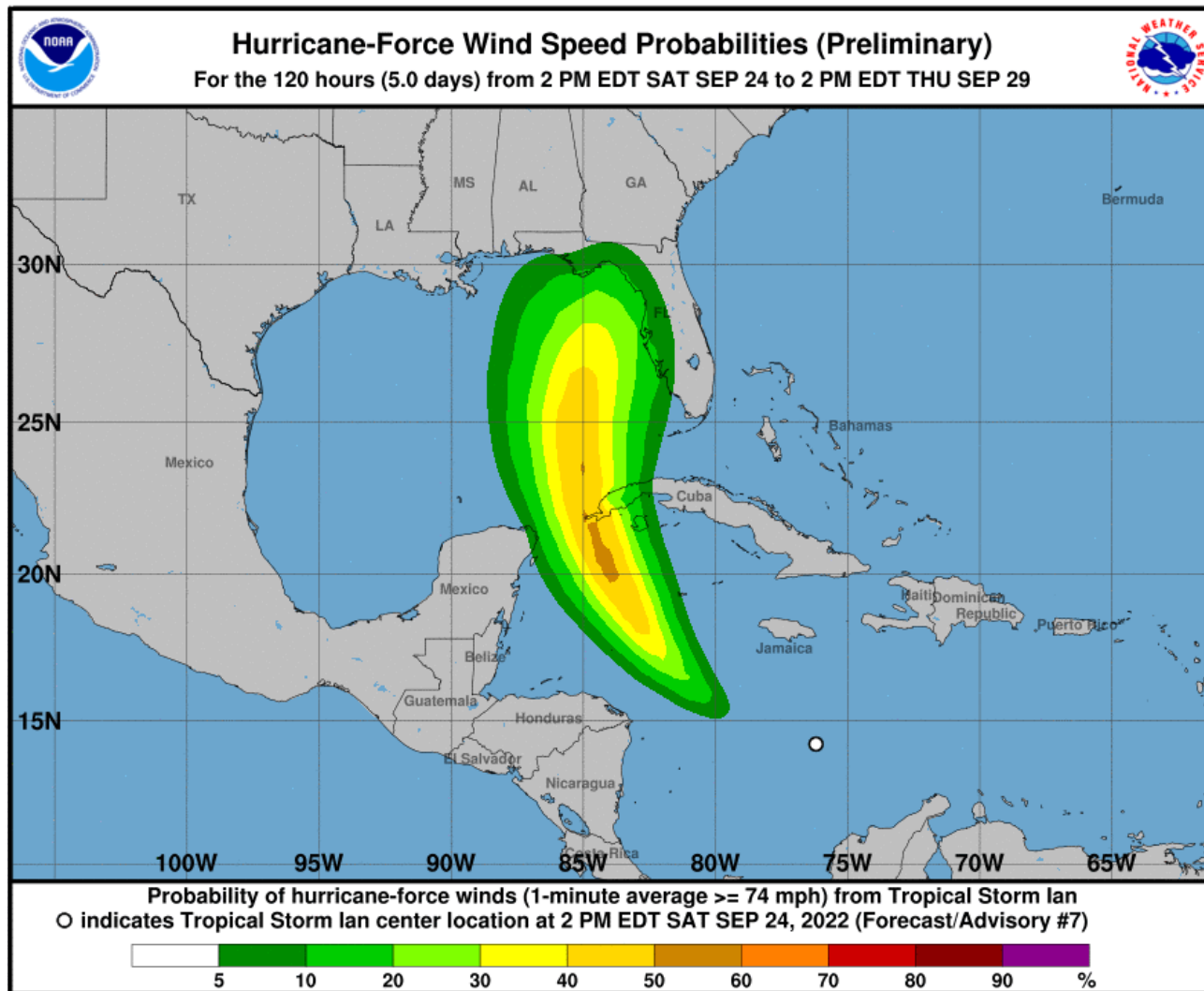
Note: A reduction in percentages does not necessarily mean a lower threat. These probabilities are dependent on the track, wind radii and intensity and may fluctuate up and down.

Tropical storm-force winds may begin as early as late Monday night into early Tuesday morning along the Florida Keys and southern Peninsula, but are more likely on Tuesday. Tropical storm-force winds may begin as early as Tuesday morning and afternoon across the Peninsula (from south to north). Tropical storm-force winds may begin as early as Wednesday across the Big Bend & North Florida.

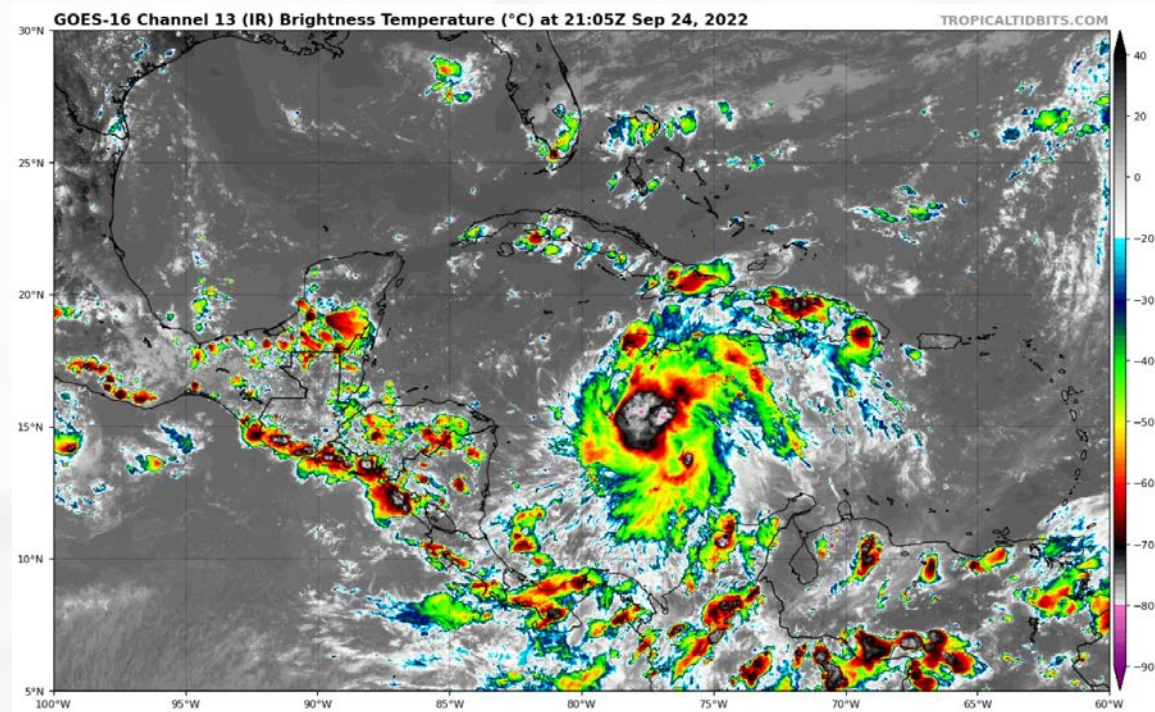


Hurricane-Force Wind Probabilities & Satellite Imagery

Tropical Storm Ian ([LINK](#))



There is now a 5-15% chance of hurricane-force winds affecting the Lower Keys and the West Coast of Florida. These probabilities will increase as we get closer to landfall.



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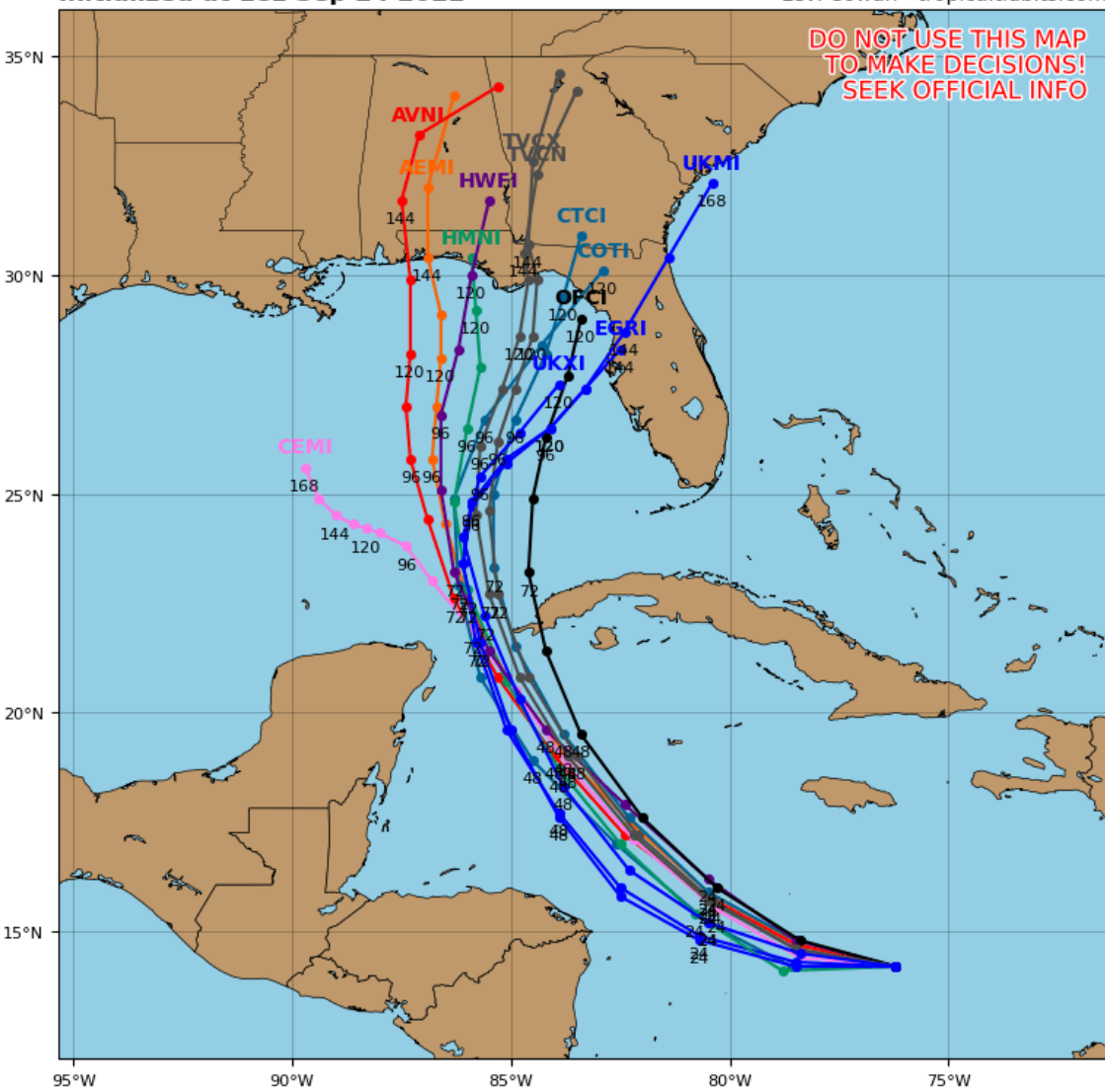
Model Forecasts – Next 5 Days

Tropical Storm Ian

Tropical Storm IAN Model Track Guidance

Initialized at 18z Sep 24 2022

Levi Cowan - tropicaltidbits.com



Computer models remain in more disagreement than normal, especially after 72 hours when the storm is expected to move into the Gulf of Mexico.

A turn toward the west-northwest and northwest may begin tomorrow as it gets pulled gradually northward ahead of an approaching cold front moving through the Plains into the East and Southeastern U.S.

Once Ian emerges into the southeastern Gulf of Mexico, computer model guidance begins to spread with some solutions showing a slower, further westward track and others depicting a quicker, eastward track. This is due to model differences in the location of the frontal system next week as well as the forward movement of Ian. The general trend with the afternoon model guidance has shifted westward, and the Florida Gulf Coast anywhere between Pensacola and Tampa Bay are all potential landfall locations during the middle part of next week.

It is important to note that these model tracks do not depict intensity nor the envelope of impacts. Ian is forecast to grow in size as it enters the eastern Gulf of Mexico and impacts could still be felt from the Florida Keys to the Florida Panhandle.

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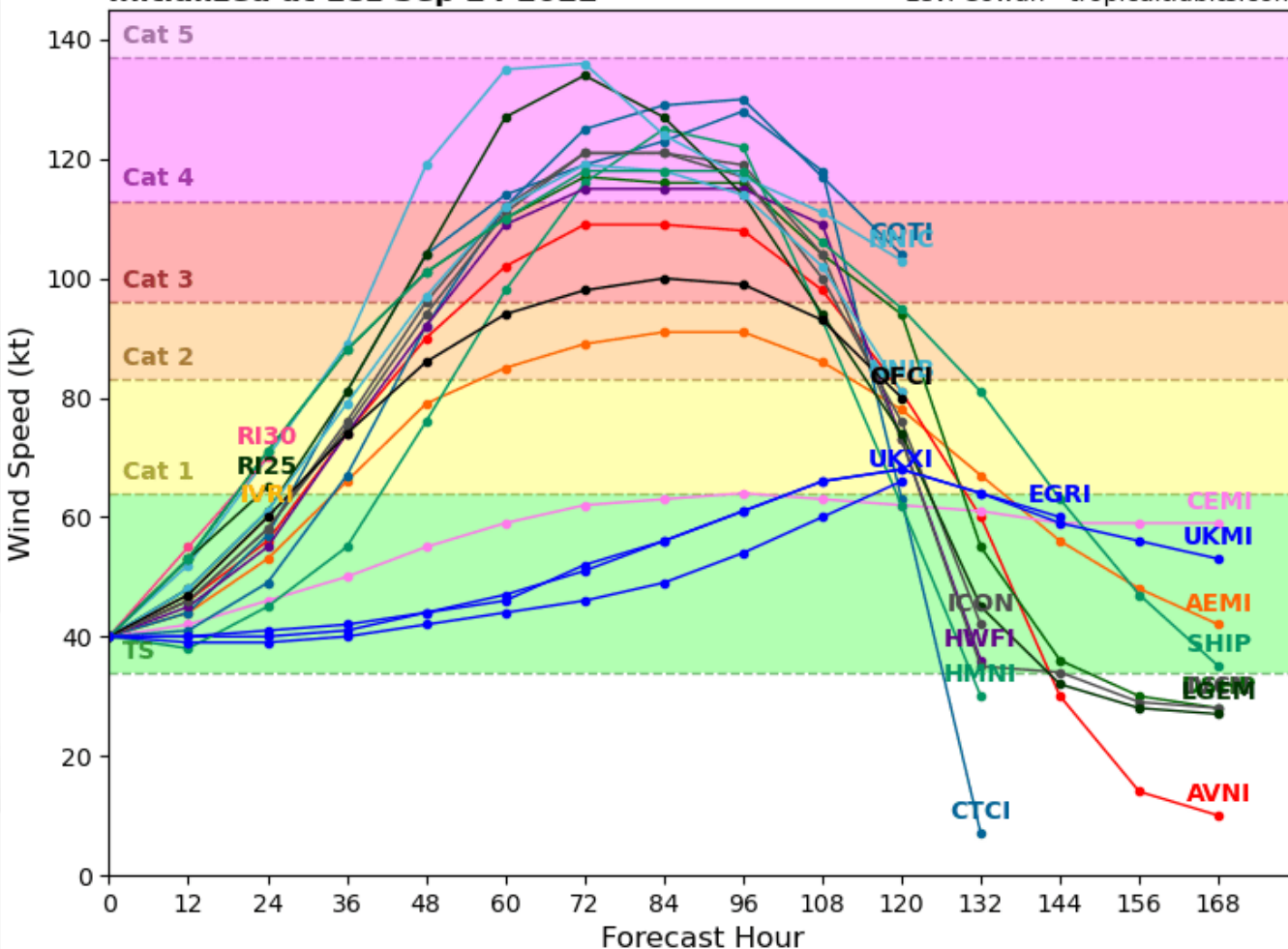
Model Forecast Intensity

Tropical Storm Ian

Tropical Storm IAN Model Intensity Guidance

Initialized at 18z Sep 24 2022

Levi Cowan - tropicaltidbits.com



The northeasterly wind shear that has been impacting Ian will continue to decrease over the next day or two while the cyclone moves over the warm waters of the northwestern Caribbean Sea. Computer models are in decent agreement that Ian will strengthen to hurricane intensity within the next 24-36 hours. A more significant strengthening period is expected between the 24-hour and 72-hour period. Computer model guidance is in good agreement that Ian is likely to be a major hurricane when it approaches western Cuba and moves into the Gulf of Mexico.

Some models are indicating a slight weakening trend as it approaches the Florida Coast, but similar to track uncertainties, there is also a great deal of uncertainty in the intensity of Ian as it makes landfall in Florida.



Key Messages

From the National Hurricane Center



Key Messages for Tropical Storm Ian

Advisory 7: 5:00 PM EDT Sat Sep 24, 2022



1. Ian is expected to produce heavy rainfall, flash flooding, and possible mudslides in areas of higher terrain, particularly over Jamaica and Cuba. Limited flash and urban flooding is possible with rainfall across the Florida Keys and Florida peninsula through mid next week.

2. Hurricane or tropical storm conditions are expected on Grand Cayman beginning early Monday.

3. Ian is forecast to be a major hurricane when it passes near or over western Cuba, and there is increasing confidence in a life-threatening storm surge and hurricane-force winds in portions of western Cuba beginning late Monday.

4. Ian is expected to remain a major hurricane when it moves generally northward across the eastern Gulf of Mexico during the middle of next week, but uncertainty in the track forecast is higher than usual. Regardless of Ian's exact track, there is a risk of dangerous storm surge, hurricane-force winds, and heavy rainfall along the west coast of Florida and the Florida Panhandle by the middle of next week, and residents in Florida should ensure they have their hurricane plan in place, follow any advice given by local officials, and closely monitor updates to the forecast.



For more information go to hurricanes.gov

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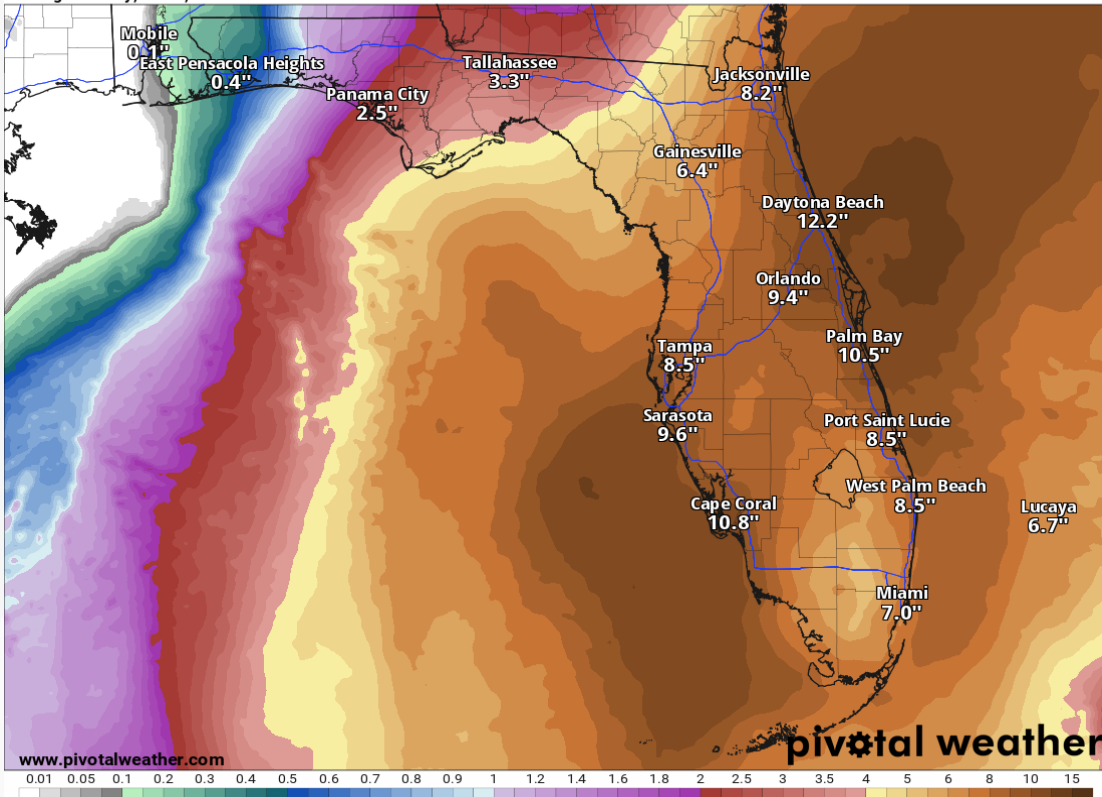
7-Day Forecast Rainfall

From the Weather Prediction Center and GFS model

7-Day Precipitation (in)

Ending Saturday, Oct. 1, 2022 at 8 a.m. EDT

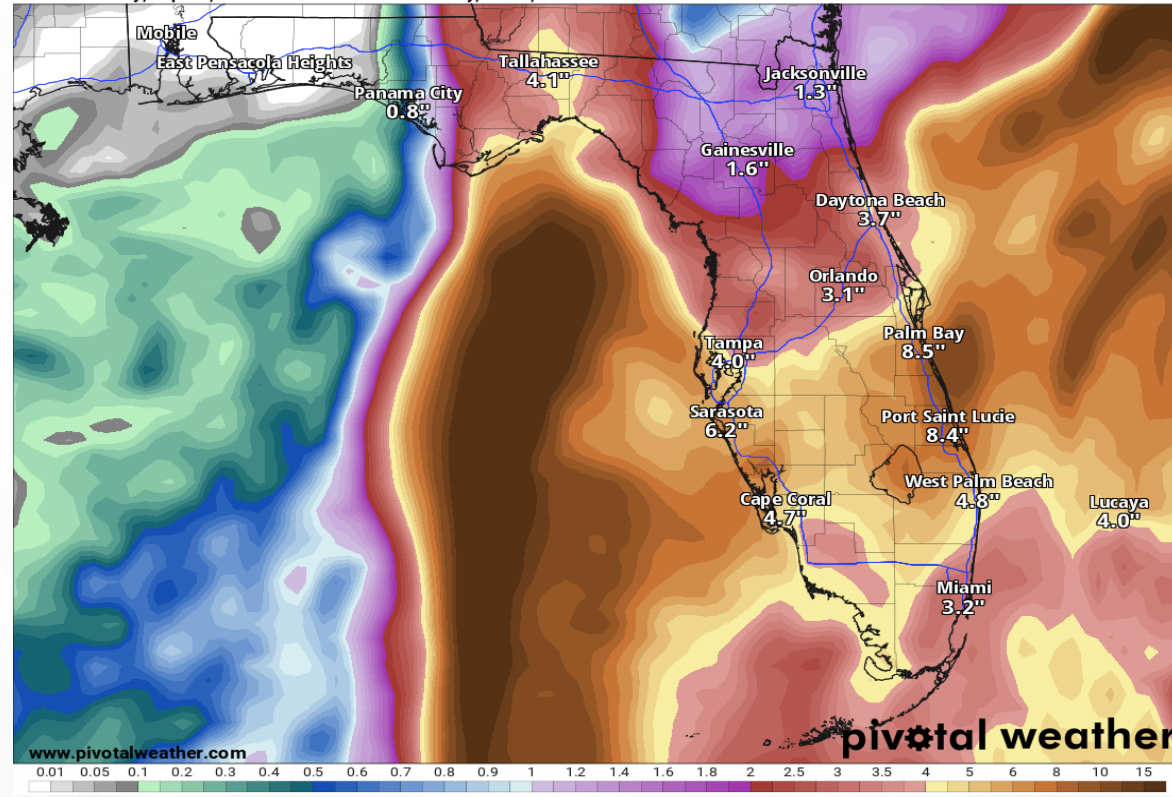
Init: Sat 2022-09-24 12z WPC



Total QPF (in) over model run

Between Friday, Sep. 23, 2022 at 8 a.m. EDT and Saturday, Oct. 1, 2022 at 11 a.m. EDT

Init: Fri 2022-09-23 12z GFS



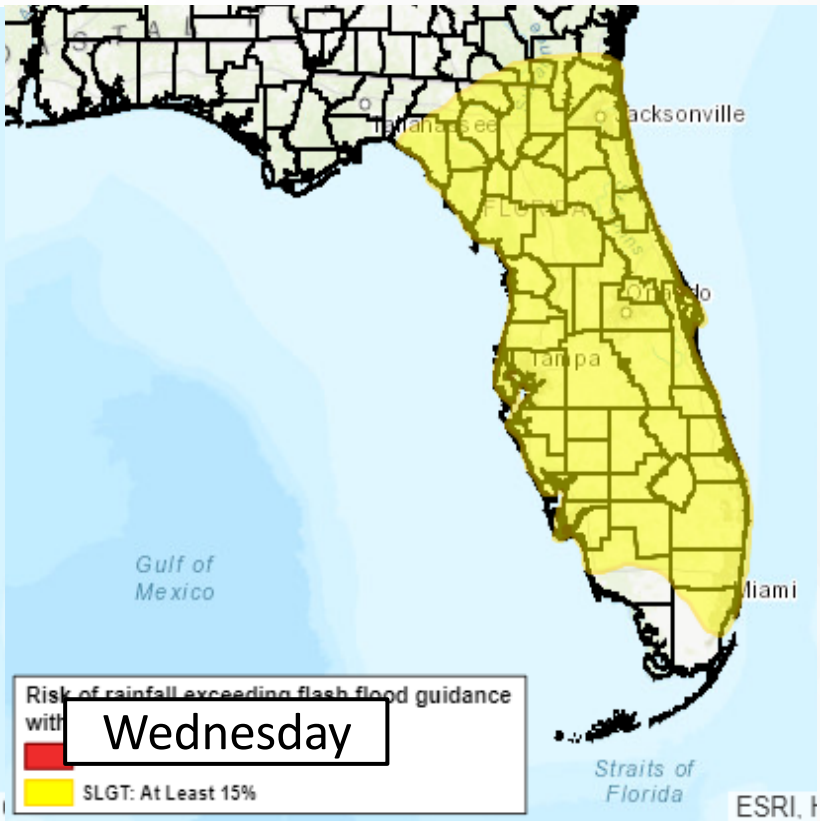
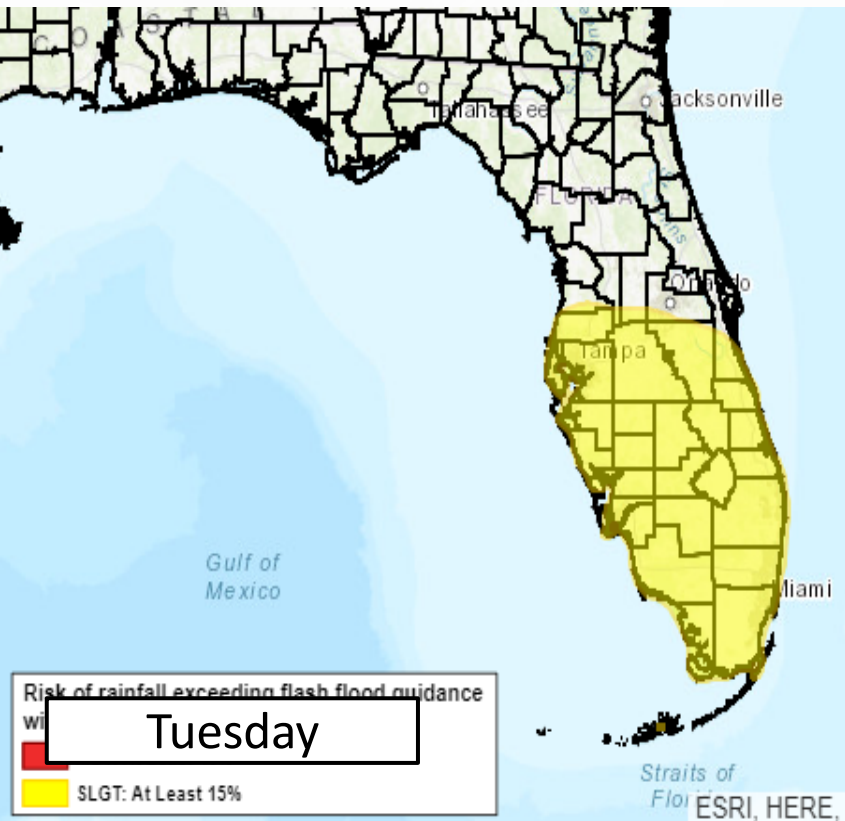
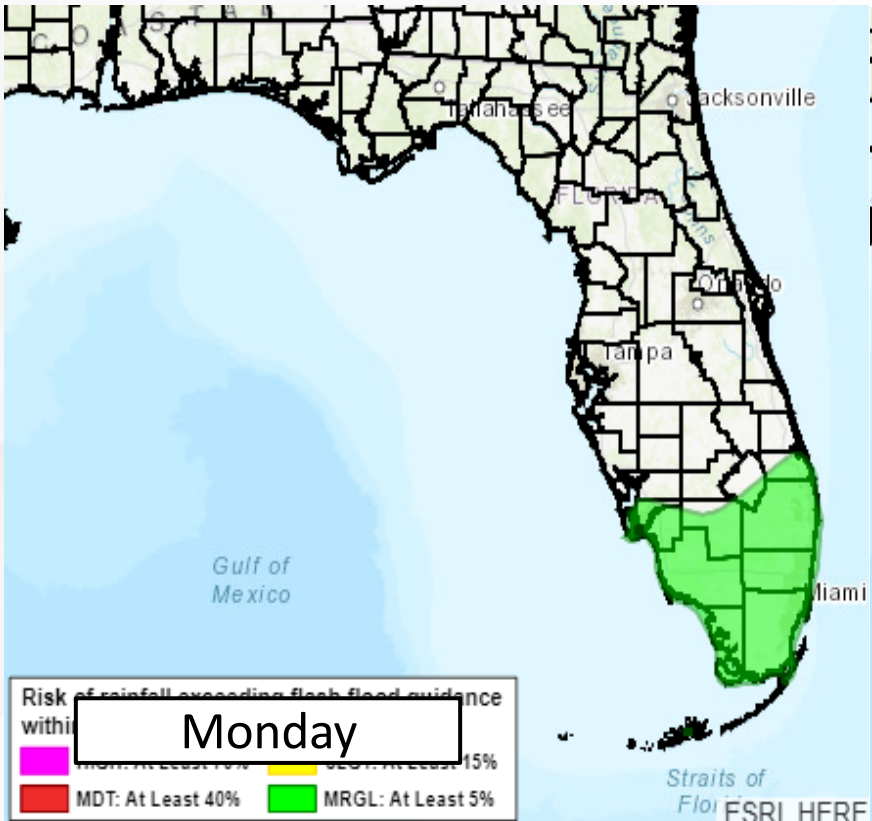
While it is still too early to determine where the heaviest rainfall totals will occur, widespread rainfall totals of 5-10" are possible as Ian moves northward.

It is important to note that these rainfall totals are highly dependent on the exact track of Ian. A further westward, slower track would result in heavier rainfall totals in the Big Bend and eastern Panhandle.



Flash Flood Outlooks

From the Weather Prediction Center

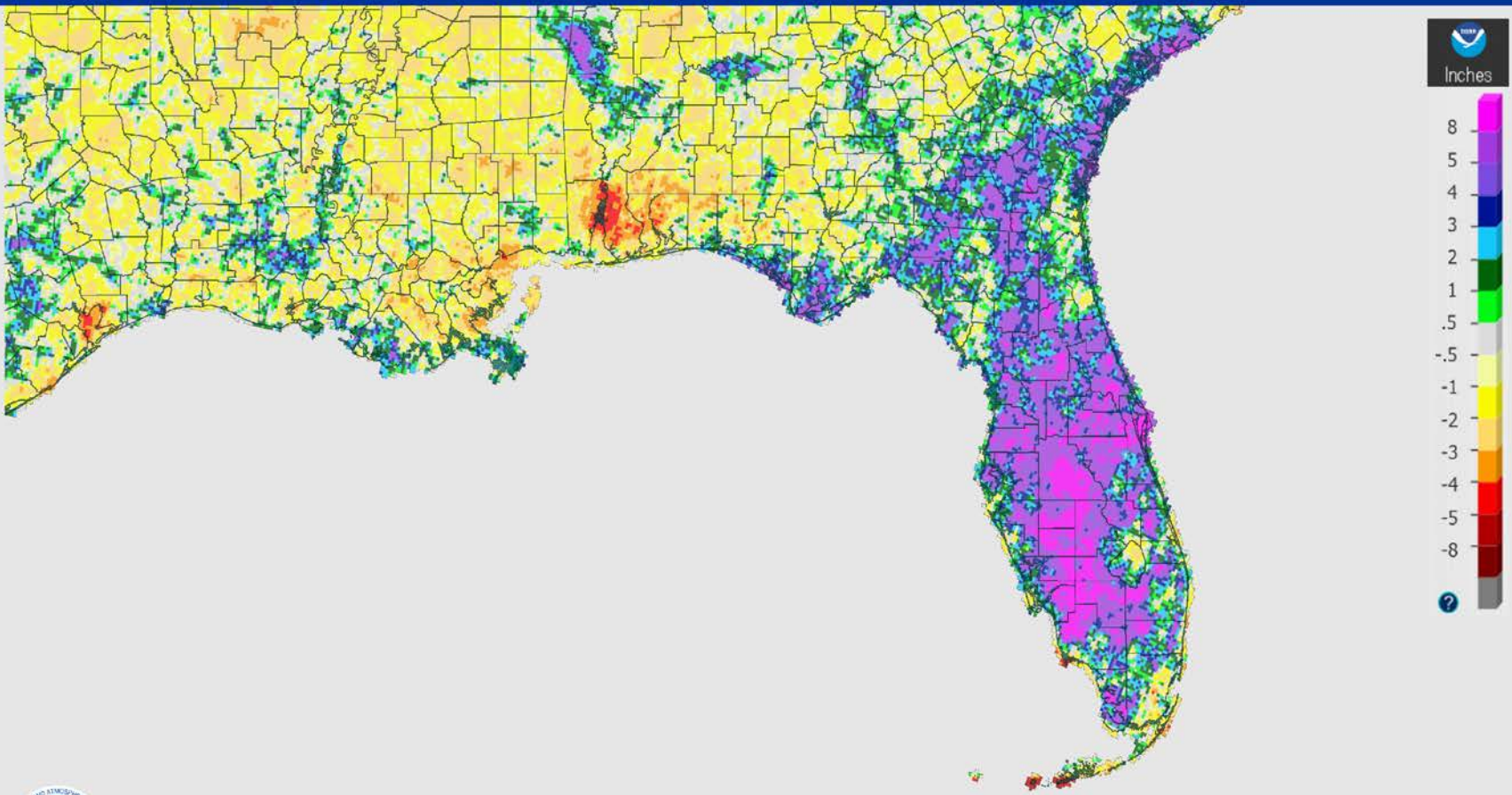


Understanding WPC Excessive Rainfall Risk Categories				
No Area/Label	MARGINAL (MRGL)	SLIGHT (SLGT)	MODERATE (MDT)	HIGH (HIGH)
Flash floods are generally not expected.	Isolated flash floods possible	Scattered flash floods possible	Numerous flash floods likely	Widespread flash floods expected
	Localized 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.
@NWSWPC				



30 Rainfall Departure from Normal

September 24, 2022 30-Day Departure Precipitation
Created on: September 24, 2022 - 21:12 UTC
Valid on: September 24, 2022 12:00 UTC



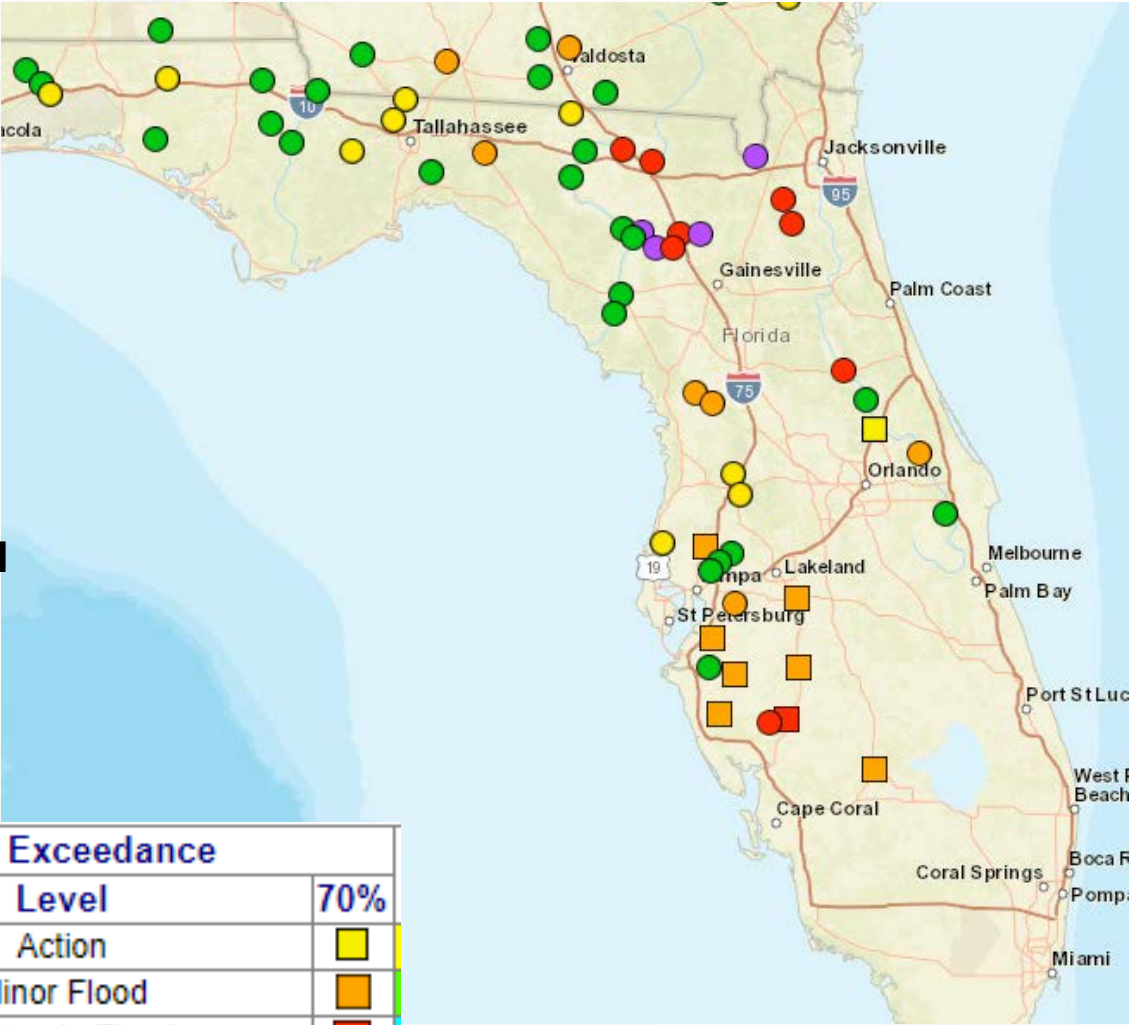
Much of the Florida Peninsula and Big Bend have rainfall surpluses of 3-10" and could lead to rapid onset of flooding as well as increased drainage into area rivers.





Possible River Flooding

Chance of River Flooding Based on Range of Forecasted Rainfall



Based on rainfall modelling,
POSSIBLE river crest levels

Chance of Exceedance		
30%	Level	70%
	Action	
	Minor Flood	
	Moderate Flood	
	Major Flood	
= less than 30% chance of reaching Action level		

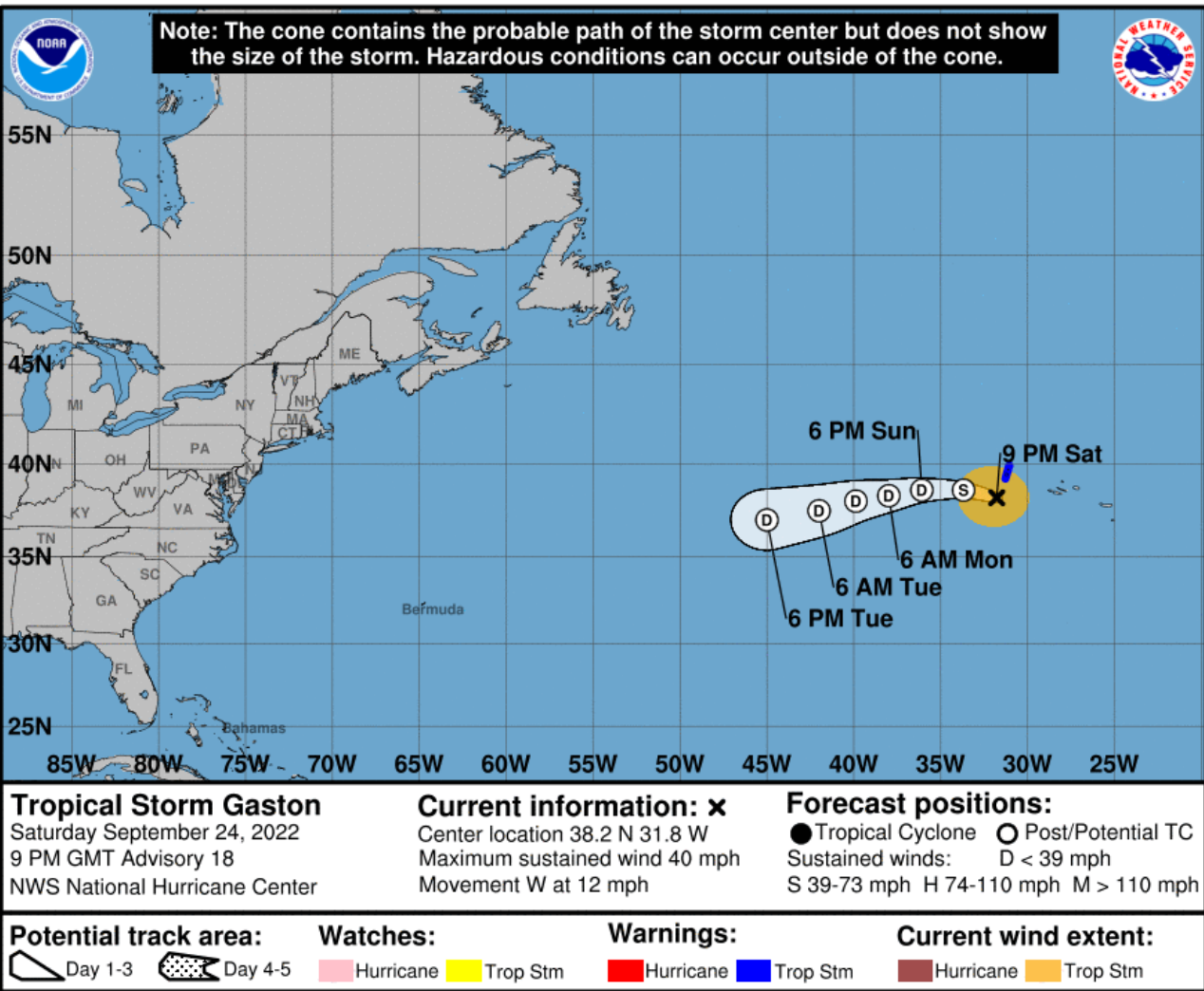
Minor to moderate riverine flooding continues this morning in the Tampa Bay and Peace basins following several days of heavy rainfall in the Florida Peninsula. While these rivers are receding, the combination of additional heavy rainfall and wet antecedent conditions would leave these areas more susceptible for flooding.

There is the potential for significant river flooding, particularly in the central and northern Florida Peninsula basins where some rivers are already above flood stage. Depending on the forecast track, some Panhandle rivers may also be at risk for flooding.

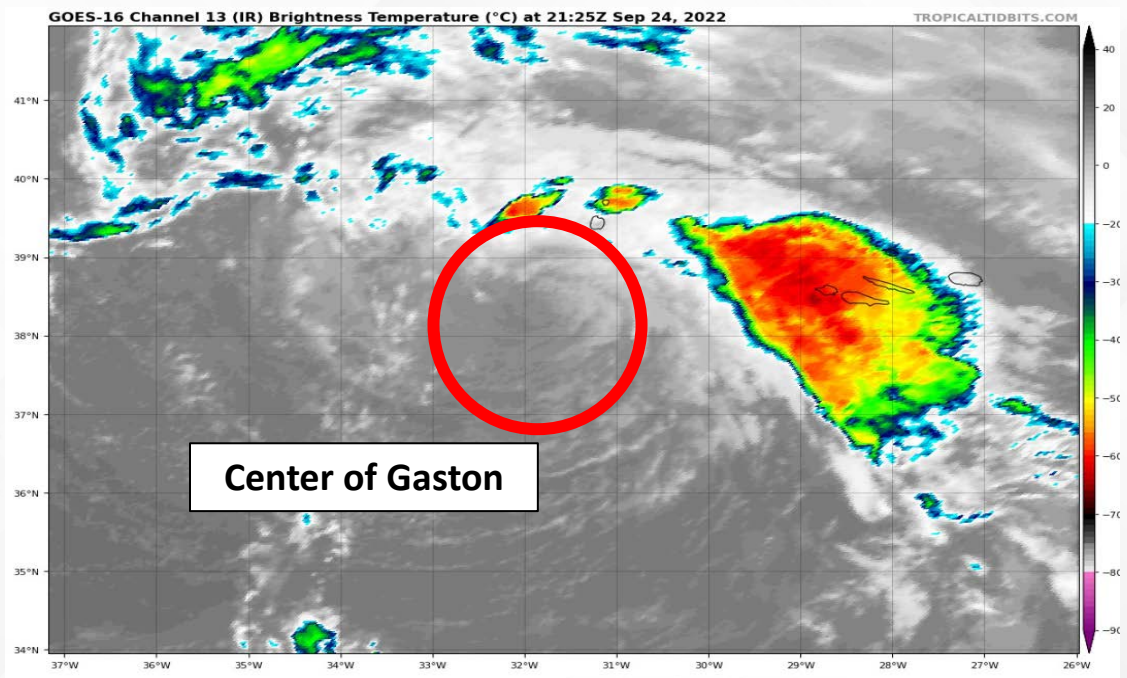


Forecast Cone and Satellite Imagery

Tropical Storm Gaston ([LINK](#))



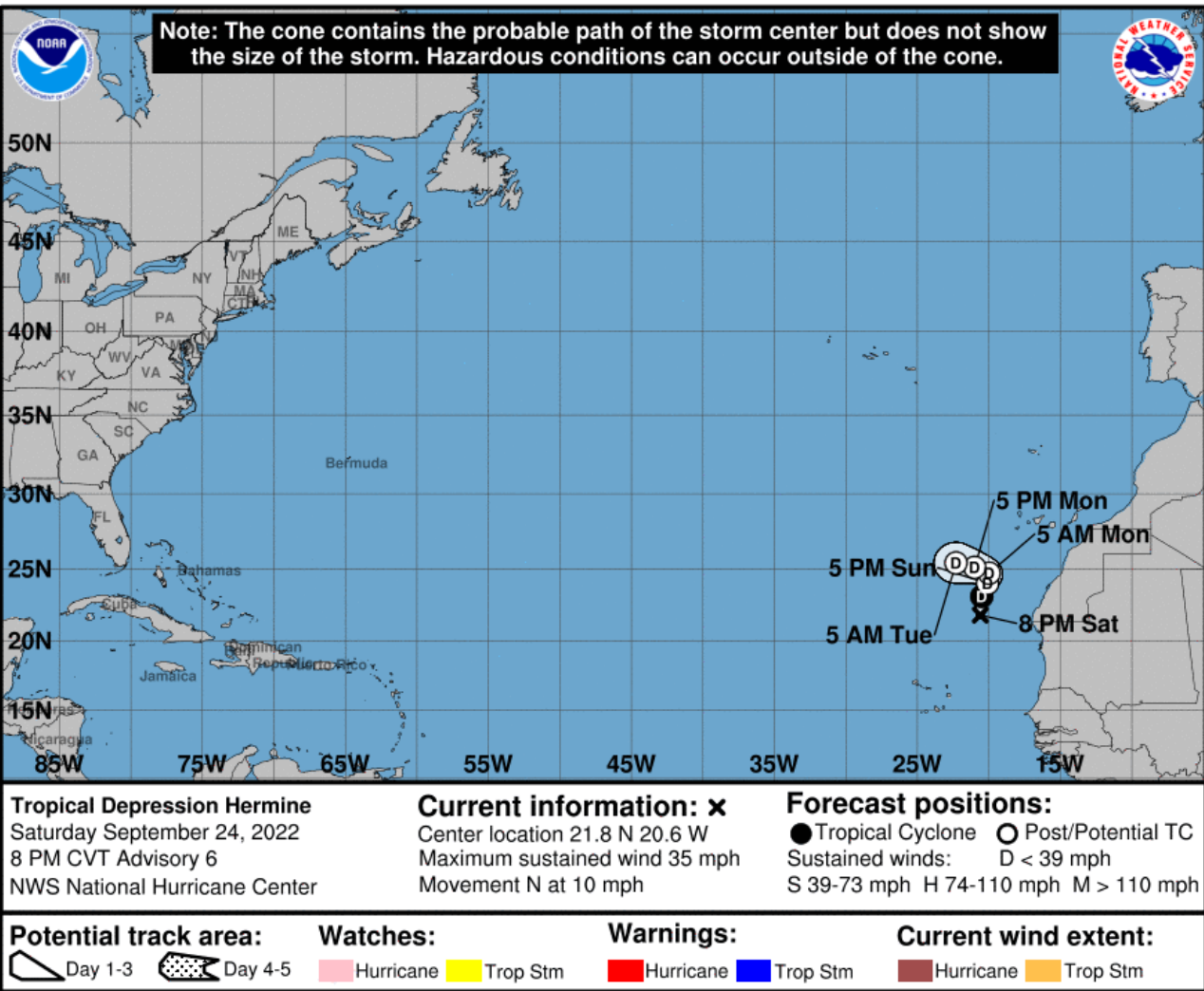
- **Location:** 170 miles west of the central Azores
 - **Maximum Sustained Winds:** 40 mph
 - **Current Movement:** W at 12 mph
 - **FL Watches/Warnings:** None
- Gaston poses no threat to Florida.*



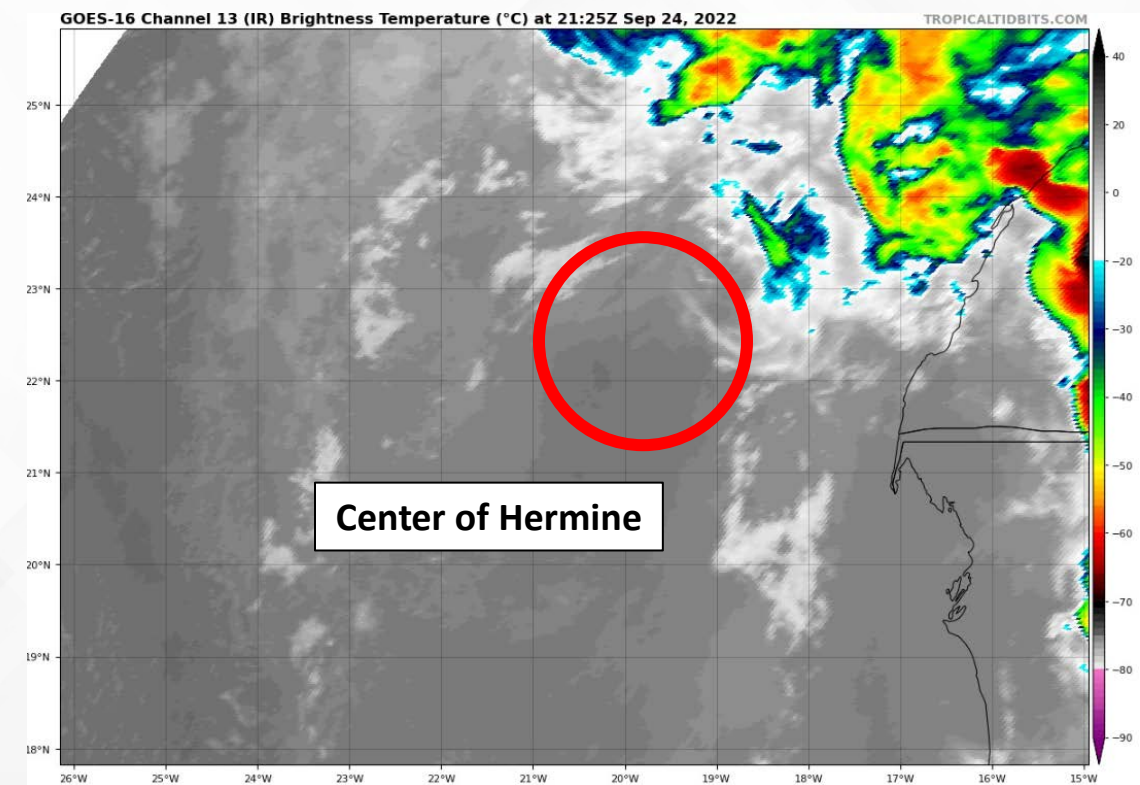


Forecast Cone and Satellite Imagery

Tropical Depression Hermine ([LINK](#))



- **Location:** 460 miles northeast of the Cabo Verde Islands
 - **Maximum Sustained Winds:** 35 mph
 - **Current Movement:** N at 10 mph
 - **FL Watches/Warnings:** None
- Hermine poses no threat o Florida.*

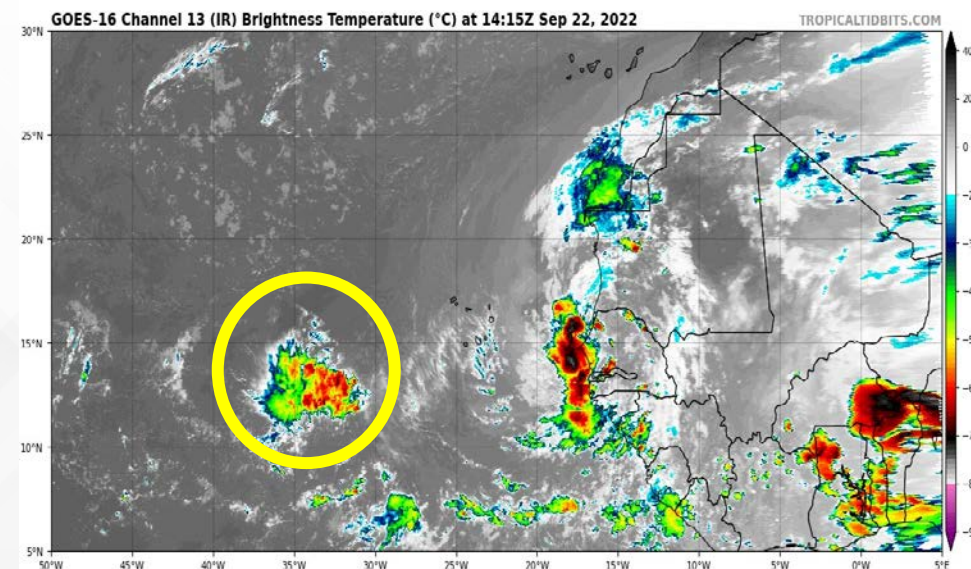
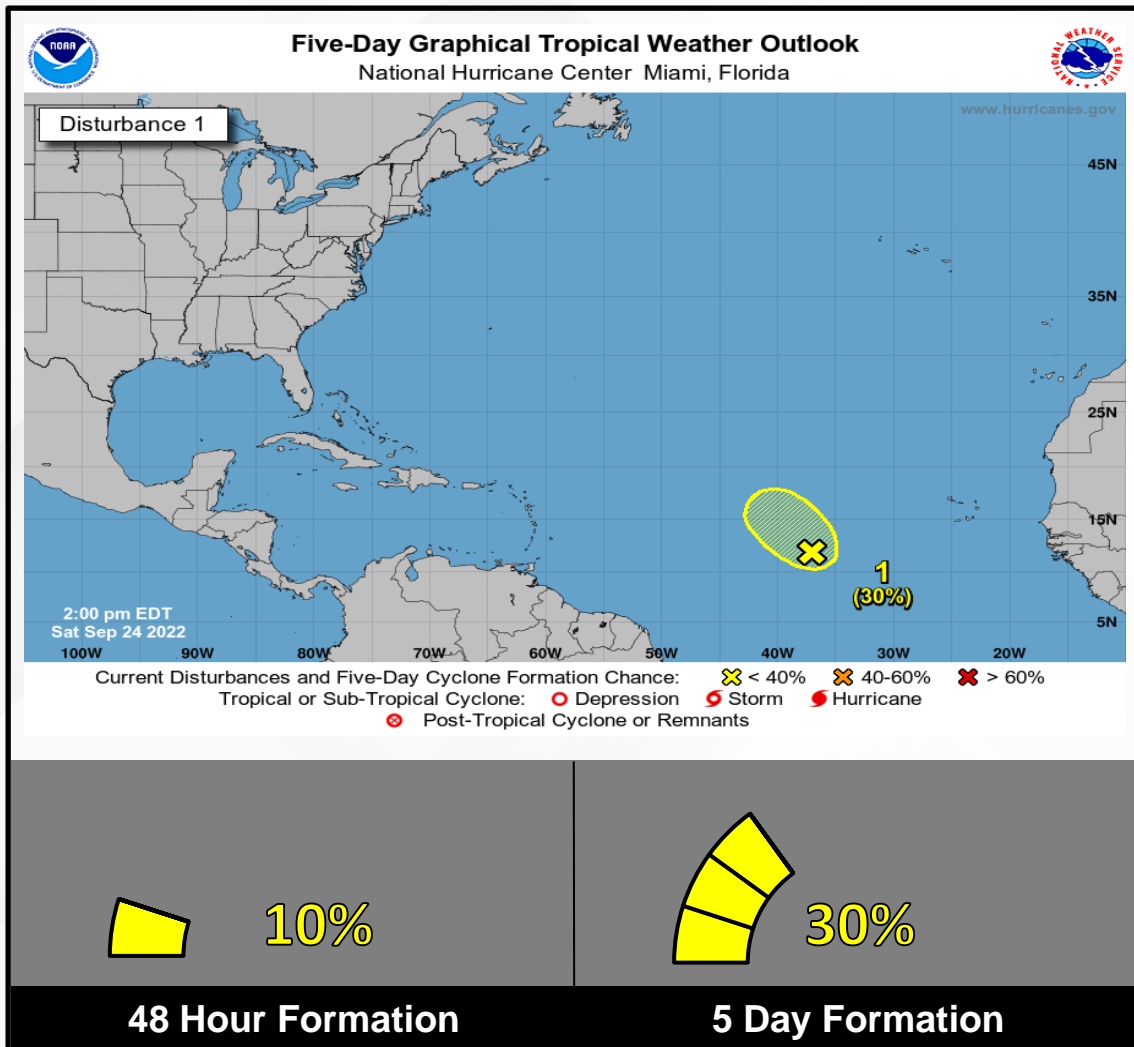




Tropical Weather Outlook

Disturbance 1 – Invest 99L ([LINK](#))

Showers and thunderstorms remain disorganized in association with a broad area of low pressure located several hundred miles west-southwest of the Cabo Verde Islands. Despite unfavorable upper-level winds, some slow development of this system is possible over the next several days while it drifts northwestward or northward over the central tropical Atlantic. *Invest 99L poses no threat to Florida.*



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Summary

Tropical Storm Ian:

- As of 5:00 PM EDT Saturday, Ian was located about 255 miles south of Kingston, Jamaica or about 775 miles south-southeast of Key West, Florida, and moving west around 16mph.
- A turn toward the northwest and north-northwest is forecast on Sunday and Monday, followed by a northward motion on Tuesday. On the forecast track, Ian will move near or over western Cuba late Monday and emerge over the southeastern Gulf of Mexico on Tuesday.
- Ian could make landfall along the Florida Gulf Coast on Thursday. However, the forecast beyond 72 hours remains uncertain and further adjustments to the track forecast may be needed in the day 3-5 period. Therefore, it is important to not focus on the exact forecast track of Ian.
- Maximum sustained winds remain near 45 mph. Strengthening is forecast during the next few days, and Ian is expected to become a hurricane on Sunday. More rapid intensification is expected on Monday and Ian is forecast to be a major Category 4 hurricane by the time it enters the southeastern Gulf of Mexico.

Tropical Storm Gaston:

- At 5:00 PM Saturday, Gaston is located about 170 miles west of the central Azores and moving west at 12 mph. A turn toward the southwest is anticipated by late Sunday.
- Maximum sustained winds are near 40 mph, and continued gradual weakening is forecast. Gaston is expected to become a post-tropical cyclone overnight or on Sunday.

Tropical Depression Hermine:

- At 5:00 PM Saturday, Hermine was downgraded to a tropical depression with 35mph winds while located about 460 miles north-northeast of the Cabo Verde Islands.
- Hermine could be a remnant low by Monday.

Florida Outlook:

- There are no wind or surge watches in effect for Florida.
- It is too early to determine the exact magnitude and location of storm-specific threats such as storm surge values, highest winds, exact location of the heaviest rainfall totals, and isolated tropical tornadoes; therefore, do not focus on the “center point” on the forecast cone, but remember that hurricane impacts can extend well beyond the forecast cone.
- Tropical rains may begin to overspread across the Florida Keys and southern Peninsula late Monday and tropical storm-force winds may arrive on Tuesday. Tropical storm-force winds may then spread from south to north along portions of the Peninsula through Wednesday and could arrive in the eastern Panhandle/Big Bend on Wednesday.
- Lingering ocean swells from Fiona will continue the rip current risk along Florida’s East Coast into the weekend.
- The next name on the list is Julia.

The next briefing packet will be issued Sunday Morning. For the latest information, please visit the [National Hurricane Center website](#).



Tropical Update

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