



Tropical Update



10:30 AM EDT

Thursday, November 7, 2024

Hurricane Rafael

Rafael Turning West-Northwestward Over the Southeastern Gulf of Mexico

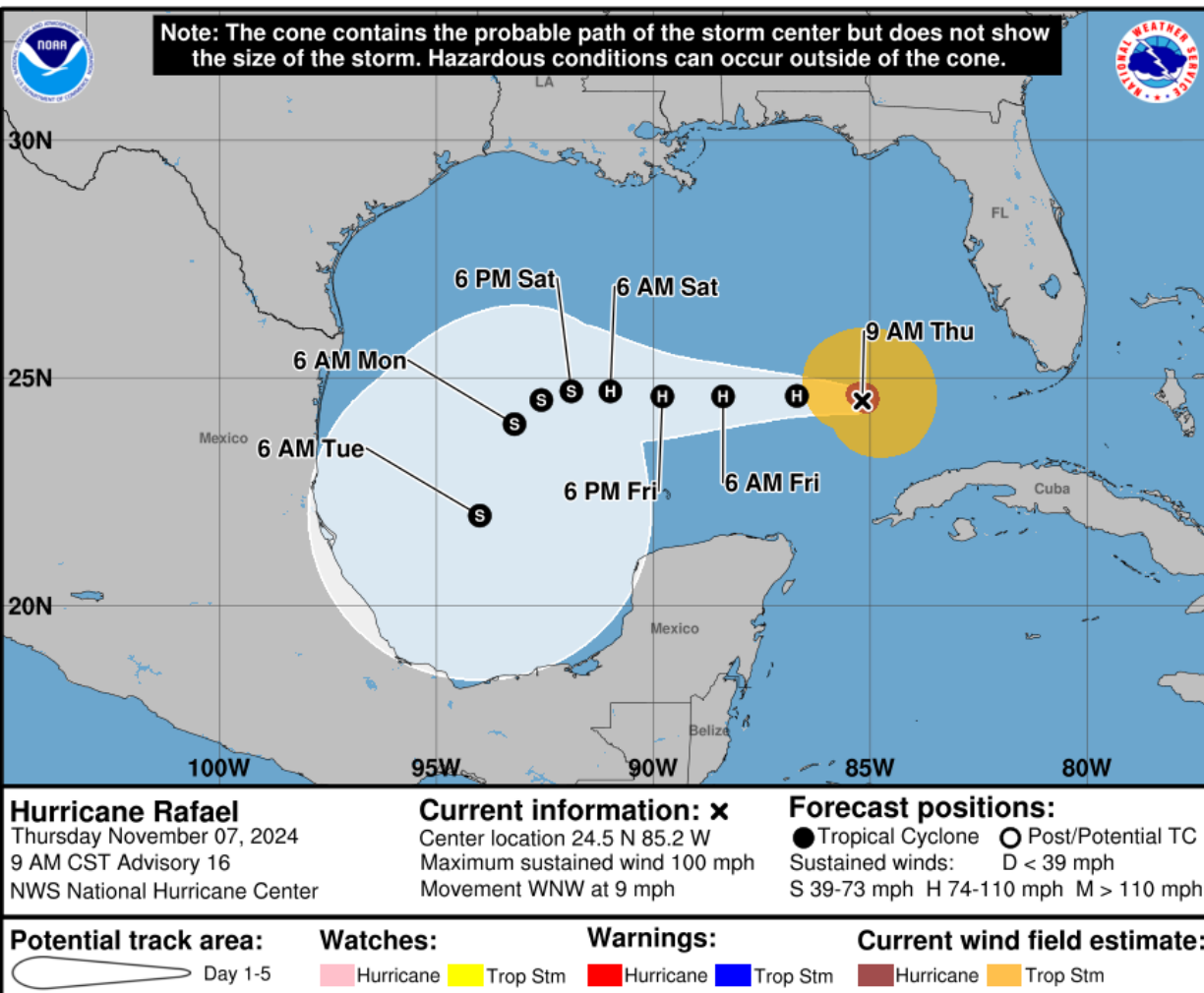
Marginal Risk For Flash Flooding Continues Across the Eastern Panhandle and Through the Big Bend

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.



Hurricane Rafael

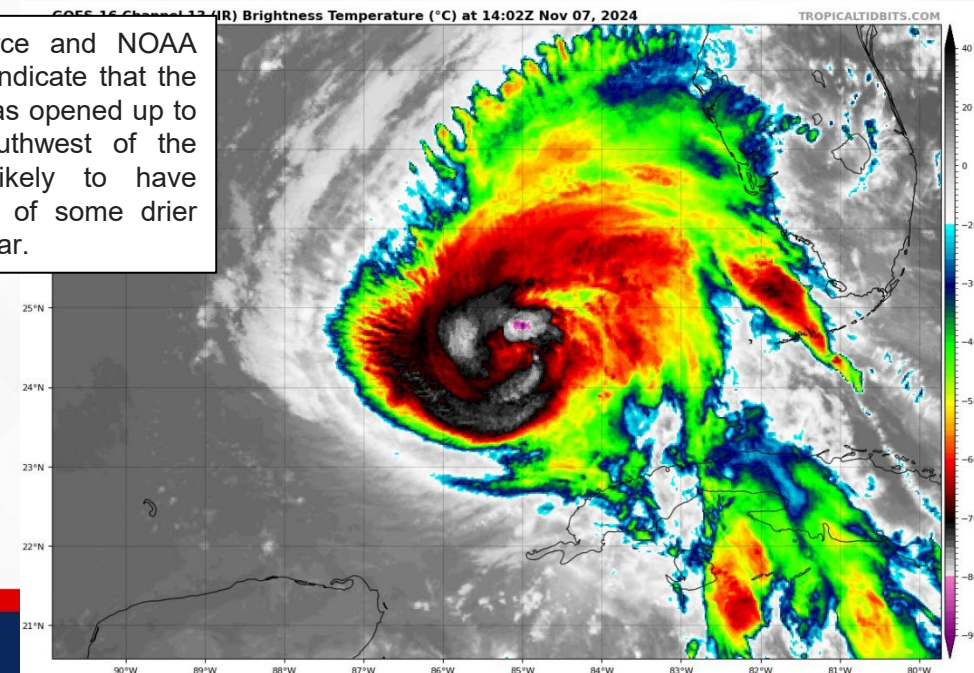
From the National Hurricane Center (NHC)



- **Location:** 200 miles WNW of Havana, Cuba; 215 miles W of Key West, Florida
- **Maximum Sustained Winds:** 100 mph (Category 2)
- **Current Movement:** WNW at 9 mph
- **FL Watches/Warnings:** None

A turn toward the west is expected later today, with this general motion continuing through the weekend. On the forecast track, Rafael is expected to move over the southern Gulf of Mexico for the next few days. Some additional weakening is anticipated during the next few days.

Data from Air Force and NOAA Hurricane Hunters indicate that the eyewall of Rafael has opened up to the south and southwest of the center. This is likely to have negative influences of some drier air and westerly shear.





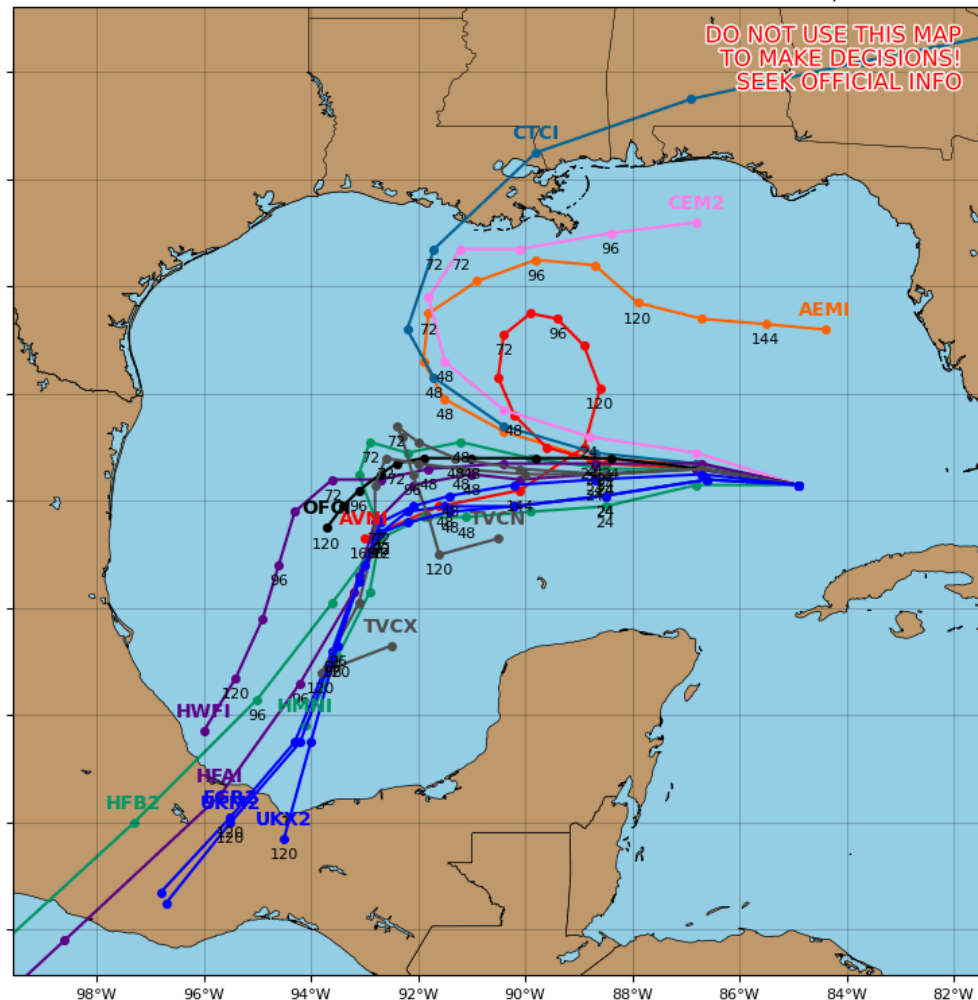
Forecast Computer Models – Next 5 Days

Hurricane Rafael

Hurricane RAFAEL Model Track Guidance

Initialized at 12z Nov 07 2024

Levi Cowan - tropicaltidbits.com



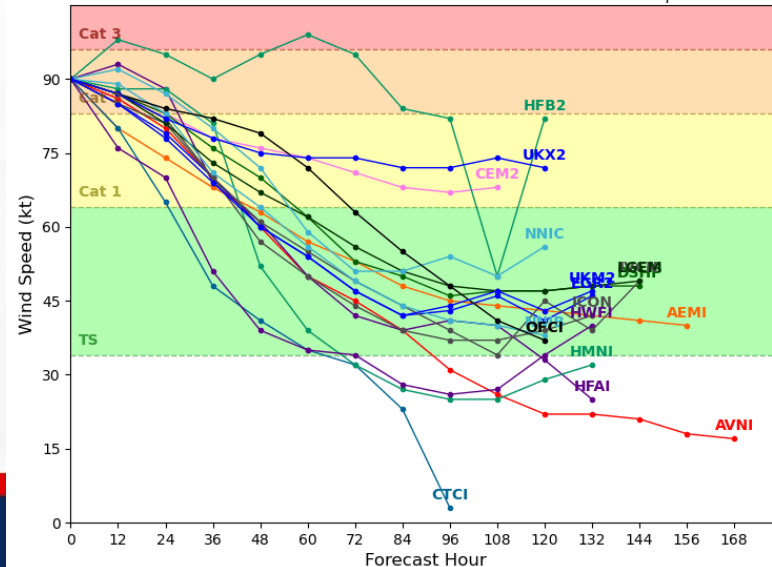
Recent data from Hurricane Hunter aircraft indicate Rafael is beginning a leftward turn. The hurricane should move westward over the next 24-48 hours as an area of high pressure builds to its north. There remains some significant spread in the model guidance over the Gulf of Mexico beyond the next 48 hours; however, most of the models show a narrow area of high pressure building to the northwest of Rafael, which should cause the system to turn southwestward in response. The motion is likely to be quite slow during the latter part of the forecast period. There remains above average uncertainty in the future track of Rafael, and updates to the future track forecast can be expected.

Rafael is expected to move into an even drier airmass over the next few days, with at least weak to moderate westerly shear over the system. Therefore, despite warm sea surface temperatures over the southern Gulf of Mexico, some additional weakening is forecast through this weekend into early next week. Rafael should remain a hurricane for the next couple of days.

Hurricane RAFAEL Model Intensity Guidance

Initialized at 12z Nov 07 2024

Levi Cowan - tropicaltidbits.com





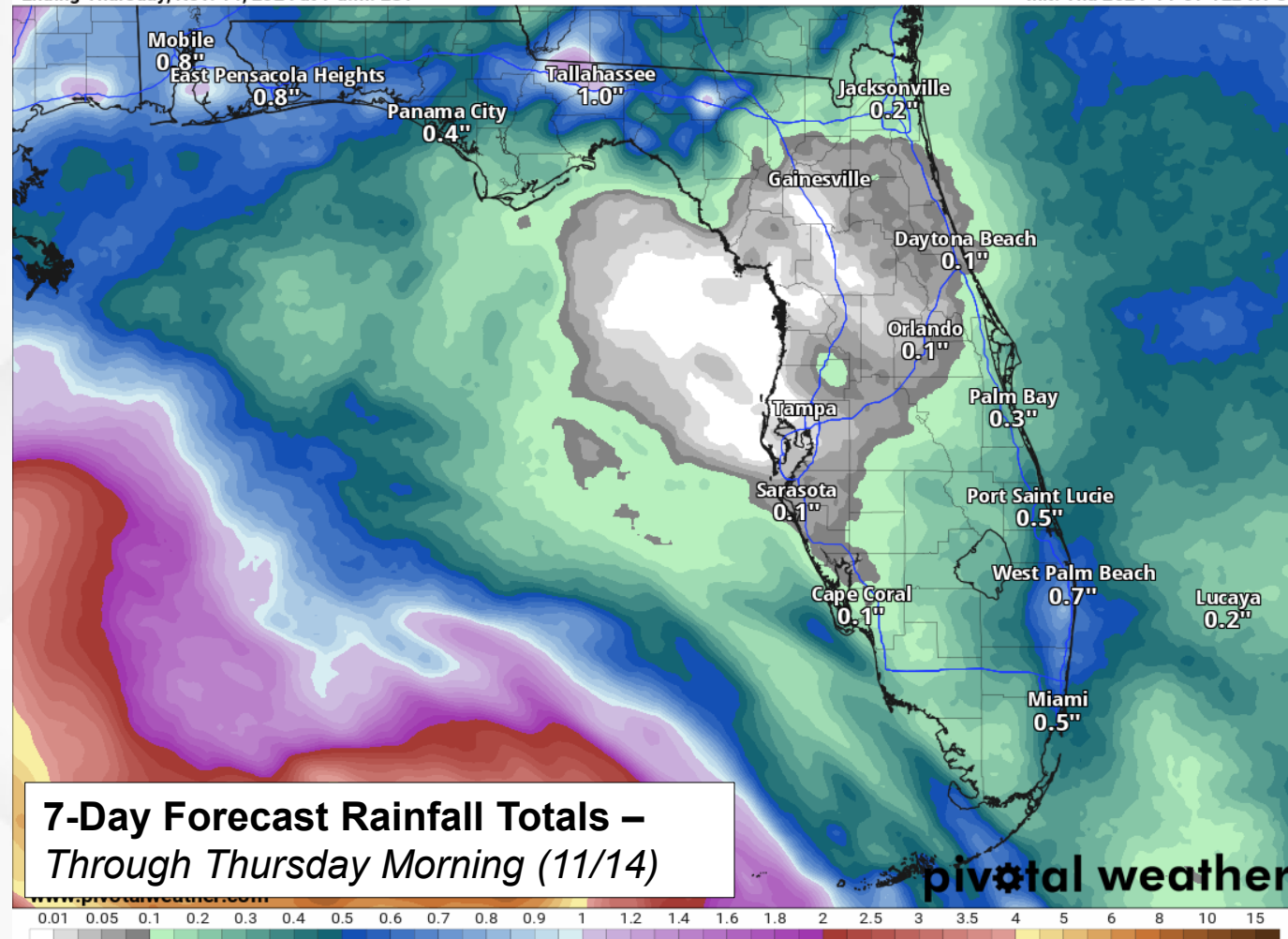
Rainfall Totals – Next 7 Days

From the Weather Prediction Center (WPC)

7-Day Precipitation (in)

Ending Thursday, Nov. 14, 2024 at 7 a.m. EST

Init: Thu 2024-11-07 12z WPC

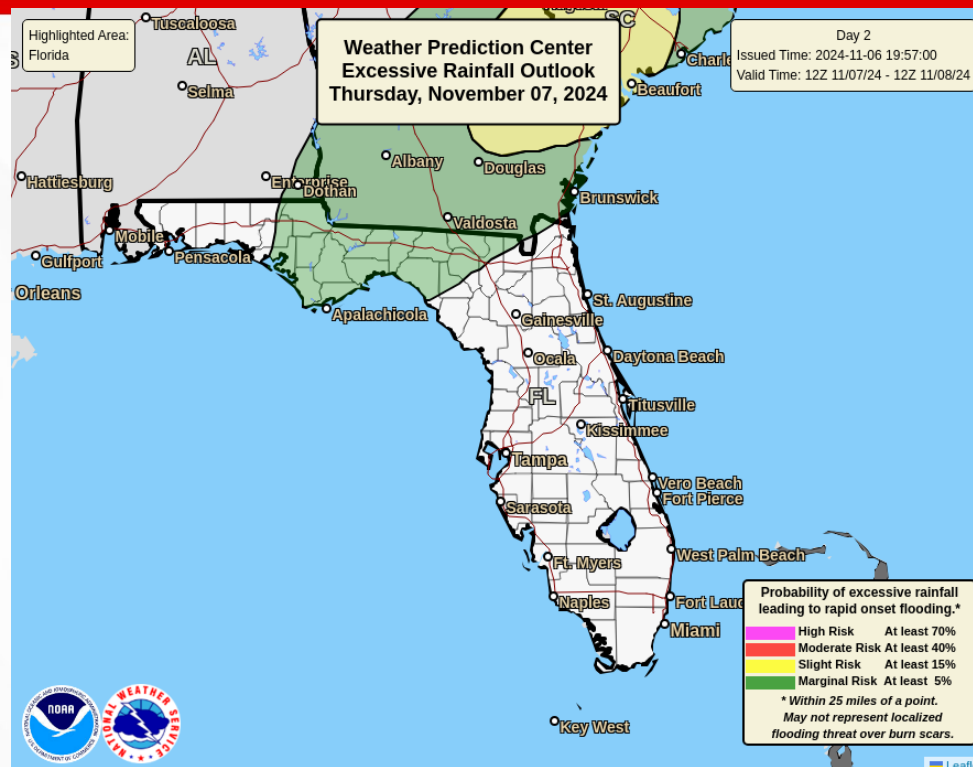


- Rain chances will begin to decrease across Florida today with isolated to scattered showers and embedded thunderstorms persisting along the Peninsula (10-35% chance of rain) and across North Florida and the Keys (25-60% chance of rain).
- Mostly dry conditions will generally return across the state through the rest of the period with isolated to scattered showers and thunderstorms continuing to develop along the East Coast and moving across the Peninsula.
- Isolated to scattered showers and thunderstorms will be possible along the Panhandle early next week with the next cold front.
- Widespread rainfall totals near or below 1" are forecast across the state over the next 7 days with locally higher totals upwards of 2-3" possible along the Florida Panhandle, Southeast Coast, and Keys.



Flash Flooding – Thursday

From the Weather Prediction Center (WPC)

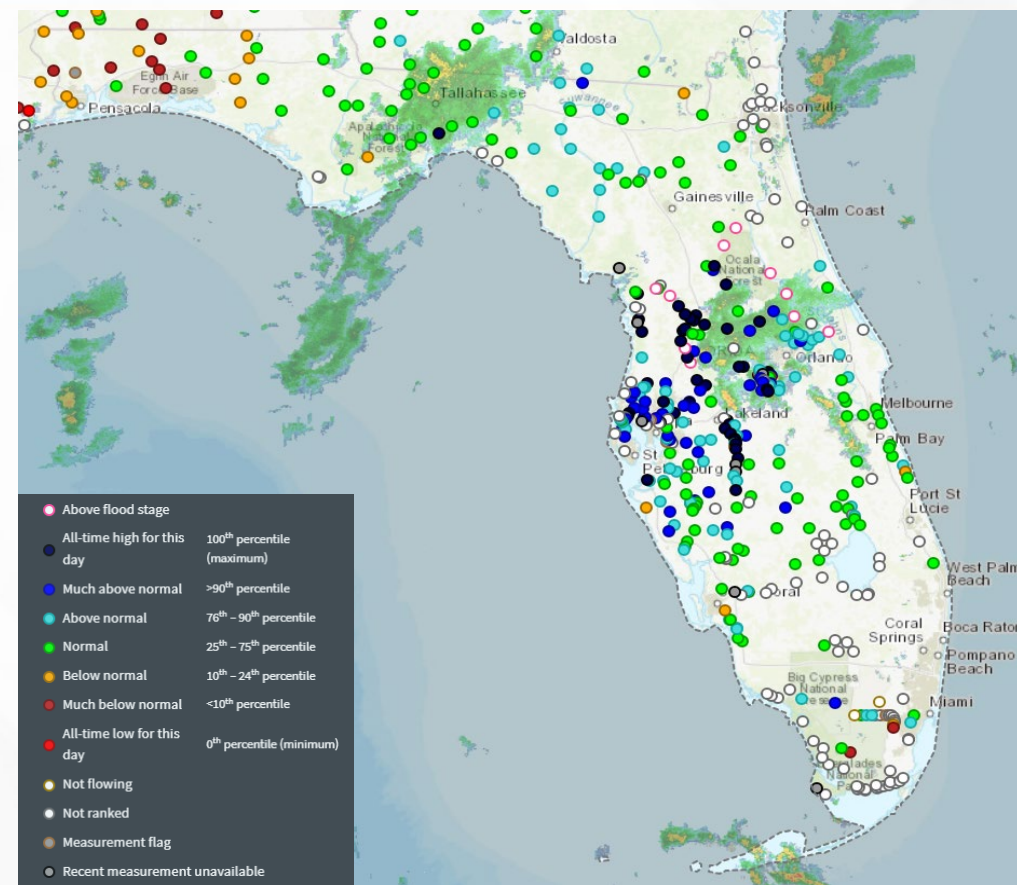
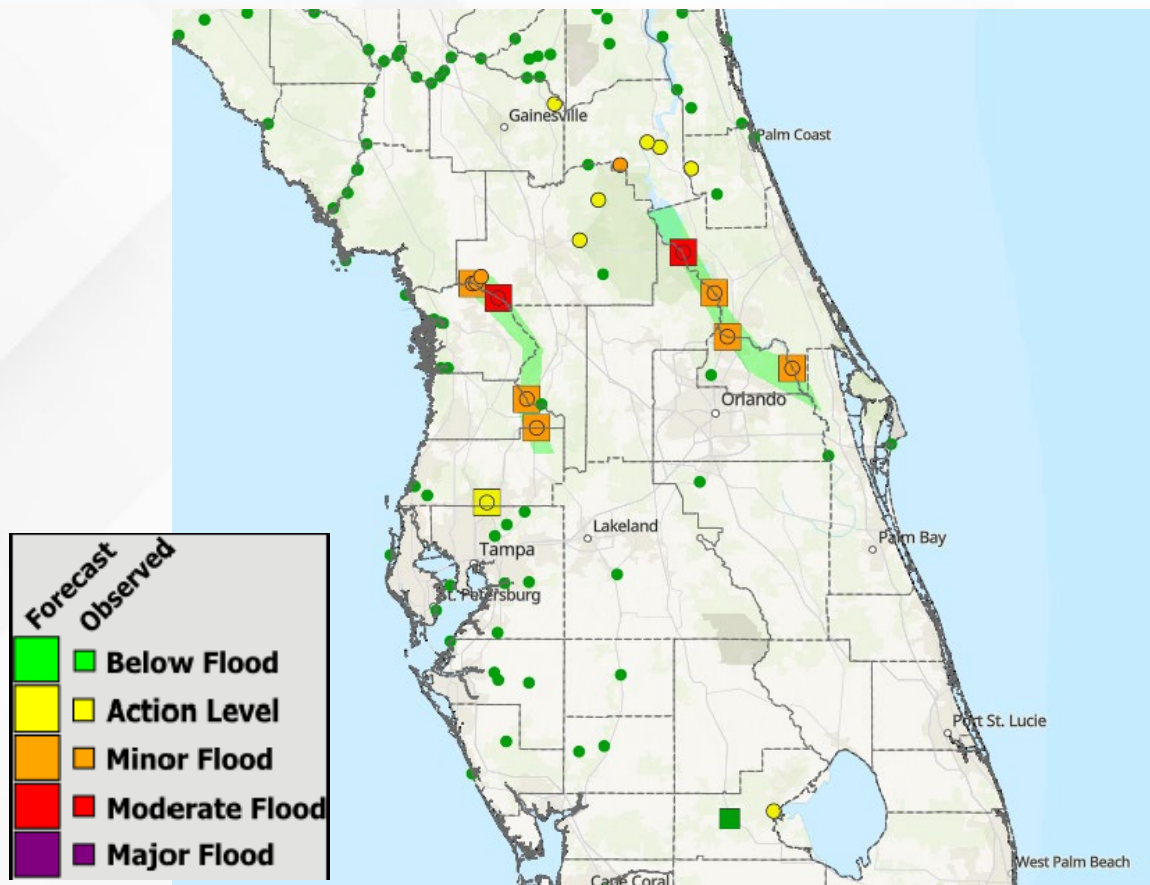


- Rain chances will begin to decrease across Florida today with lingering moisture continuing to give way to isolated to scattered showers and embedded thunderstorms across the state throughout the day and across North Florida overnight.
- Some of these showers and thunderstorms may be slow-moving at times.
- The Weather Prediction Center (WPC) is outlooking a **Marginal Risk (level 1 of 4) for Flash Flooding** along the Eastern Panhandle and across the Big Bend towards the I-75 corridor today as this very moist airmass may allow for locally heavy downpours at times, giving way to localized instances of **flooding** and **ponding of water** over already saturated grounds and along urban and low-lying/poor drainage areas.
- **Flood Watches** remain in effect across Madison and inland Jefferson counties.



River Flooding

From National Weather Service (NWS)



Minor to moderate riverine flooding continues across the Withlacoochee and St. Johns River basins in response to Hurricane Milton in early October. The upper portions of the Withlacoochee ([US 301 Trilby](#) and [Croom](#)) continued to see water levels very slowly decline, while lower portions of the river ([Holder near SR 200](#) and [Dunnellon](#)) continue to see water levels hold steady within a crest. The lower Withlacoochee can expect water levels to remain steady over the next day or so before beginning to very slowly decline. Similarly, the St. Johns River continues to see water levels at all forecast points ([Astor](#), [Lake Harney](#), [Deland](#) and [Sanford](#)) hold steady or very slowly decline as onshore winds persist along tidal portions of the river, keeping discharge rates slow.

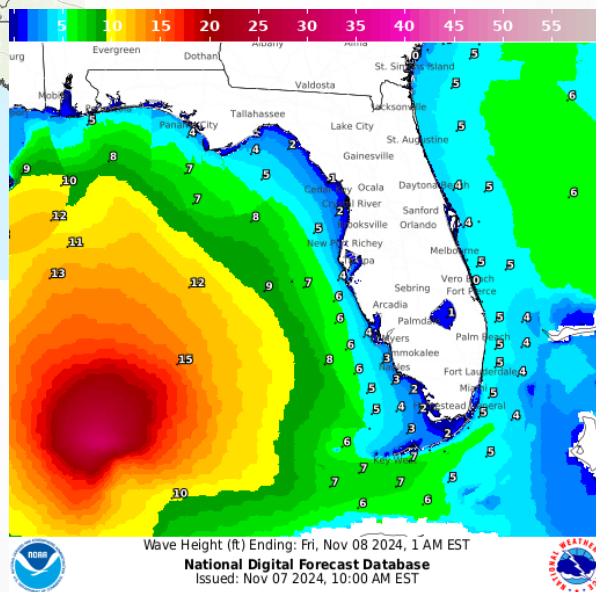


Forecast Wave Heights & Rip Currents

From the National Weather Service (NWS)



High Surf Advisory



North Florida Gulf Coast

Rip Current

Marine Hazard

Today

Fri

Sat

Sun

Mon



Florida West Coast

High Surf

Rip Current

Marine Hazard

Today

Fri

Sat

Sun

Mon



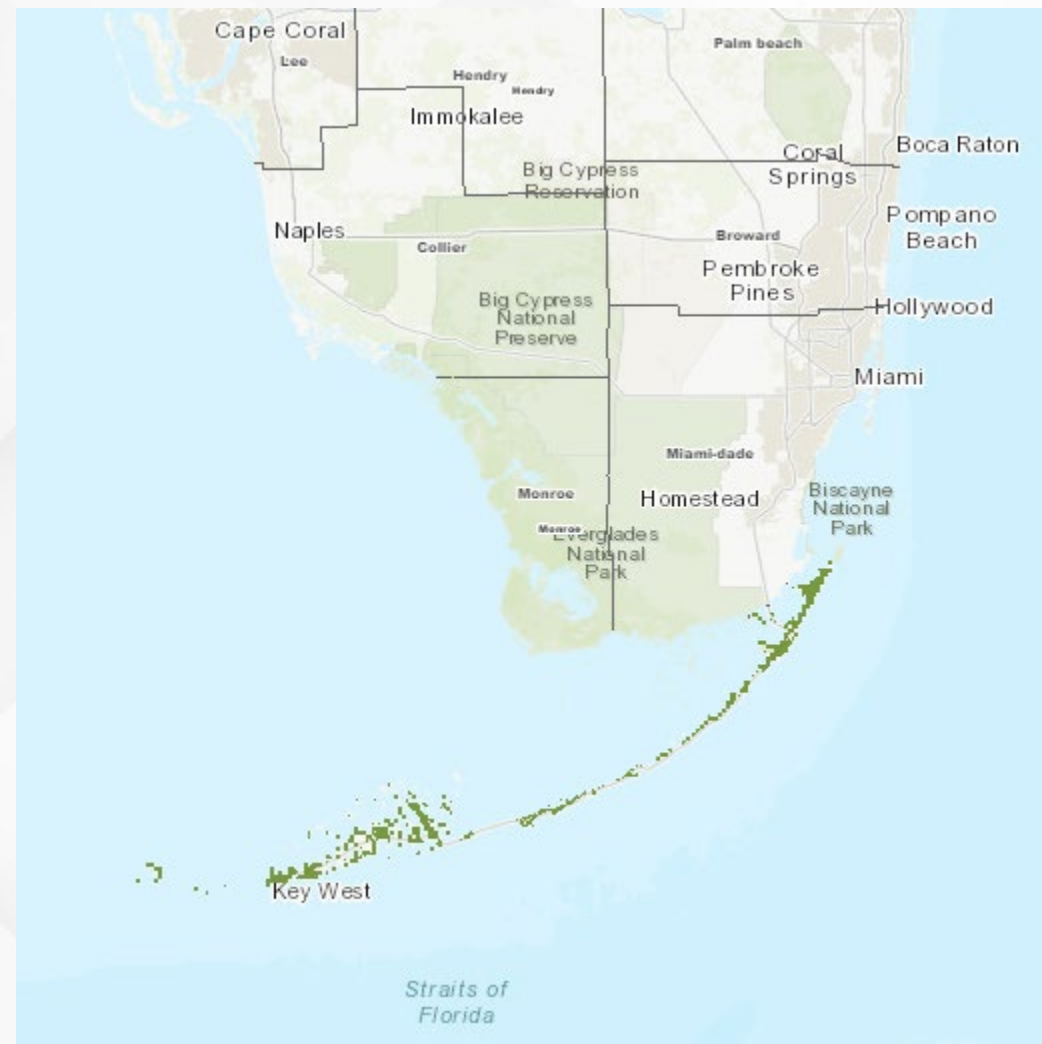
- **Hazardous beach and boating conditions** persist nearly statewide with ongoing breezy winds and ocean swells. **High Surf Advisories** go into effect this evening and tonight along portions of the Florida Panhandle as ocean swells from distant Hurricane Rafael are expected to create **large breaking waves near 5-7'** in the surf zone late today into tonight and lead to instances of **localized beach erosion**.
- **4-6' breaking waves** are forecast along the West Coast of Florida by tonight with **locally higher 7' breaking waves** further offshore.
- **Wave heights** will return to **near 3-5'** along the East Coast today; however, **large breaking waves near 5-8'** will persist along the Atlantic-facing Keys.
- A **high risk of rip currents** will largely linger through the remainder of the week and into the weekend.

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Coastal Flooding Potential

From the National Weather Service (NWS)



A **Coastal Flood Statement** remains in effect along the Florida Keys through late this afternoon as instances of **minor saltwater flooding** remain possible near and during times of high tide as ocean swells persist from Hurricane Rafael.



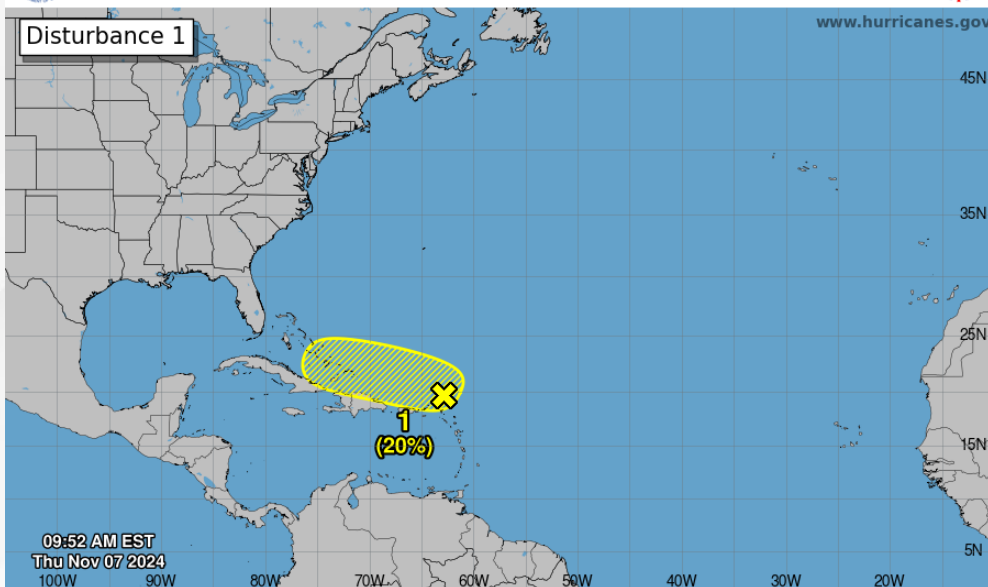
Tropical Weather Outlook

Disturbance 1 – Southwestern Atlantic



Seven-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



Current Disturbances and Seven-Day Cyclone Formation Chance: ✕ < 40% ✖ 40-60% ✗ > 60%
Tropical or Sub-Tropical Cyclone: ○ Depression ● Storm ● Hurricane
○ Post-Tropical Cyclone or Remnants

20%

48 Hour Formation

20%

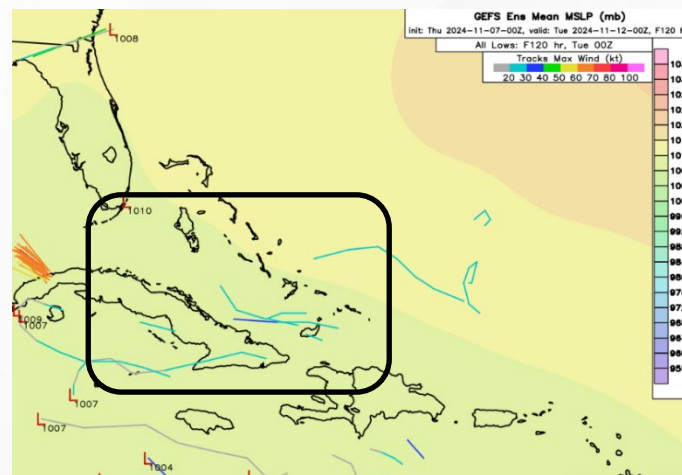
7 Day Formation

A trough of low pressure over the northern Leeward Islands continues to produce disorganized showers and thunderstorms. Some gradual development of this system is possible during the next couple of days while it moves westward near the Greater Antilles.

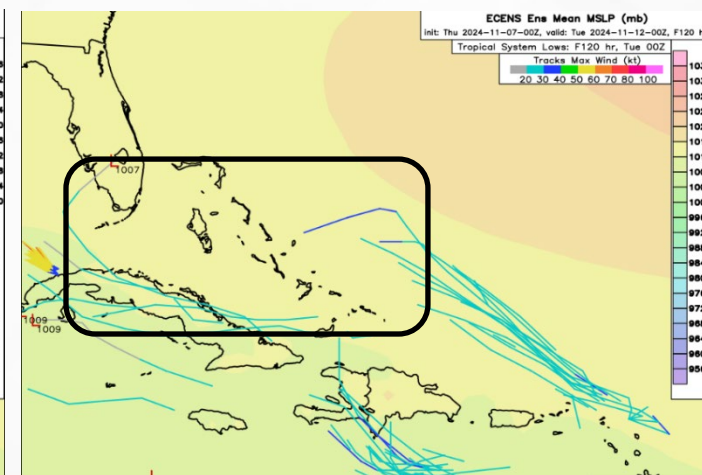
This system poses no direct threat to Florida over the next 5 to 7 days; trends within the model guidance will continue to be monitored regarding the development of this area of disturbed weather later this week. Computer forecast models carry quite a bit of uncertainty with the formation and evolution of this potential disturbance.

Chance of development through 48 hours...**low...20%**

Chance of development through 7 days...**low...20%**



American Model Ensemble
Valid: Tuesday (11/11) Morning



European Model Ensemble
Valid: Tuesday (11/12) Morning



Summary

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Hurricane Rafael:

- As of 10:00 AM EST, Hurricane Rafael is located about 215 miles west of Key West, Florida, and 200 miles west-northwest of Havana, Cuba, and moving west-northwestward at 9 mph.
- A turn toward the west is expected later today, with this general motion continuing through the weekend.
- On the forecast track, Rafael is expected to move over the southern Gulf of Mexico for the next few days.
- Maximum sustained winds remain near 100 mph, making Rafael a Category 2 hurricane.
- Some additional weakening is anticipated during the next few days.
- There remains above average uncertainty in the future track of Rafael as there remains some significant spread in the model guidance over the Gulf of Mexico beyond the next 48 hours, and updates to the future track forecast can be expected.
- *All tropical watches and warnings for Florida have been discontinued; however, hazardous beach and boating conditions, ocean swells, breezy winds, and increased rain chances will linger across portions of the state today.*

Southwestern Atlantic:

- A trough of low pressure over the northern Leeward Islands continues to produce disorganized showers and thunderstorms.
- Some gradual development of this system is possible during the next couple of days while it moves westward near the Greater Antilles.
- *This system poses no direct threat to Florida over the next 5 to 7 days; trends within the model guidance will continue to be monitored regarding the development of this area of disturbed weather later this week. Computer forecast models carry quite a bit of uncertainty with the formation and evolution of this potential disturbance.*
- The NHC is outlooking a **low (20%)** chance of development over the next 48 hours and through the next 7 days.

Florida Outlook:

- Rain chances will begin to decrease across Florida today with isolated to scattered showers and embedded thunderstorms persisting along the Peninsula (10-35% chance of rain) and across North Florida and the Keys (25-60% chance of rain).
- Widespread rainfall totals near or below 1" are forecast across the state over the next 7 days with locally higher totals upwards of 2-3" possible along the Florida Panhandle, Southeast Coast, and Keys.
- The Weather Prediction Center (WPC) is outlooking a **Marginal Risk (level 1 of 4) for Flash Flooding** along the Eastern Panhandle and across the Big Bend towards the I-75 corridor today as this very moist airmass may allow for locally heavy downpours at times, giving way to localized instances of flooding and ponding of water over already saturated grounds and along urban and low-lying/poor drainage areas.
- **Flood Watches** remain in effect across Madison and inland Jefferson counties.
- Rivers, creeks and streams across Central Florida continue to flow at or above normal streamflows following the widespread heavy rainfall from Hurricanes Helene and Milton.
- A **Coastal Flood Statement** remains in effect along the Florida Keys through late this afternoon as instances of minor saltwater flooding remain possible near and during times of high tide as ocean swells persist from Hurricane Rafael.

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



Tropical Update

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Florida Division of Emergency Management

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