



Tropical Update



6:00 PM EDT

Monday, September 23, 2024

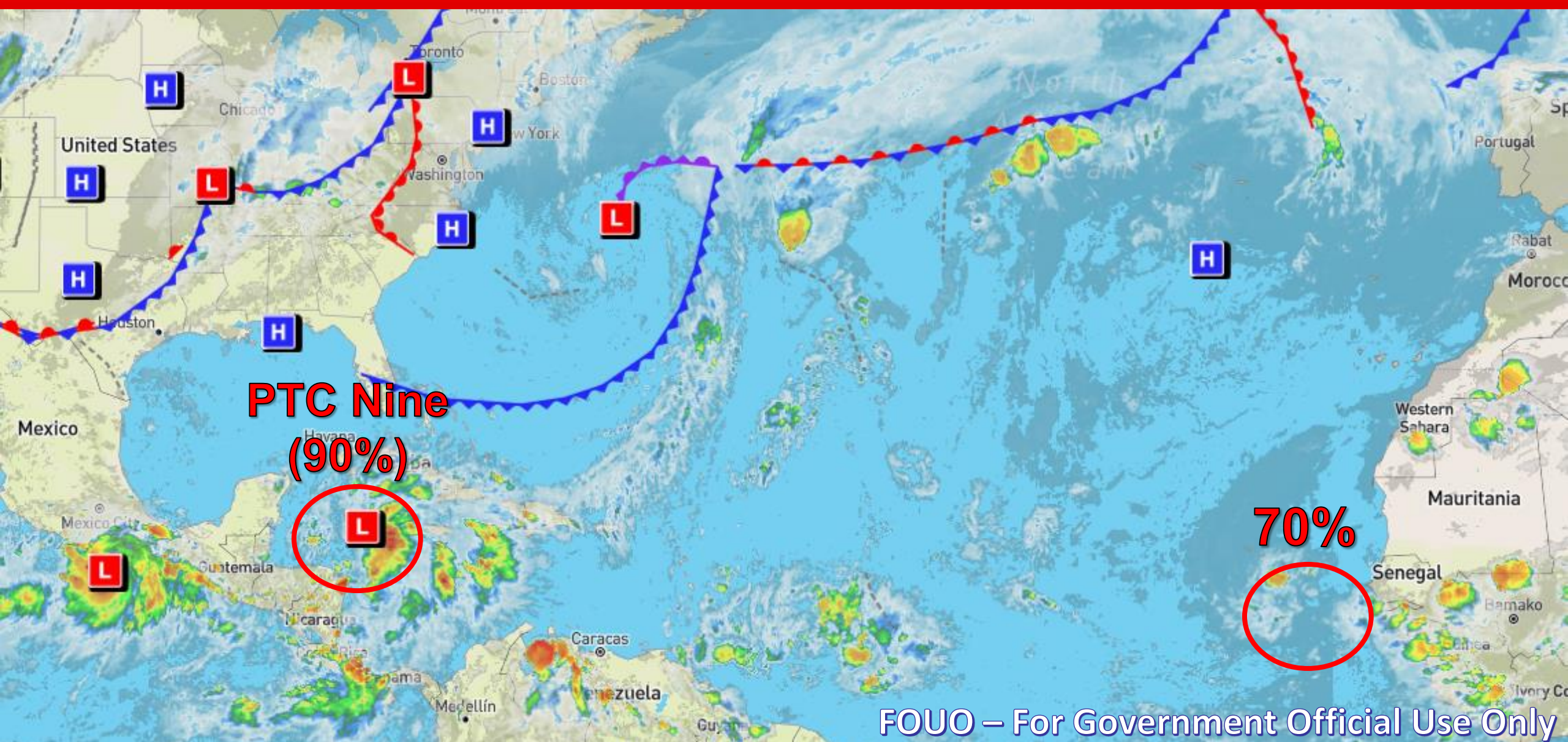
Potential Tropical Cyclone Nine Forecast to Strengthen Significantly During Next Few Days (90%); Tropical Storm Watch for Lower Florida Keys and Dry Tortugas; Florida Outlook Eastern & Central Tropical Atlantic (70%)

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

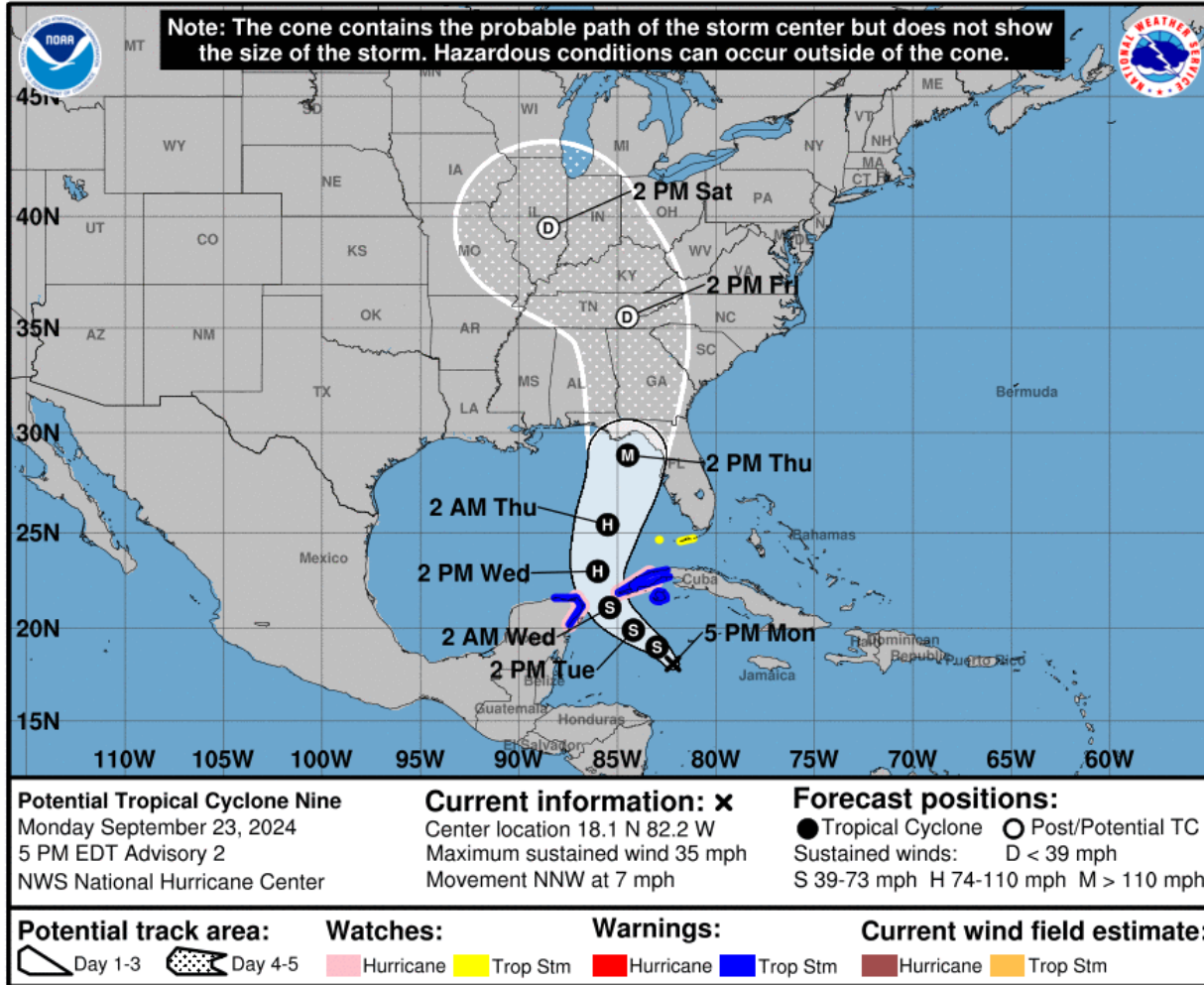
Chance of development: — None — Low — Medium — High





Potential Tropical Cyclone Nine

From the National Hurricane Center (NHC)



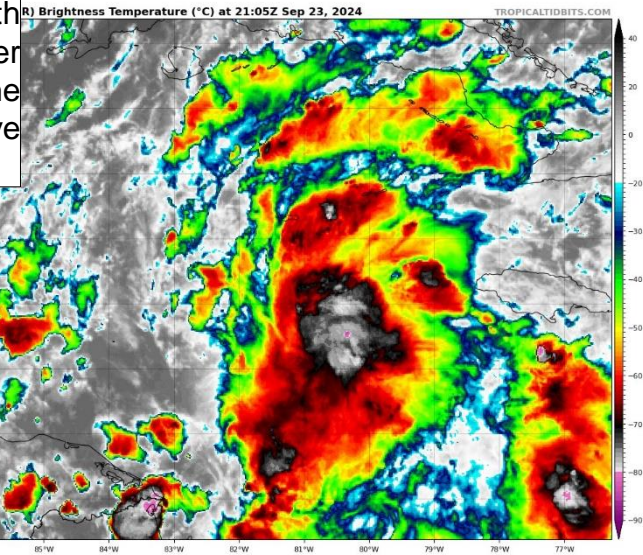
- **Location:** 105 miles SW of Grand Cayman; 315 miles SE Western Tip of Cuba
- **Maximum Sustained Winds:** 35 mph
- **Current Movement:** NNW at 7 mph
- **FL Watches & Warnings:** Tropical Storm Watches – Dry Tortugas and Lower Keys

A northwestward motion is expected on Tuesday and Tuesday night, followed by a faster northward to north-northeastward motion on Wednesday and Thursday. On the forecast track, the center of the system is forecast to move across the northwestern Caribbean Sea Tuesday night and then over the eastern Gulf of Mexico on Wednesday and Thursday. Maximum sustained winds are near 35 mph with higher gusts. Strengthening is expected during the next few days, and the system is forecast to become a hurricane on Wednesday and continue strengthening as it moves across the eastern Gulf of Mexico.

*Formation chance through 48 hours...**high...90%.**

*Formation chance through 7 days...**high...90%.**

Showers and thunderstorms associated with PTC Nine are gradually becoming better organized but remains mostly confined to the eastern side. This system still does not have a well-defined center or circulation.





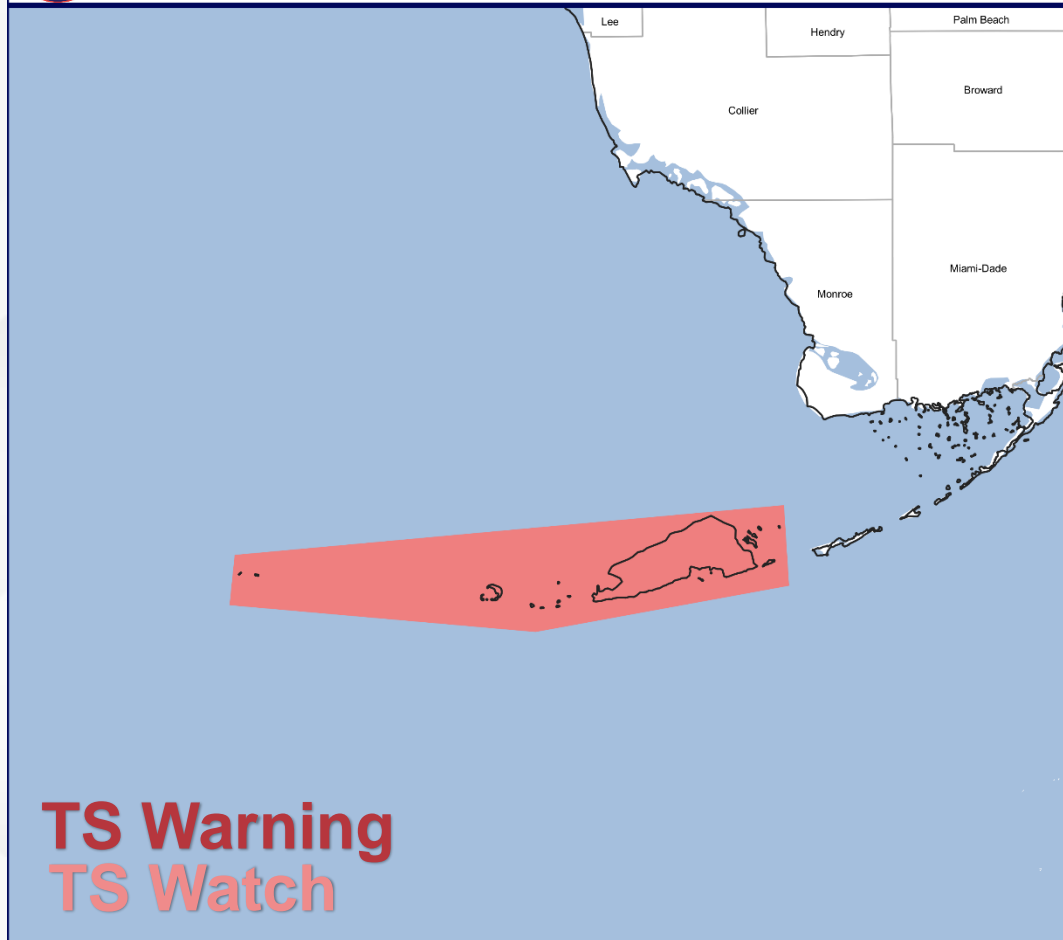
Current Tropical Wind Watches/Warnings

As of 5:00 PM EDT Monday



Tropical Storm Watch: Monday Afternoon

Created by FDEM State Meteorological Support Unit || Data from NWS, US Census Bureau, Natural Earth



• Tropical Storm Watches:

- *Dry Tortugas*
- *Lower Keys south of Seven Mile Bridge (Monroe County)*

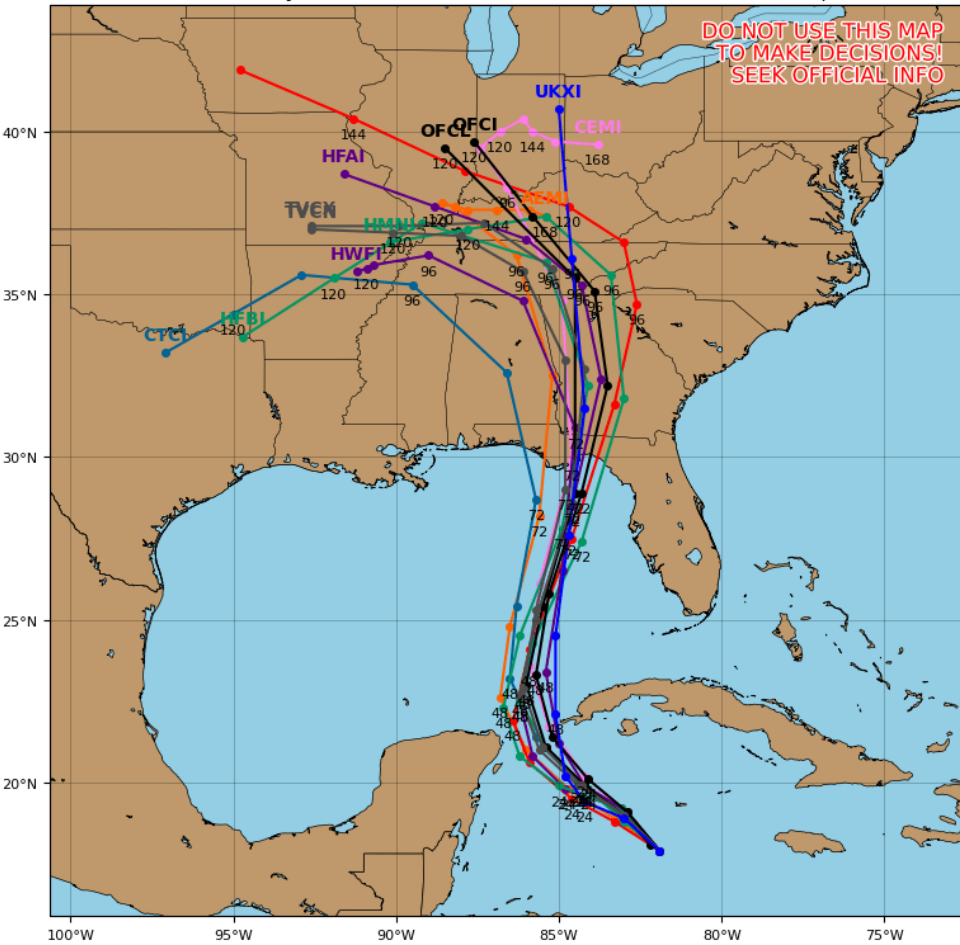


Model Forecasts – Next 5 Days

Potential Tropical Cyclone Nine

Potential Tropical Cyclone NINE Model Track Guidance

Initialized at 18z Sep 23 2024 Levi Cowan - tropicaltidbits.com

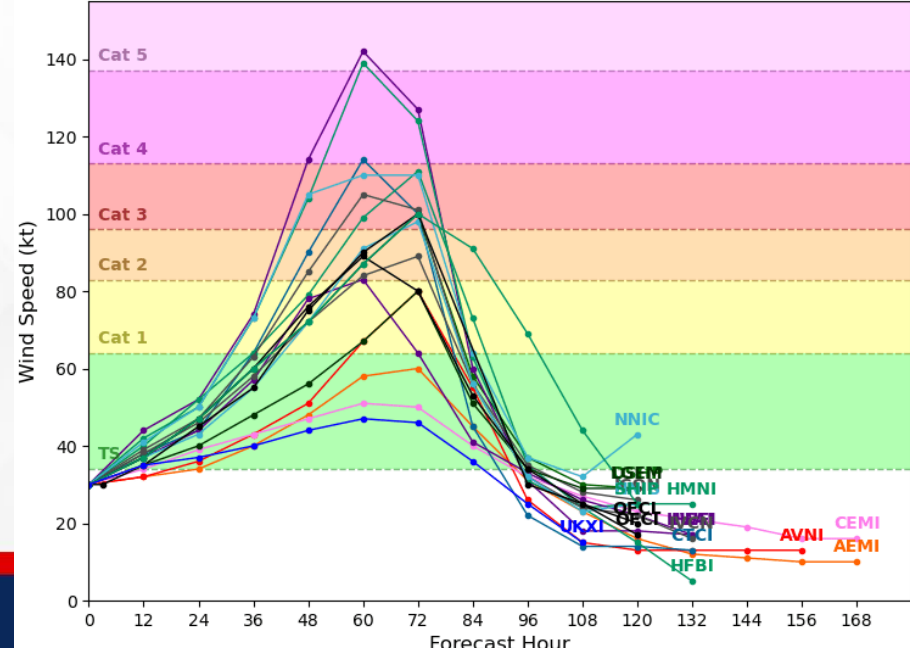


Computer model guidance has changed little since this morning showing a general northwestward motion expected to continue through tonight and Tuesday night over the northwestern Caribbean Sea. As PTC Nine enters the southeastern Caribbean Sea, a faster forward motion to the north to north-northeastward Wednesday and Thursday. This system does not have a well-defined center of circulation, and therefore track shifts can be expected as this system continues to evolve and organize through the next few days. Computer model guidance is showing that PTC Nine will approach the Florida Panhandle and Big Bend through the next 72-84 hours.

Computer model guidance continues to show that conditions will be favorable for additional strengthening and development over the northwestern Caribbean Sea and southeastern Gulf of Mexico. The system is forecast to become a hurricane on Wednesday and continue strengthening on Thursday as it moves across the eastern Gulf of Mexico. Additional strengthening can be expected upon approach to the coastal Panhandle and Big Bend through the next 72-84 hours.

Potential Tropical Cyclone NINE Model Intensity Guidance

Initialized at 18z Sep 23 2024 Levi Cowan - tropicaltidbits.com





Key Messages

From the National Hurricane Center (NHC)

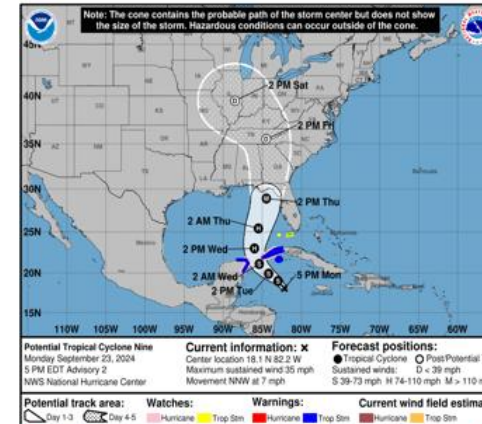


Key Messages for Potential Tropical Cyclone Nine

Advisory 2: 5:00 PM EDT Mon Sep 23, 2024



1. The disturbance is forecast to intensify and be near hurricane strength when it reaches the far northwestern Caribbean Sea Tuesday night. Tropical storm conditions are expected over portions of western Cuba and the northeastern coast of the Yucatan Peninsula with hurricane conditions possible.
2. The system is expected to intensify into a major hurricane before it approaches the northeastern Gulf Coast on Thursday. While it is too soon to pinpoint the exact location and magnitude of impacts, the potential for life-threatening storm surge and damaging hurricane-force winds along the coast of the Florida Panhandle and the Florida west coast is increasing. Storm Surge and Hurricane Watches will likely be issued for a portion of that area tonight or Tuesday morning, and residents should ensure they have their hurricane plan in place.
3. Potential Tropical Cyclone Nine will bring heavy rain to portions of the western Caribbean which may lead to flooding and possible mudslides in western Cuba.

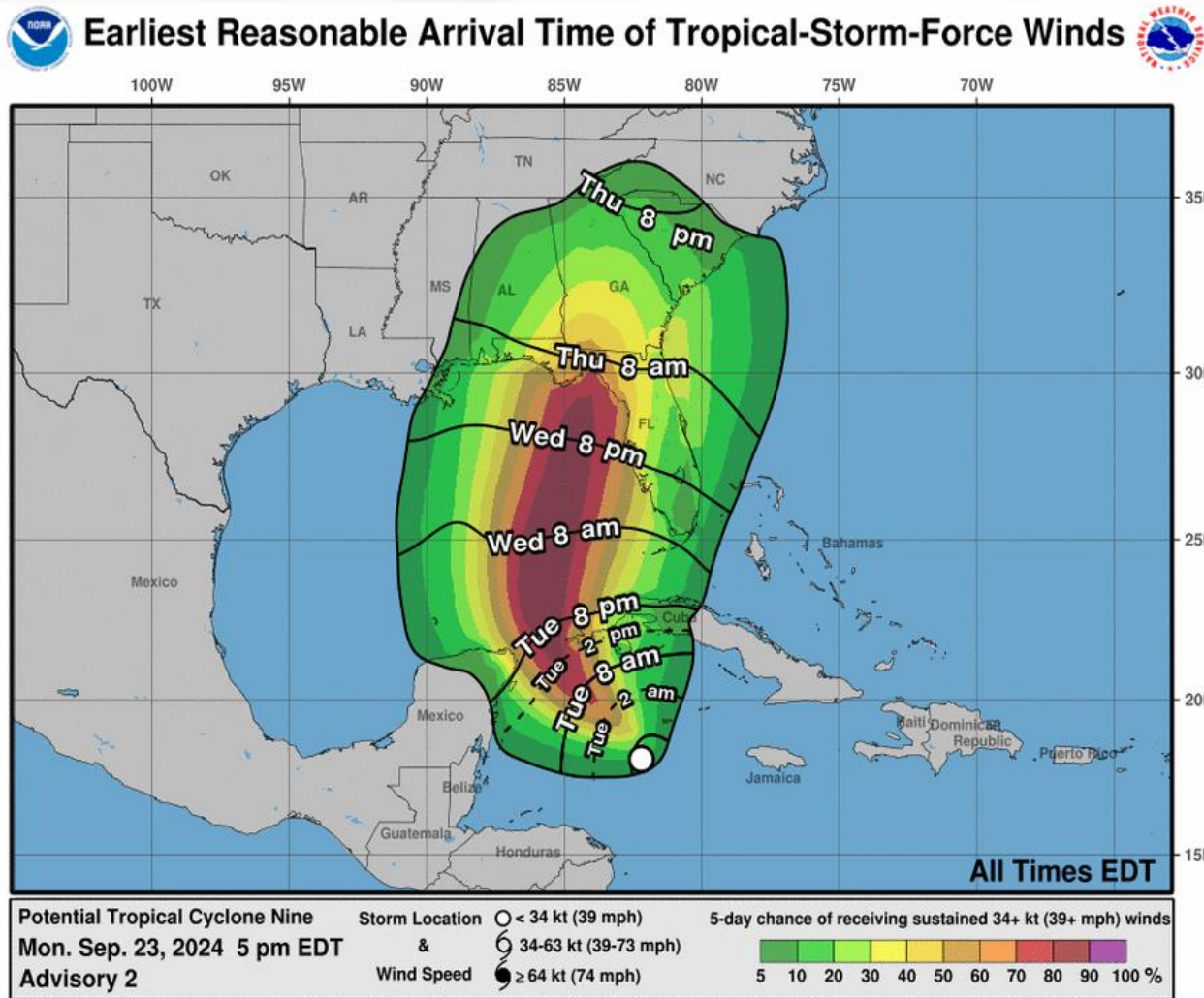


For more information go to hurricanes.gov



Tropical Storm-Force Wind Probabilities

Potential Tropical Cyclone Nine



Tropical-storm-force winds are most likely to arrive to the Lower Keys late Wednesday afternoon, then extend northward into South and West-Central Florida overnight Wednesday and early Thursday morning. Tropical storm-force winds look to reach the I-4 corridor Thursday morning and into midday, as well as the southernmost Panhandle and Big Bend Coast. Tropical storm-force winds will continue to extend northward throughout Thursday morning and afternoon across North Florida.

However, tropical-storm force conditions may begin as early as the predawn hours on Wednesday for the Lower Keys and Wednesday morning and into midday across South Florida. Tropical storm-force winds could arrive as early as the predawn hours of Thursday morning along the coastal Panhandle Big Bend and towards the Capital City.

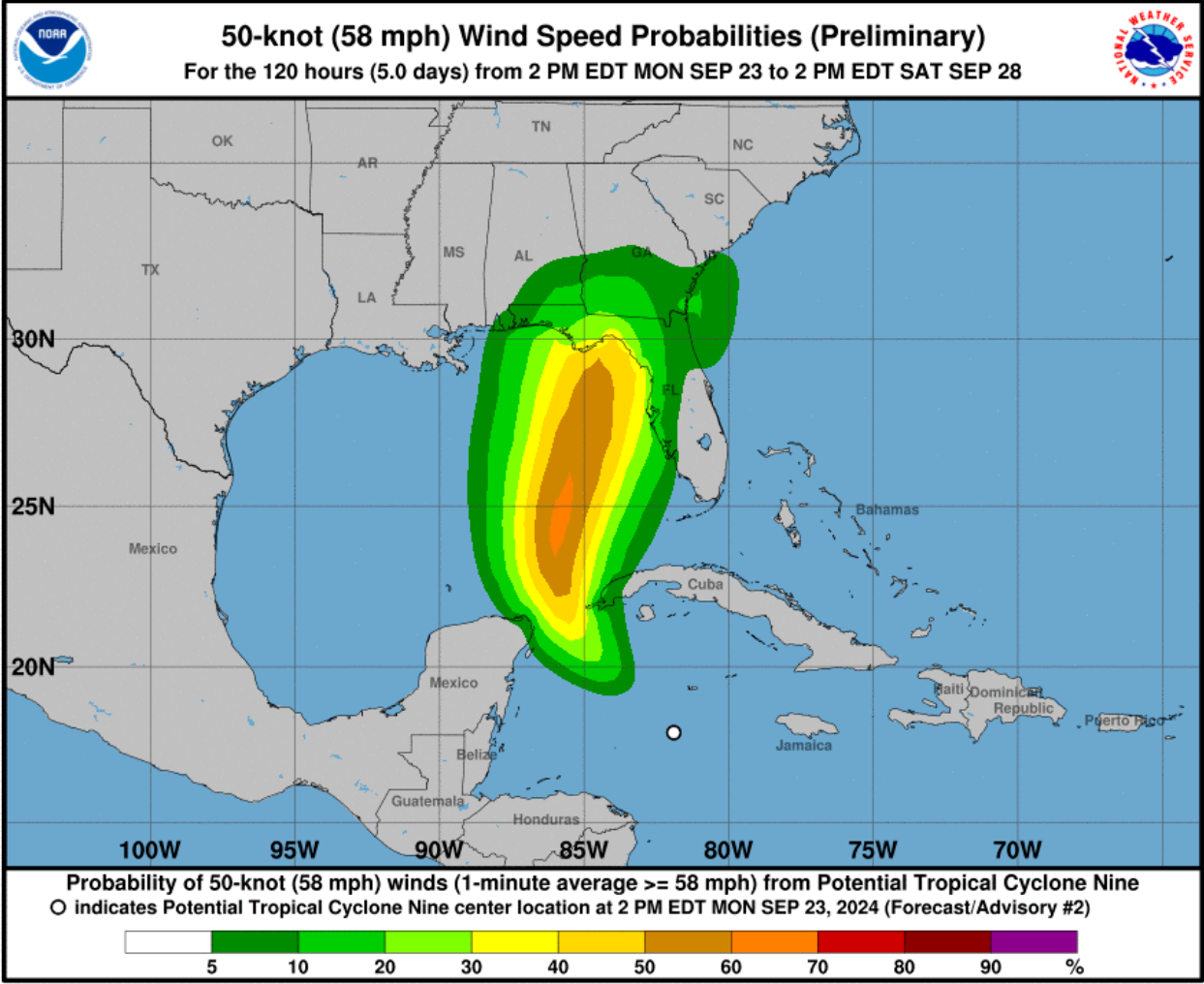
Wind speed probabilities will likely continue to increase in future packets as the eventual forecast track and intensity forecast become realized.

| City | Tropical Storm-Force Wind Probability |
|--------------|---------------------------------------|
| Key West | 27% |
| Naples | 37% |
| Miami | 6% |
| Fort Myers | 20% |
| Tampa | 58% |
| Cedar Key | 67% |
| Cocoa Beach | 28% |
| Orlando | 19% |
| Gainesville | 37% |
| Tallahassee | 56% |
| Jacksonville | 26% |
| Apalachicola | 75% |
| Panama City | 64% |
| Pensacola | 18% |



Strong Tropical Storm-Force Wind Probabilities

Potential Tropical Cyclone Nine



With additional strengthening over the next few days, strong tropical storm force-winds can be expected to increase over the next few days as well.

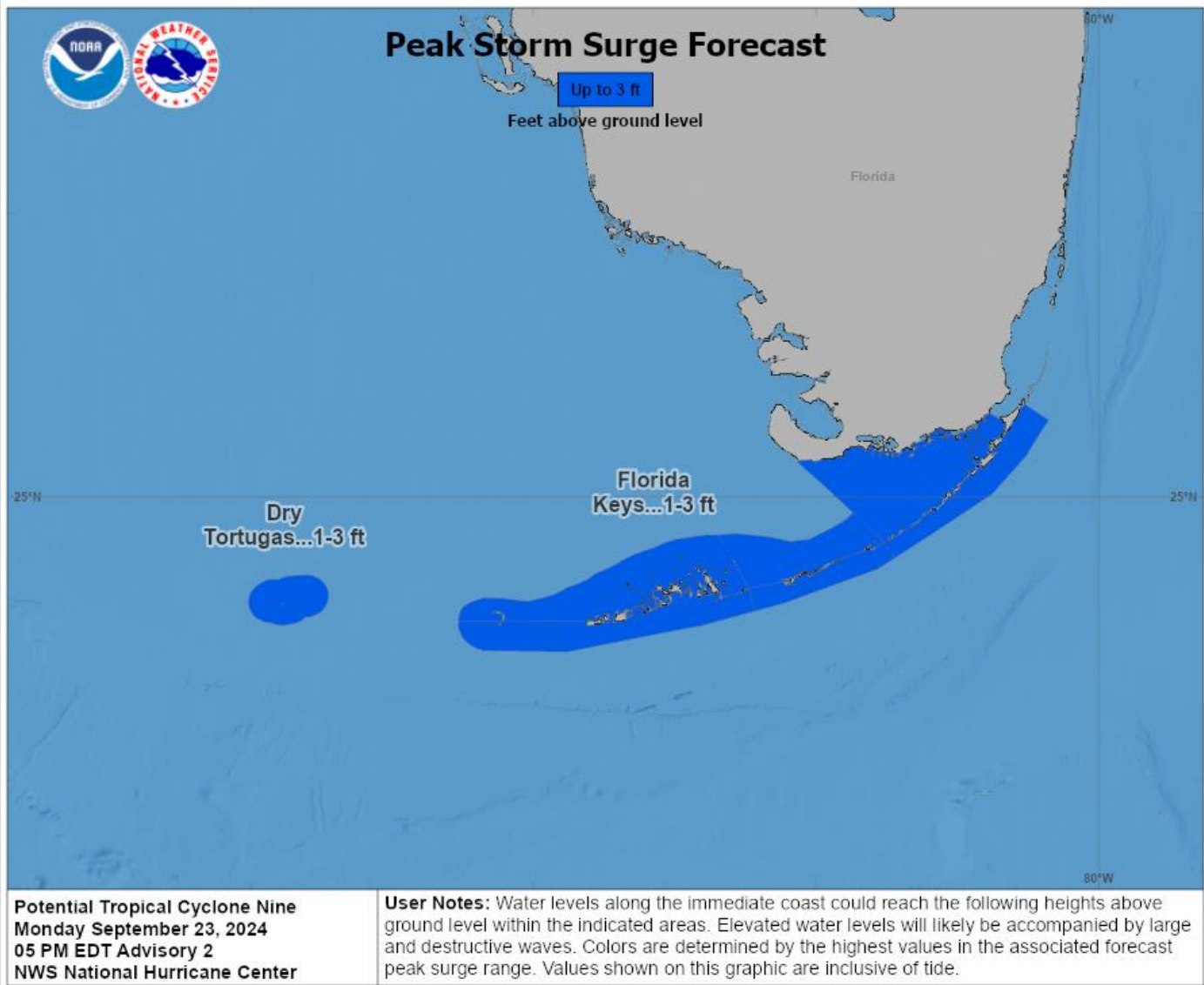
| City | Strong Tropical Storm-Force Wind Probability |
|--------------|--|
| Key West | 3% |
| Naples | 6% |
| Miami | 0% |
| Fort Myers | 4% |
| Tampa | 23% |
| Cedar Key | 34% |
| Cocoa Beach | 3% |
| Orlando | 0% |
| Gainesville | 10% |
| Tallahassee | 23% |
| Jacksonville | 7% |
| Apalachicola | 46% |
| Panama City | 34% |
| Pensacola | 6% |



Current Storm Surge Watch

As of 5:00 PM EDT Monday

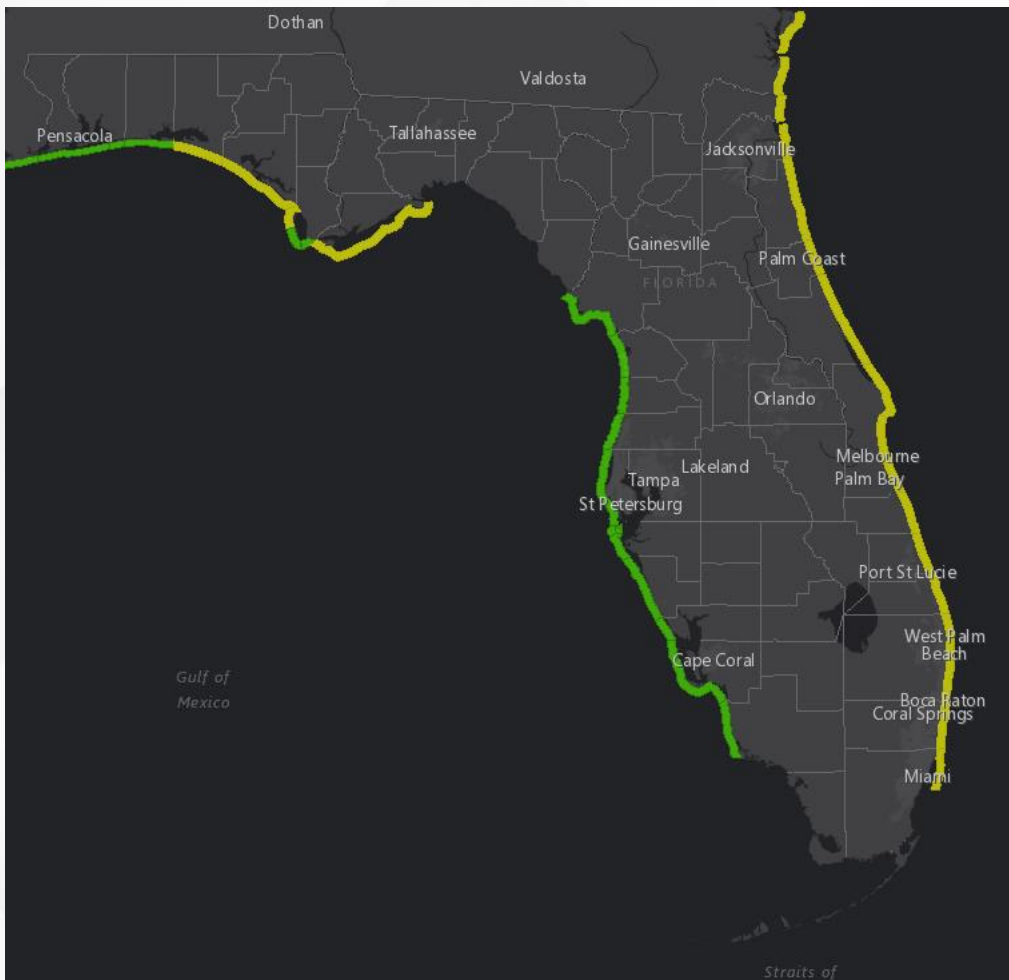
The combination of storm surge and tide will cause normally dry areas near the coast to be flooded by rising waters moving inland from the shoreline. Forecast storm surge of 1-3' is possible along the Dry Tortugas and across the Florida Keys. As the system moves into the southern Gulf of Mexico over the next few days, storm surge is likely to increase along the West Coast and extending into the Big Bend.





Rip Current Risk - Today

From the Weather Prediction Center (WPC)



Onshore winds and lingering ocean swells along the Florida East Coast will create a **moderate risk for rip currents**. Several Panhandle beaches can also anticipate a **moderate risk for rip currents** through today. As this system enters the southern Gulf of Mexico and moves northward over the next couple of days, **an increased risk for rip currents** can be expected for Panhandle and West Coast beaches. A **high risk for rip currents** can likely be expected nearly statewide by midweek.

24 Hr Marine Hazard Risks

FL Panhandle

| | Today | Tue | Wed | Thu | Fri | Sat | Sun |
|---------------|-------|-----|-----|-----|-----|-----|-----|
| Rip Current | | | | | | | |
| Marine Hazard | | | | | | | |



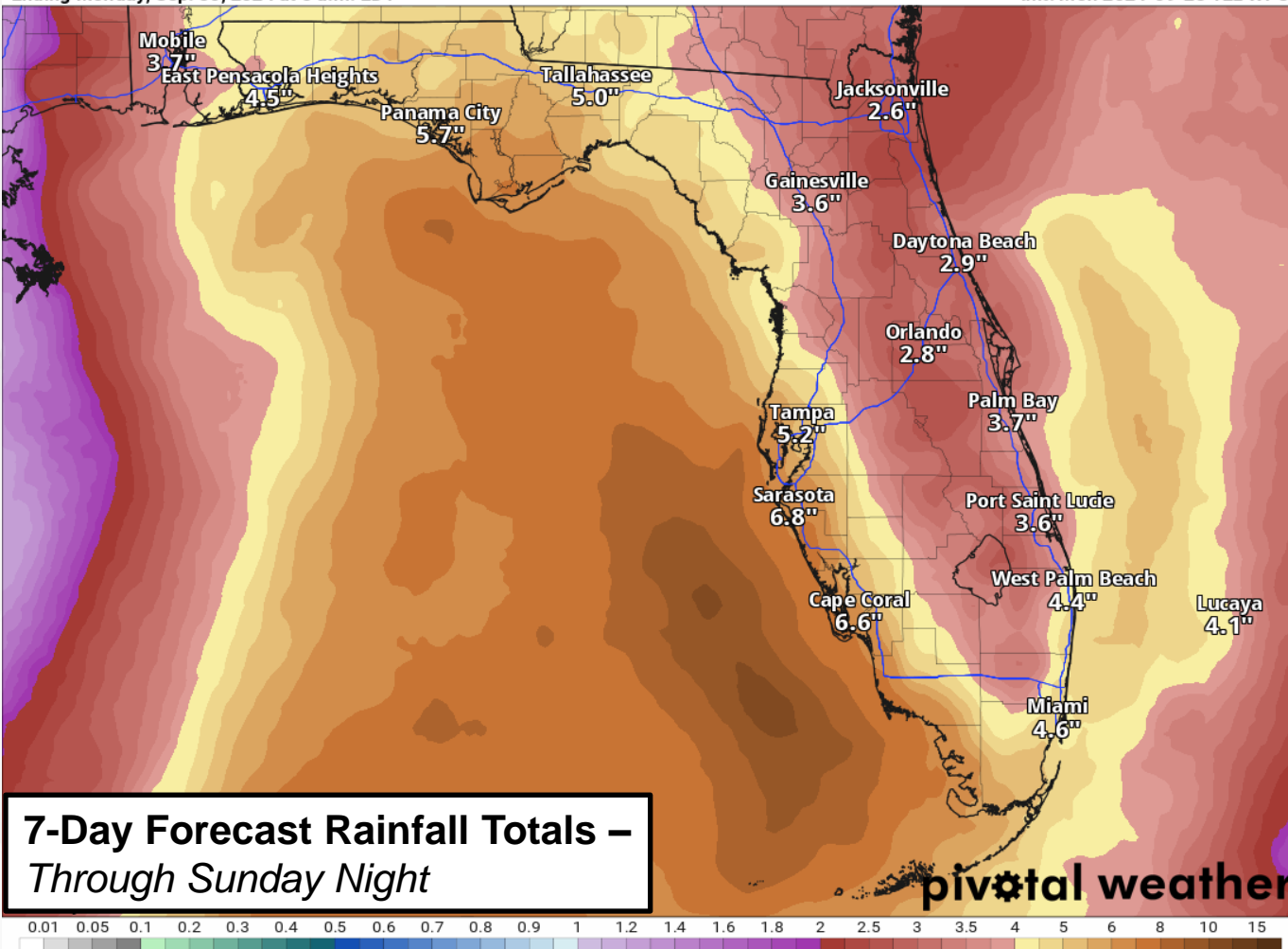
Rainfall Totals – Next 7 Days

From the Weather Prediction Center (WPC)

7-Day Precipitation (in)

Ending Monday, Sep. 30, 2024 at 8 a.m. EDT

Init: Mon 2024-09-23 12z WPC



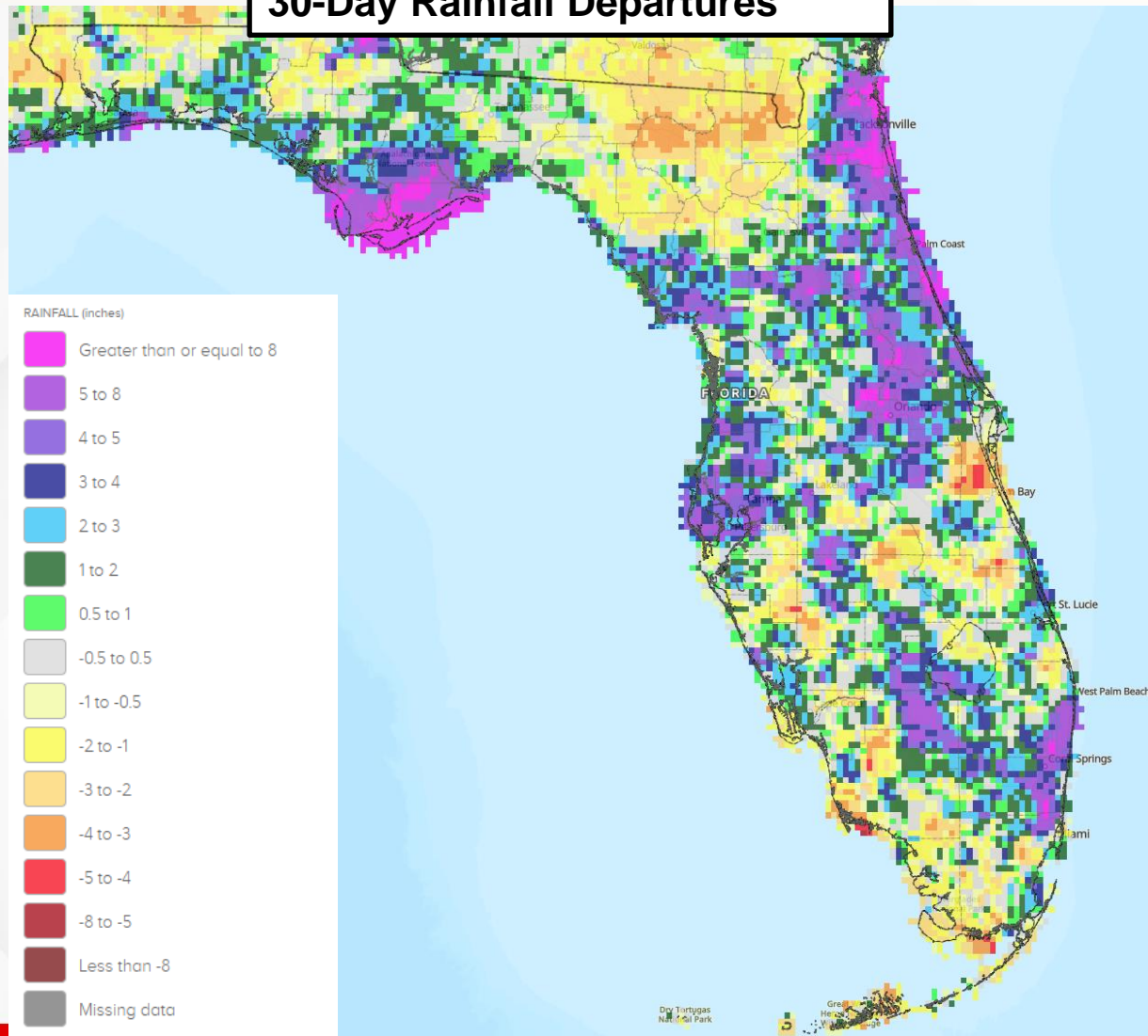
- Drier air and high pressure building in will limit shower and thunderstorm activity over the next few days across much of the state today and through the middle portions of this week. Shower and thunderstorm activity will become much more isolated and concentrated along the sea breeze.
- Increasing rain chances can be expected along to increase from south to north along the western Peninsula, then extend into northeastern Gulf of Mexico.
- *Rainfall totals heavily tied to the eventual track and forward speed of the system. With computer model guidance uncertainty regarding the exact track, there remains uncertainty as to where the heaviest rainfall can be expected.*
- Widespread rainfall totals of 2-4" can be expected across the state through the next 7 days, with locally higher totals upwards of 6-10" along the Panhandle and immediate Gulf Coast.



Rainfall Departures – 30 Days

How Saturated Are Our Soils?

30-Day Rainfall Departures

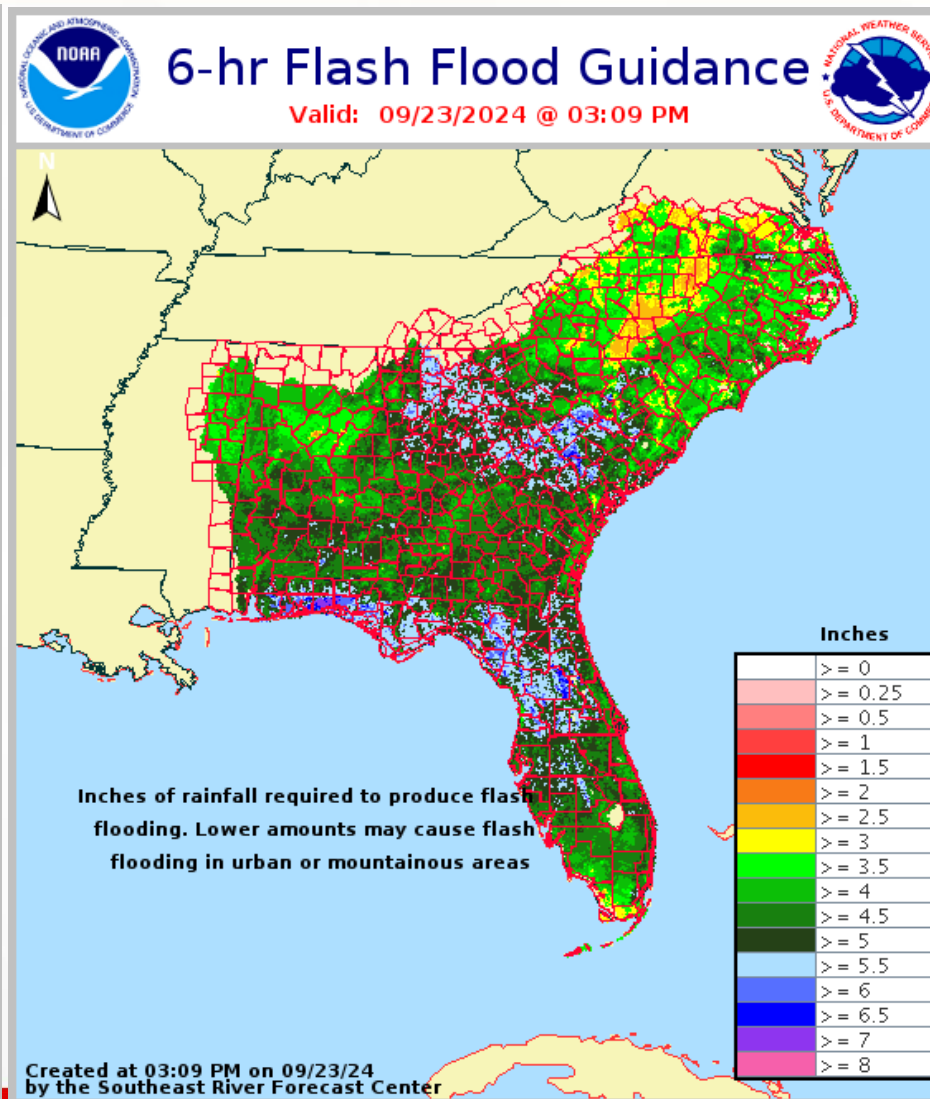
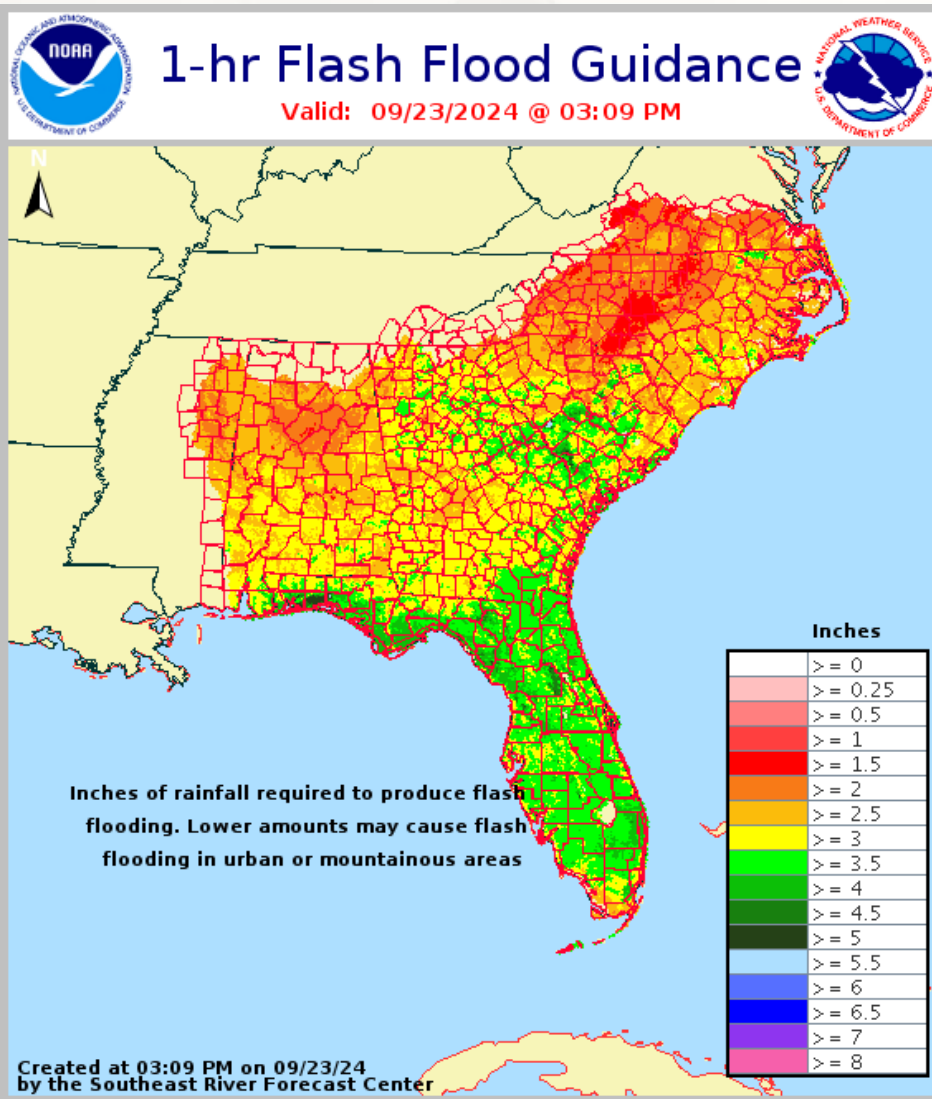


- Coastal portions of the Panhandle and south of the I-10 corridor are 5-8" above normal for rainfall from the last 30-days. This would increase the potential for onset flooding with additional heavy rainfall over the region.
- *Recent heavy rainfall over the Panhandle has allow for rises within water levels, but all rivers, creeks and waterways are currently below flood stage.*
- Interior portions of the Panhandle and Big Bend have seen below normal rainfall totals of 2-4" over the last 30-days.



Flash Flood Guidance

How Much Rain is Needed to Create Flash Flooding?

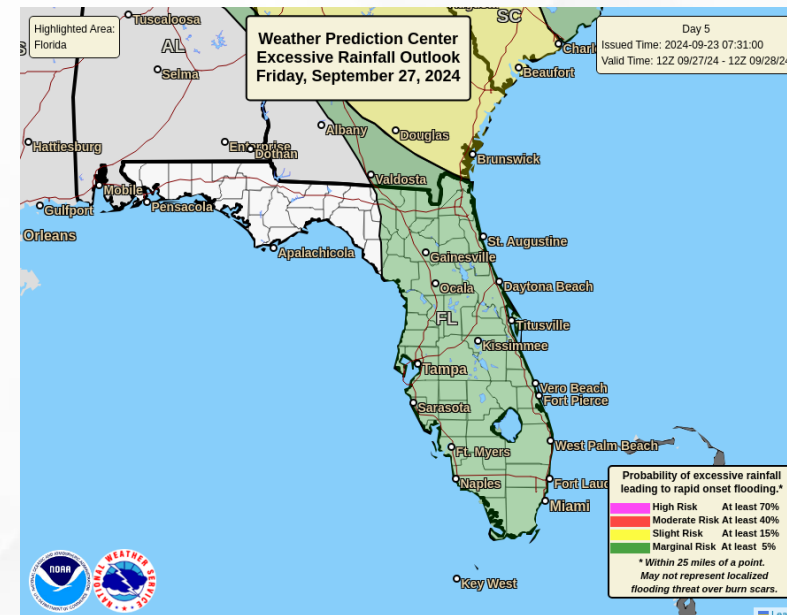
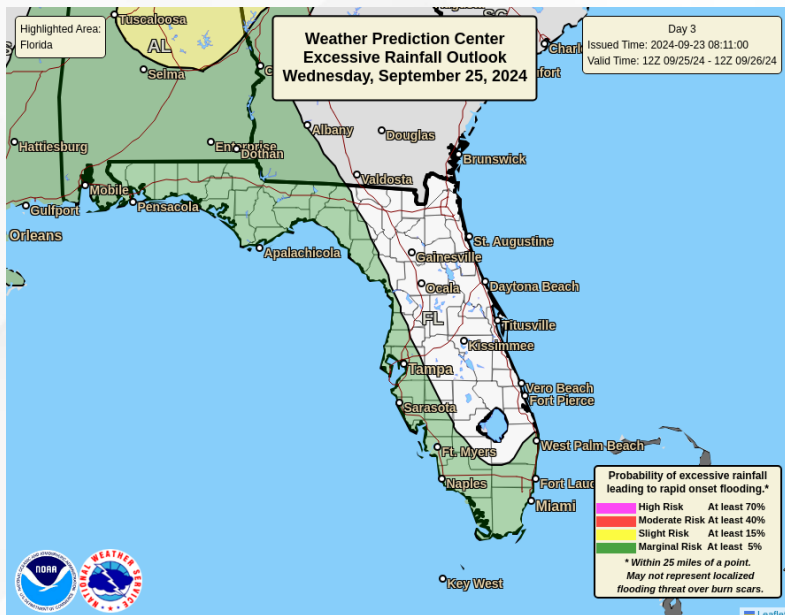


- Along the coastal Panhandle and Big Bend and into the interior Suwannee Valley, it would take 3-4" within an hours or 4-6" within 6 hours to cause flash flooding with some of the already saturated grounds and soils.
- Similarly, along the western Peninsula and, it would take about 3-4" within an hour or 4-6" within 6 hours.



Flash Flood Outlook

From the Weather Prediction Center (WPC)



The Weather Prediction Center (WPC) is outlooking a **Marginal Risk (level 1 of 4) for Flash Flooding** across West and South Florida on Wednesday. By Thursday, the Weather Prediction Center (WPC) is outlooking a **Moderate Risk (level 3 of 4) for Flash Flooding** across the Eastern Panhandle, Big Bend, and Suwannee Valley with a **Marginal to Slight (level 1-2 of 4)** across the rest of the state. With computer model guidance hinting towards a quicker forward motion, hazards will likely extend well away from the center. Regardless, tropical downpours and multiple rounds of rainfall may be possible that lead to **instances of flash flooding** as the system moves into the southeastern Gulf of Mexico. There is a **Marginal Risk (level 1 of 4) for Flash Flooding** on Friday as well from the I-75 corridor and eastward and throughout the Peninsula.

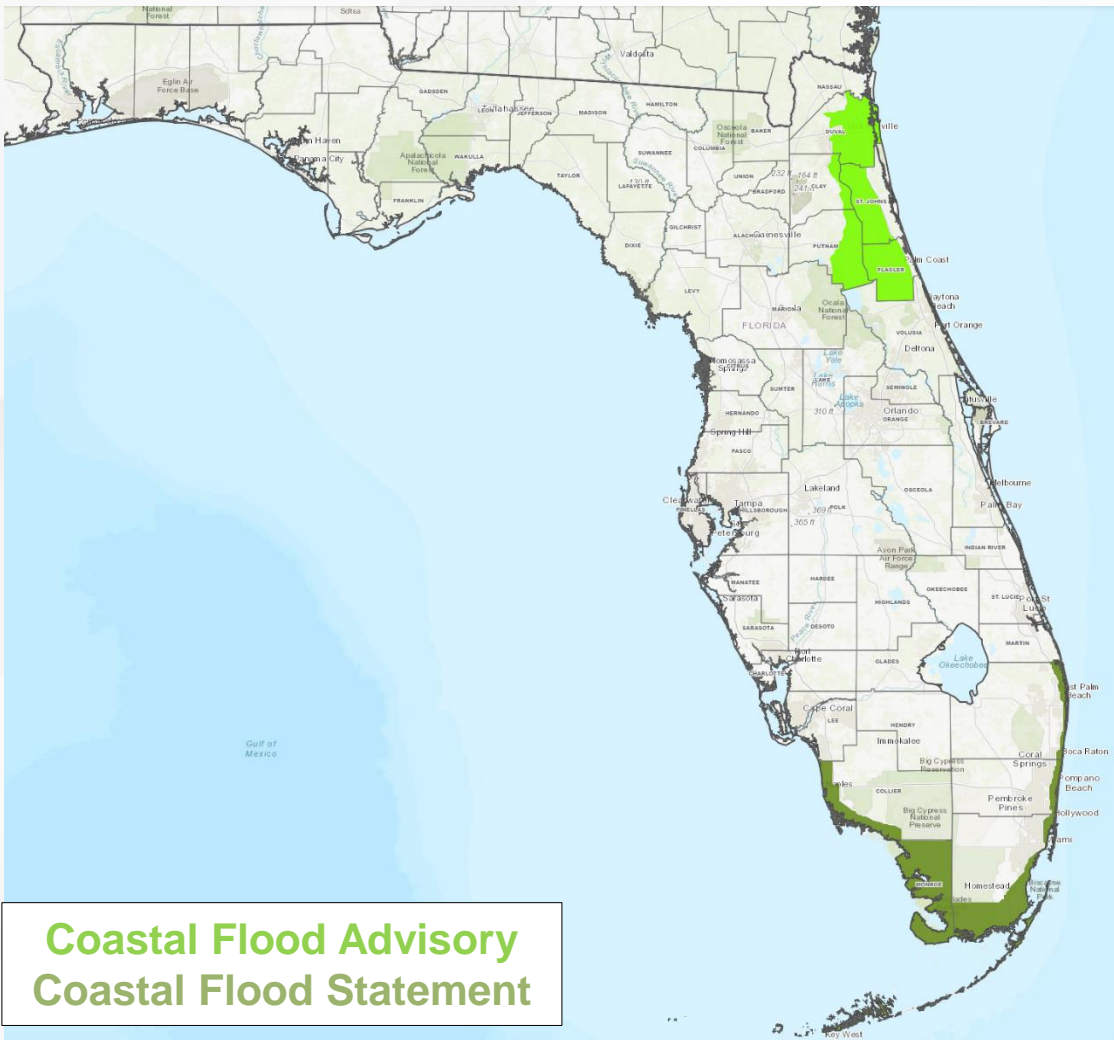
Understanding WPC Excessive Rainfall Risk Categories

| 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. |



Coastal Flooding Continues

From the National Weather Service (NWS)



Coastal Flood Advisory
Coastal Flood Statement

Due to compounding effects of lingering runoff from recent heavy rainfall, onshore flow, and high astronomical tides (King tides) courtesy of the recent Full Moon, **minor coastal flooding** can be expected along the St. Johns River through the middle of the week. A **Coastal Flood Advisory** remains in effect throughout the basin and along the Intracoastal Waterway and Atlantic Coast.

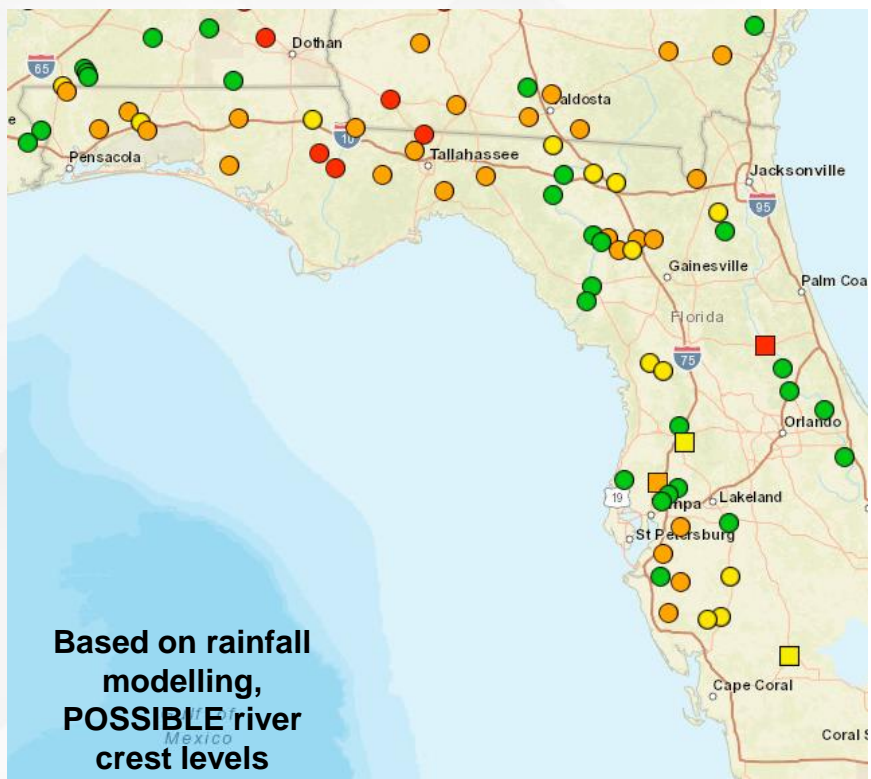
Coastal Flood Statements extend across South Florida and the Middle and Lower Keys as **minor coastal flooding and saltwater flooding** is possible near and during times of high tide.

Minor beach erosion cannot be ruled out at times near and during times of high tide along the East Coast, especially for vulnerable beaches.

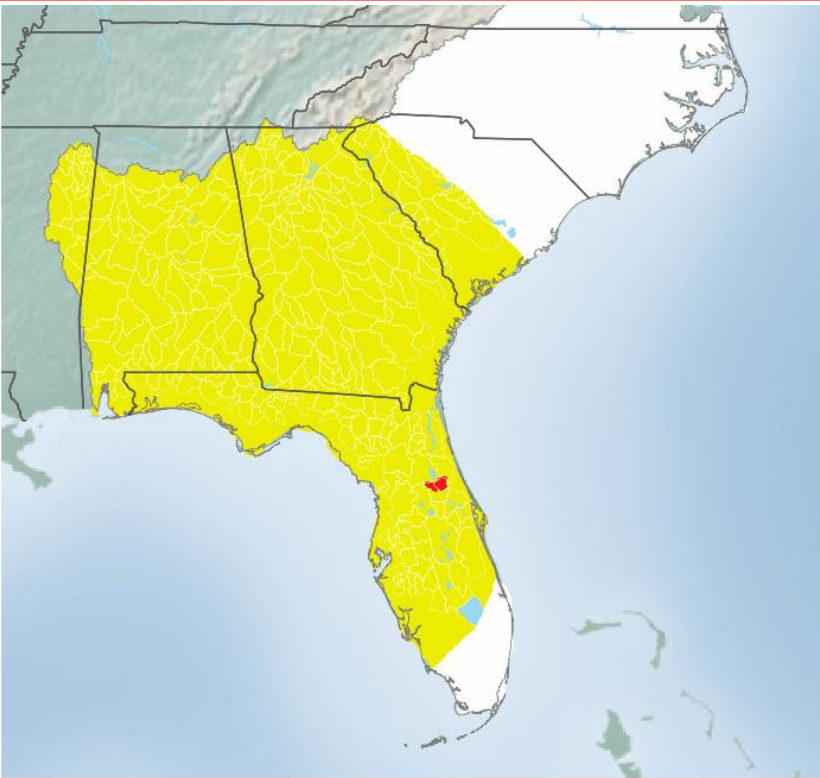


Riverine Flooding

Chance of River Flooding Based on Range of Forecast Rainfall



Based on rainfall modelling, POSSIBLE river crest levels



Rivers, creeks/streams, and waterways across North Florida are already running above normal for this time of year. Computer forecast models are indicating the potential for **minor to moderate flooding** along several mainstems and branches including the Apalachicola, Ochlockonee, Santa Fe, Myakka, Manatee, and Alafia by next week.

Riverine flooding will be closely tied to which basin receives the greatest swath of rainfall. Trends will continue to be monitored.

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

National Weather Service
Peachtree City, GA
09/23/2024 11:10 AM EDT

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weather.gov/serfc

Significant River Flooding Not Expected

Significant River Flooding Possible
Weather conditions indicate, without certainty that significant river flooding could occur

Significant River Flooding Likely
Weather conditions indicate that significant river flood conditions can be expected

Significant River Flooding Occurring
Significant river flooding is occurring at this time



River Flood Warnings

From the National Weather Service

| River Guage | County(ies) Affected | Current Level | Crest Level | Record Level | Status | Crest Date | Warning Expires |
|--|----------------------|-------------------|-------------------|--------------|--------|------------|----------------------|
| St. Johns River at Astor | Volusia, Lake | Moderate: 3.14 ft | Moderate: 3.14 ft | 4.70 ft | Steady | Crested | Until Further Notice |

A **River Flood Warning** remain in effect in the [St. Johns River at Astor](#) as water levels remain within **moderate flood stage** due to trapped tides within the river basin. Additional forecast points along the St. Johns River are forecast to remain near or within Action Stage (bank-full) due to recent heavy rainfall over the area; however, river flooding is not anticipated at this time. Tidal portions of the lower St. Johns River could fluctuate in between Action and **minor flood stage** due tide fluctuations. Additional **River Flood Warnings** will likely be issued later this week and this weekend as heavy rainfall expected from Potential Tropical Cyclone Nine is observed across the state; however, Riverine flooding will be closely tied to which basin receives the greatest swath of rainfall. Trends will continue to be monitored.

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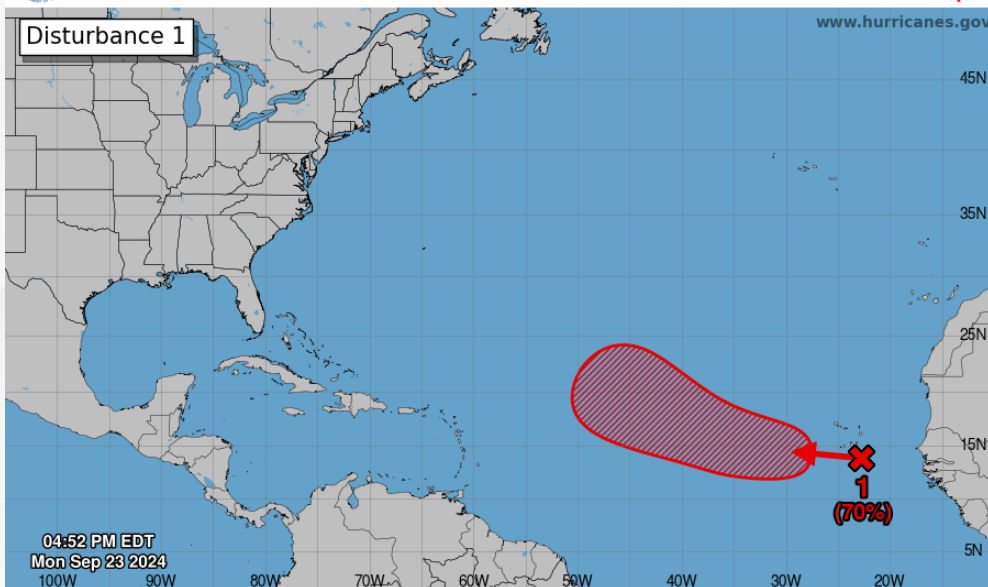
Tropical Weather Outlook

Disturbance 2 – Eastern & Central Tropical Atlantic



Seven-Day Graphical Tropical Weather Outlook

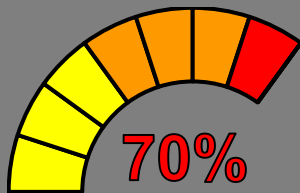
National Hurricane Center Miami, Florida



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



48 Hour Formation



7 Day Formation

A tropical wave approaching the Cabo Verde Islands is producing disorganized shower and thunderstorm activity. Environmental conditions appear generally favorable for gradual development of this system, and a tropical depression is likely to form during the middle to latter part of this week while it moves westward to west-northwestward across the eastern and central tropical Atlantic.

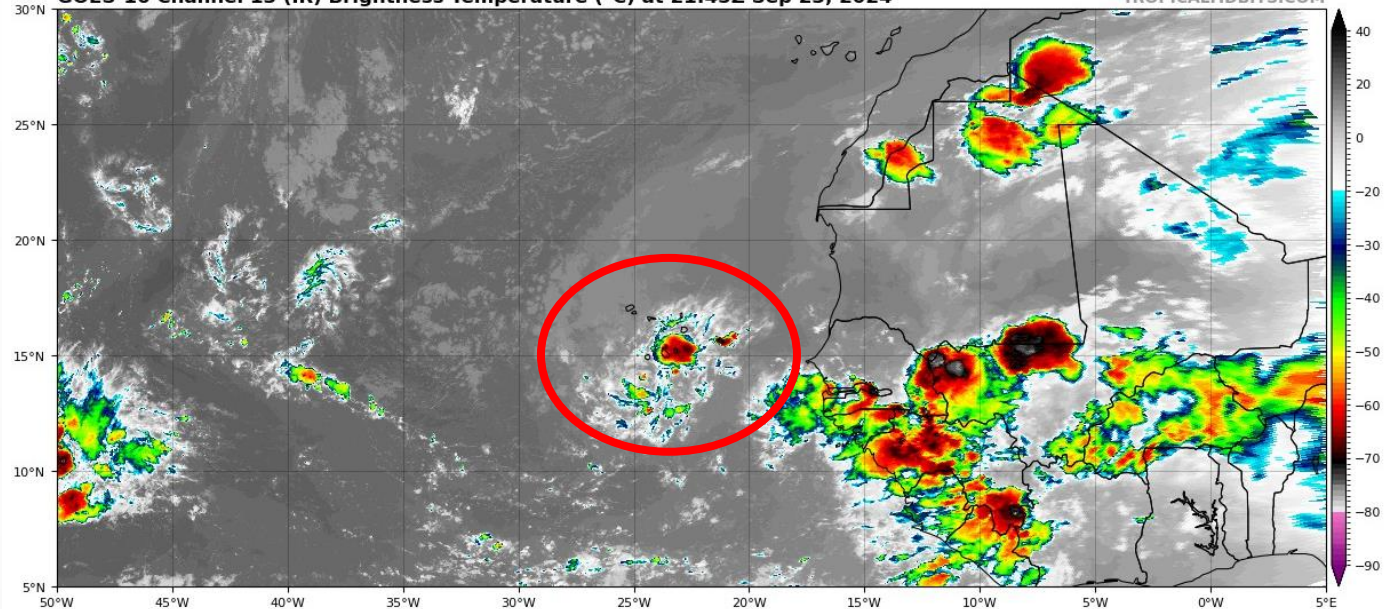
This system does not pose a threat to Florida through the next 7-10 days, at least.

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

Chance of development through 7 days... **high...70%.**

GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 21:45Z Sep 23, 2024

TROPICALTIDBITS.COM





Summary

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Potential Tropical Cyclone Nine:

- As of 5:00 PM EDT, Potential Tropical Cyclone Nine was located about 105 miles southwest of Grand Cayman and about 315 miles southeast of the western tip of Cuba.
- Potential Tropical Cyclone Nine is currently moving north-northwestward at 7 mph.
- A northwestward motion is expected on Tuesday and Tuesday night, followed by a faster northward to north-northeastward motion on Wednesday and Thursday.
- On the forecast track, the center of the system is forecast to move across the northwestern Caribbean Sea through Tuesday night, and then over the eastern Gulf of Mexico on Wednesday and Thursday.
- Maximum sustained winds are near 35 mph with higher gusts.
- Strengthening is expected during the next few days, and the system is forecast to become a hurricane on Wednesday and continue strengthening on Thursday as it moves across the eastern Gulf of Mexico.
- **Tropical Storm Watches** have been issued for the Dry Tortugas and the Lower Keys south of Seven Mile Bridge (Monroe County).
- The National Hurricane Center (NHC) is outlooking a **high (90%) chance of development** over the next 48 hours, and a **high (90%) chance of development** over the next 7 days.

Eastern and Central Tropical Atlantic:

- A tropical wave approaching the Cabo Verde Islands is producing disorganized shower and thunderstorm activity.
- Environmental conditions appear generally favorable for gradual development of this system.
- A tropical depression is likely to form during the middle to latter part of this week while it moves westward to west-northwestward across the eastern and central tropical Atlantic.
- *This system poses no direct threat to Florida over the next 7-10 days at least but will continue to be monitored.*
- The National Hurricane Center (NHC) is outlooking a **low (20%) chance of development** over the next 48 hours and a **high (70%) chance of development** 7 days.
- *The next names on the list is Helene (heh-LEEN) and Isaac (EYE-zik).*

The next briefing packet will be issued on Tuesday Morning. For the latest information, please visit the National Hurricane Center website.



Summary

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Florida Outlook:

- High pressure over the Southeast U.S. will create mostly dry conditions across North and Central Florida over the next day or two.
- Isolated showers and thunderstorms can be expected during the afternoon and evening along the sea breeze mostly south of the I-4 corridor (25-35% chance of rain).
- Drier conditions and upper-level conditions will limit thunderstorm development; however, an isolated thunderstorm or two cannot be ruled out along the sea breeze.
- High temperatures across the state will reach the upper 80s to low 90s, with heat index values in the middle 90s to low 100s this afternoon.
- Rainfall totals associated with Potential Tropical Cyclone Nine will remain dependent on the track of the system as it generally moves northward into the Gulf of Mexico over the next day or so.
 - *Trends within computer model guidance will continue to be monitored over the next day or so. Increased rain chances can be expected across the state by midweek, with the greatest chances along the West Coast then extending northward.*
 - Any tropical downpours or multiple rounds of heavy rainfall could lead to instances of localized flash flooding at times.
 - The Weather Prediction Center (WPC) is outlooking a **Marginal Risk (level 1 of 4) for Flash Flooding** across the Panhandle and West Coast on Wednesday. A **Moderate Risk (level 3 of 4) for Flash Flooding** across the Eastern Panhandle, Big Bend, and Suwannee Valley with a **Marginal to Slight (level 1-2 of 4)** across the rest of the state is outlooked throughout the entire state on Thursday.
- Tropical storm-force winds will increase over the next few days from south to north as Potential Tropical Cyclone Nine moves over the northwestern Caribbean Sea and into the southeastern Gulf of Mexico.
- The combination of storm surge and tide will cause normally dry areas near the coast to be flooded by rising waters moving inland from the shoreline.
 - **Forecast storm surge of 1-3'** is possible along the Dry Tortugas and across the Florida Keys.
- A **moderate risk for rip currents** extends along the entire Florida East Coast, with numerous beaches along the Panhandle also seeing a moderate risk for rip currents.
 - An **elevated risk for rip currents** and hazardous beach conditions can be expected across the Panhandle and West Coast by midweek.
- Lingering elevated tides and trapped water within the St. Johns River basin and its tributaries will continue to create potential for **minor coastal flooding** near and during times of high tide. **Coastal Flood Advisories** remain in effect throughout the basin as onshore winds persist, keeping tides trapped.
 - **Coastal Flood Statements** continue across South Florida and the Keys due to potential for **minor coastal and saltwater flooding** near and during times of high tide.

The next briefing packet will be issued on Tuesday Morning. For the latest information, please visit the National Hurricane Center website.



Tropical Update

FOUO – For Government Official Use Only



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State Meteorological Support Unit

Florida Division of Emergency Management

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