



Tropical Update



11:15 AM EDT

Saturday, September 21, 2024

Monitoring the Northwest Caribbean Sea (60%) for Potential Development Over the Next 7 Days

Remnants of Gordon & Invest 96L (10%)

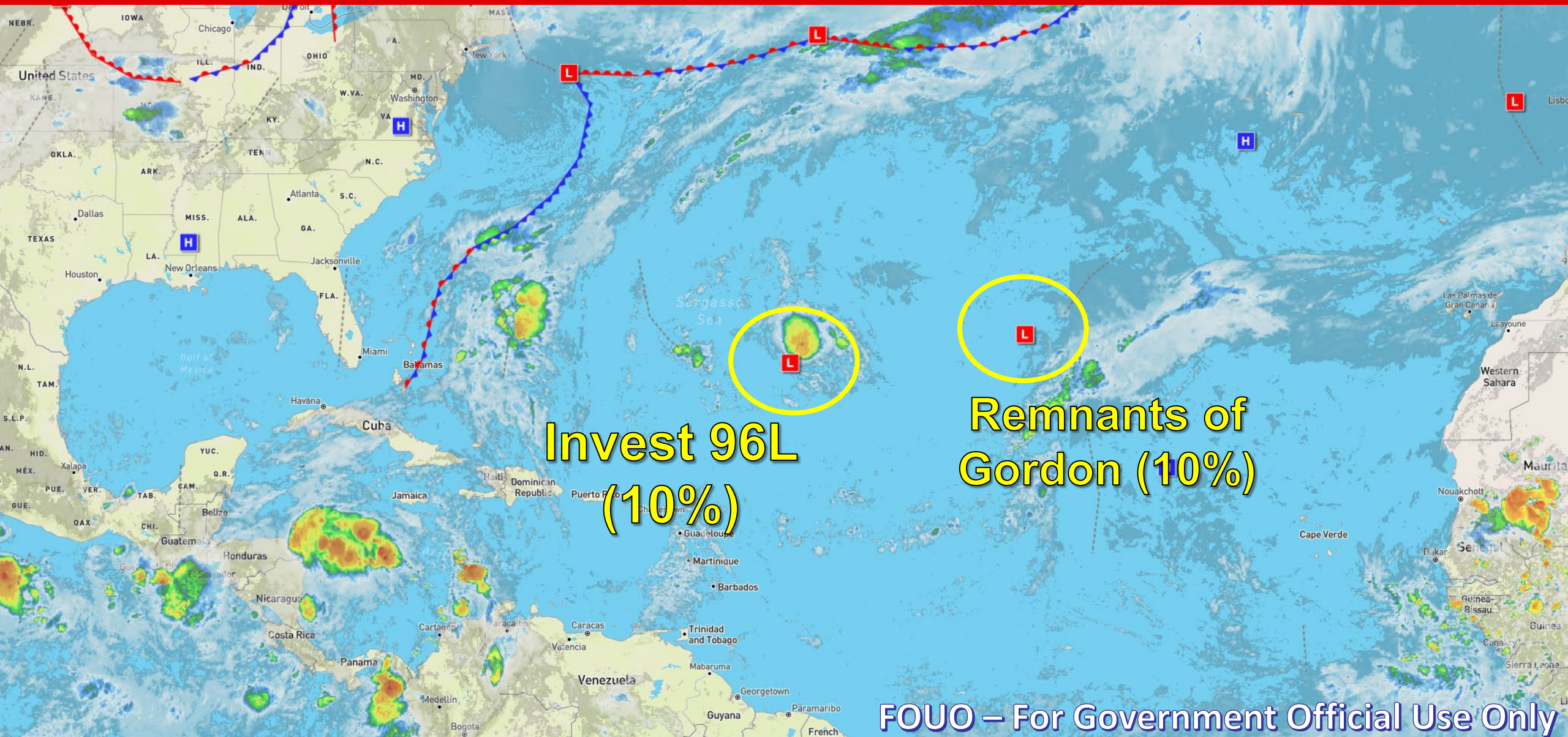
Eastern & Central Subtropical Atlantic (30%)

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



Invest 96L
(10%)

Remnants of
Gordon (10%)

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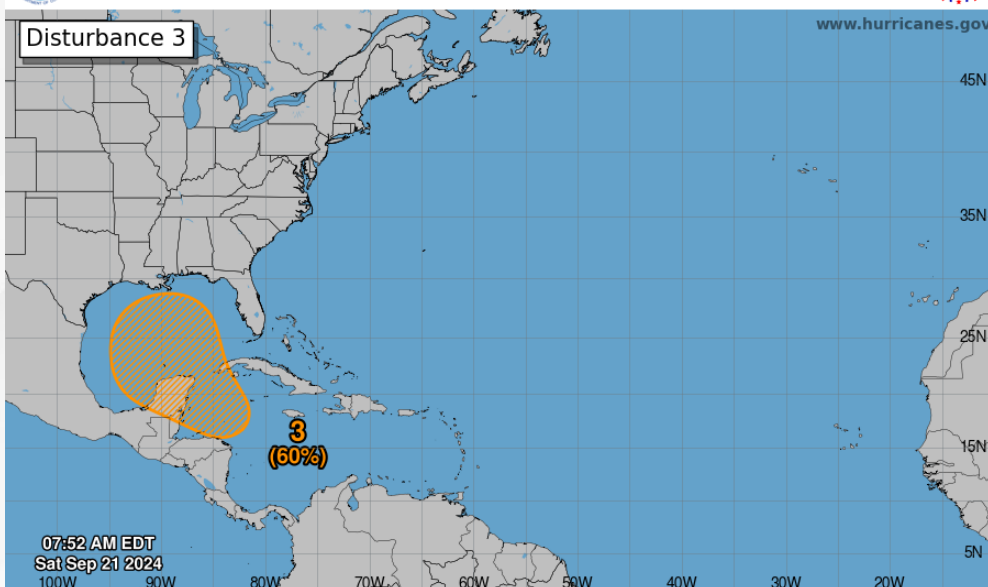
Tropical Weather Outlook

Northwestern Caribbean Sea & Gulf of Mexico



Seven-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



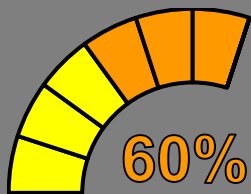
Current Disturbances and Seven-Day Cyclone Formation Chance: ✕ < 40% ✖ 40-60% ✖ > 60%

Tropical or Sub-Tropical Cyclone: ○ Depression ● Storm ● Hurricane

○ Post-Tropical Cyclone or Remnants

Near 0%

48 Hour Formation



7 Day Formation

A broad area of low pressure is likely to form by the early to middle part of next week over the northwestern Caribbean Sea and adjacent portions of Central America. Thereafter, gradual development of this system is possible, and a tropical depression could form as the system moves slowly to the north or northwest over the northwestern Caribbean Sea and across the Gulf of Mexico through the end of next week.

This system poses no direct threat to Florida within the next 5 days; however, the organization and evolution of this system should be closely monitored through the weekend and into early next week.

** Reminder – this graphic does not show a forecast cone/forecast path, but an outlooked area depicting where a low pressure center could form within the next 7 days.*

Chance of development through 48 hours... **low (near 0%)**

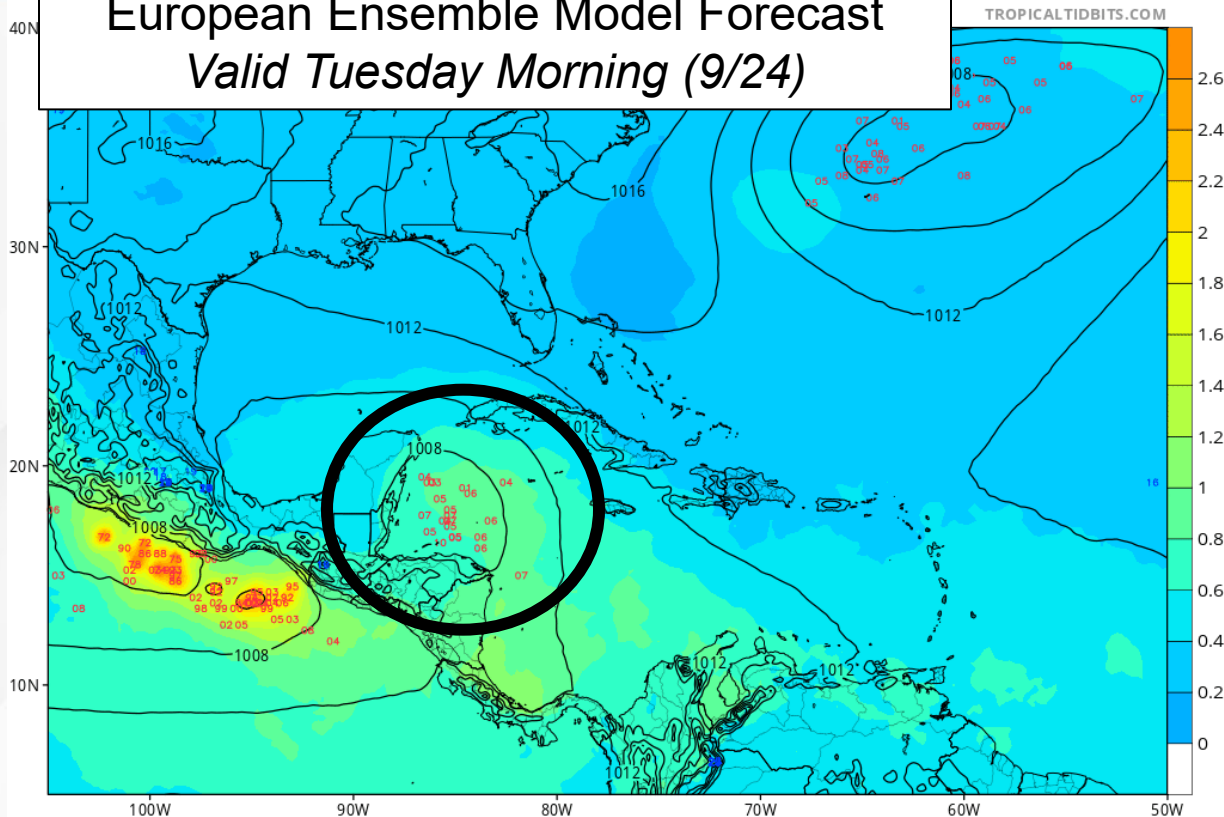
Chance of development through 7 days... **medium (60%)**



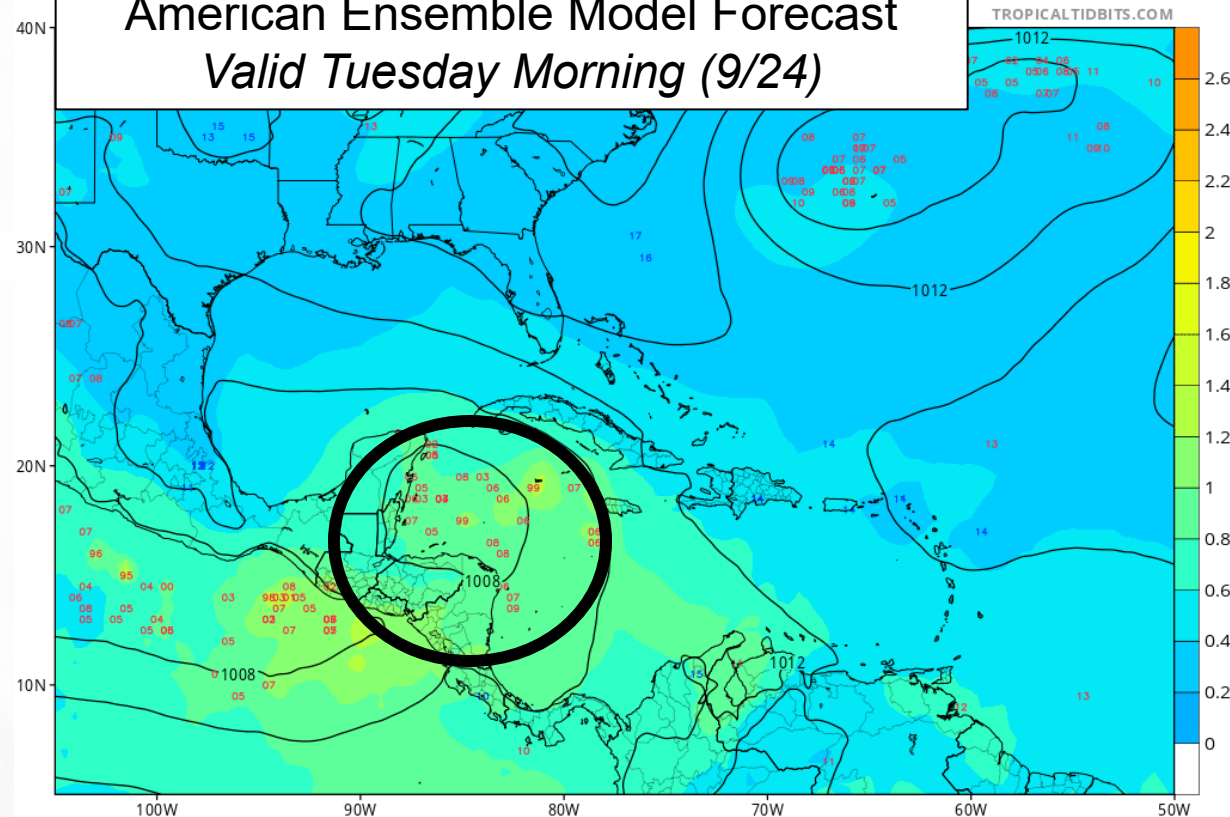
Ensemble Model Forecasts

Northwestern Caribbean Sea & Southeastern Gulf of Mexico

European Ensemble Model Forecast
Valid Tuesday Morning (9/24)



American Ensemble Model Forecast
Valid Tuesday Morning (9/24)



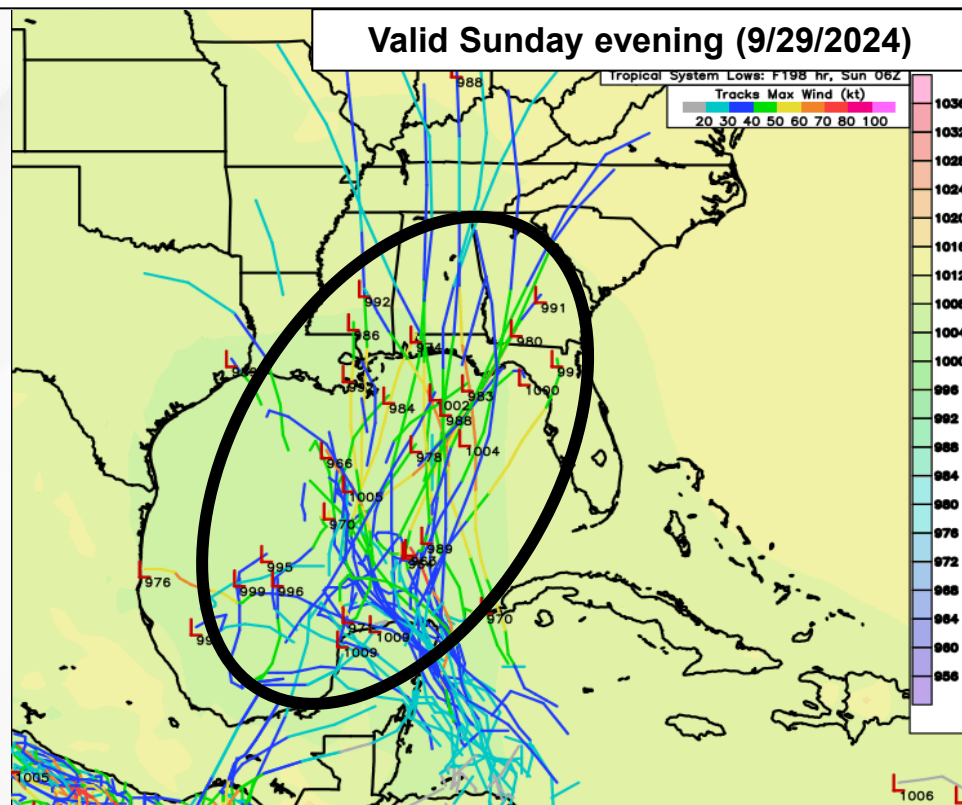
- There continues to be a decent signal across all forecast computer models that an area of low pressure is anticipated to develop over the northwestern Caribbean Sea later this weekend into early next week. A continued increase in the National Hurricane Center (NHC) development chances will likely be reflected in upcoming Tropical Weather Outlooks as forecast confidence in the near-term development builds.
- Tropical systems of similar origin (near the Central American Coast/Northwestern Caribbean Sea) share a common theme of slower initial organization. A more concentrated area of low pressure may not truly become more defined until later Monday into Tuesday of next week.



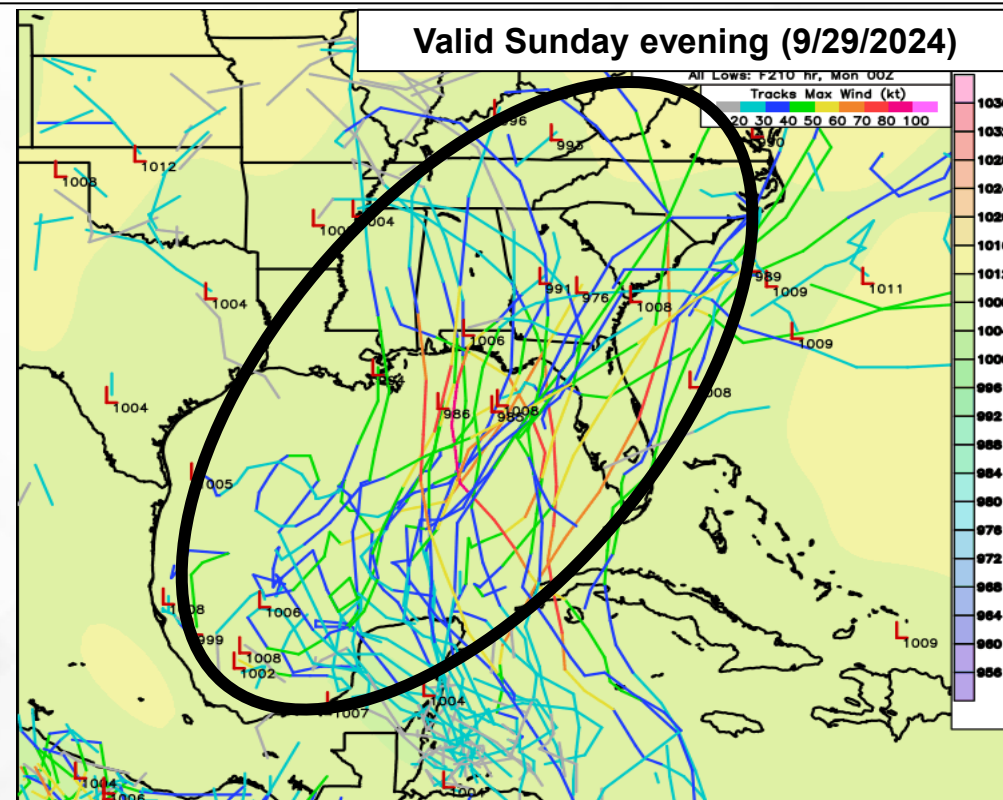
Ensemble Model Forecasts

Northwestern Caribbean Sea & Southeastern Gulf of Mexico

Computer forecast models maintain a **wide range of possible tracks** regarding the potential northwestern Caribbean tropical system. The European model shows some better agreement this morning; however, there are still discrepancies between individual ensemble members and between the European and American models. Such forecast model solution discrepancies are typical at this stage, especially before a defined low pressure system has formed – additional changes and shifts in the computer model guidance can be expected in the coming days. By utilizing ensemble forecasts, we can truly see the **great amount of uncertainty** in the eventual path of this system, in both system position and timing; however, we will continue to monitor the trends through the weekend and into early next week.



European ensemble forecast members depict an array of solutions including a weaker and further west path for the eventual tropical system, taking the system near or over the Yucatan Peninsula with some entering the southwestern Gulf of Mexico/Bay of Campeche. However, there are more solutions this morning suggesting a stronger and further east eventual path into the central Gulf of Mexico.



The American ensemble forecast models show a vast variety of eventual tracks, too. These solutions also suggest that a stronger, faster organizing system would follow a further east eventual path into the central and eastern Gulf of Mexico while a weaker, slower organizing system would follow a further west eventual path over or near the Yucatan Peninsula and possibly entering the southwestern Gulf of Mexico/Bay of Campeche.



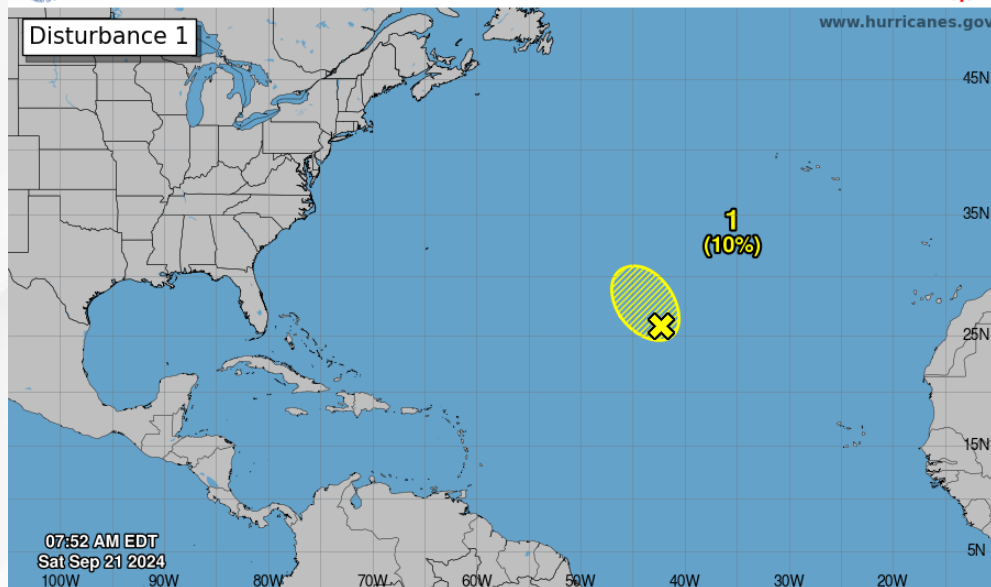
Tropical Weather Outlook

Central Subtropical Atlantic (Remnants of Gordon)



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

10%

48 Hour Formation

10%

7 Day Formation

Strong upper-level winds continue to keep showers and thunderstorms displaced away from the center of an area of low pressure (the remnants of Gordon) located over one thousand miles southwest of the Azores. Significant development of this system is not expected while it moves slowly northwestward over the central subtropical Atlantic during the next couple of days.

The Remnants of Gordon pose no threat to Florida.

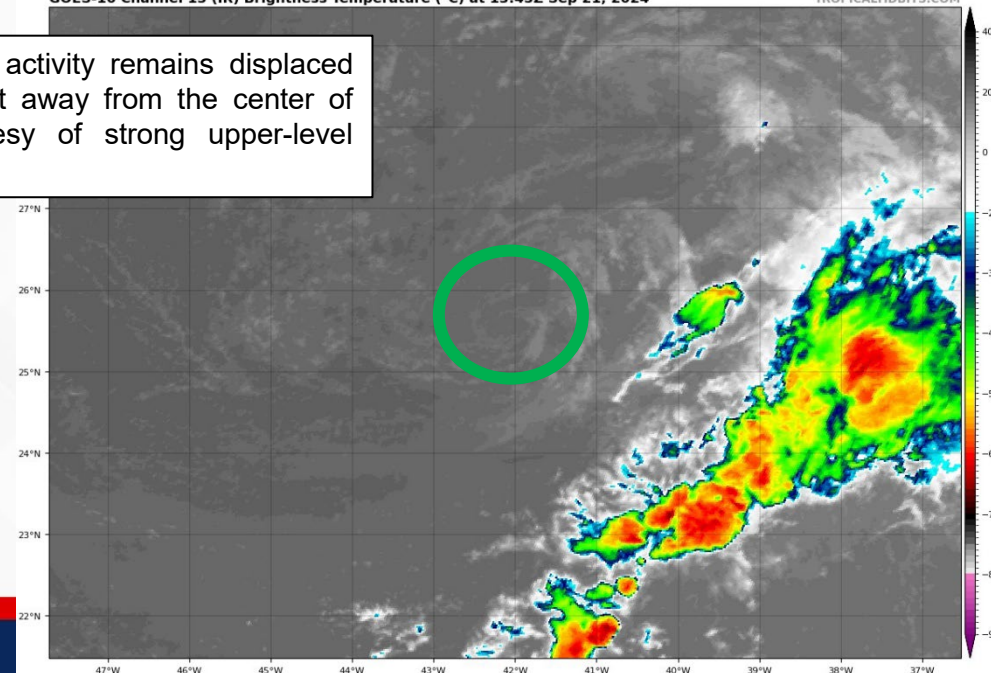
Chance of development through 48 hours... **low (10%)**

Chance of development through 7 days... **low (10%)**

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

TROPICALIDBITS.COM

Shower and thunderstorm activity remains displaced well to the south and east away from the center of circulation (**green**), courtesy of strong upper-level winds.





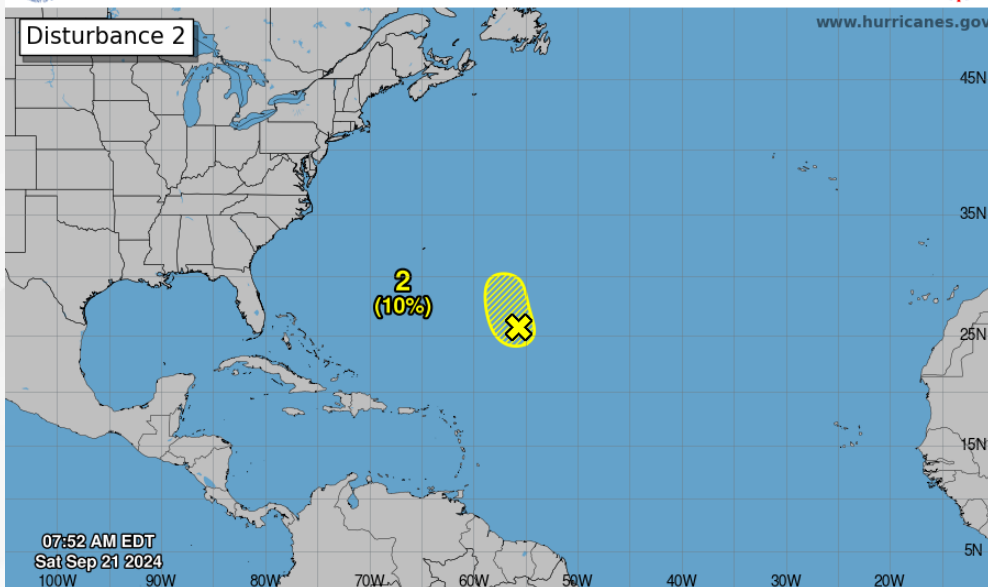
Tropical Weather Outlook

Invest 96L – Central & Western Subtropical 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

10%

48 Hour Formation

10%

7 Day Formation

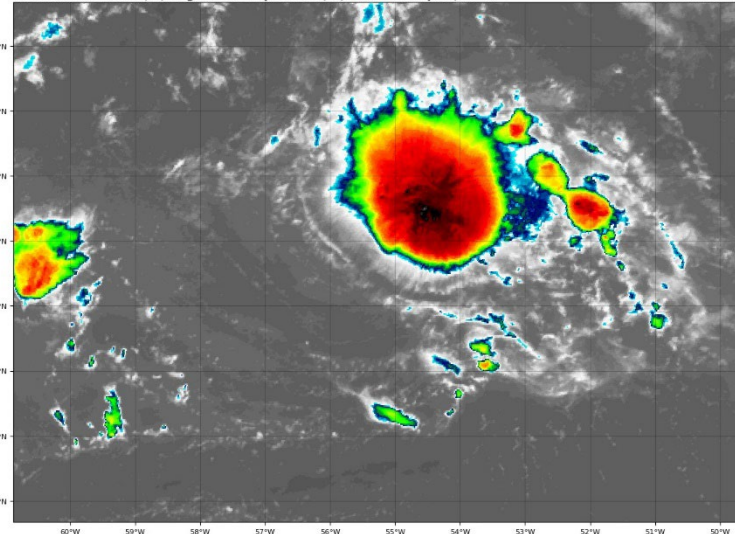
An area of low pressure located about 700 miles northeast of the northern Leeward Islands is producing some disorganized shower and thunderstorm activity. Environmental conditions do not appear conducive for significant development of this system during the next couple of days while it drifts northwestward and then northward at about 5 mph over the central or western subtropical Atlantic.

Invest 96L poses no direct threat to Florida.

Chance of development through 48 hours... **low (10%)**

Chance of development through 7 days... **low (10%)**

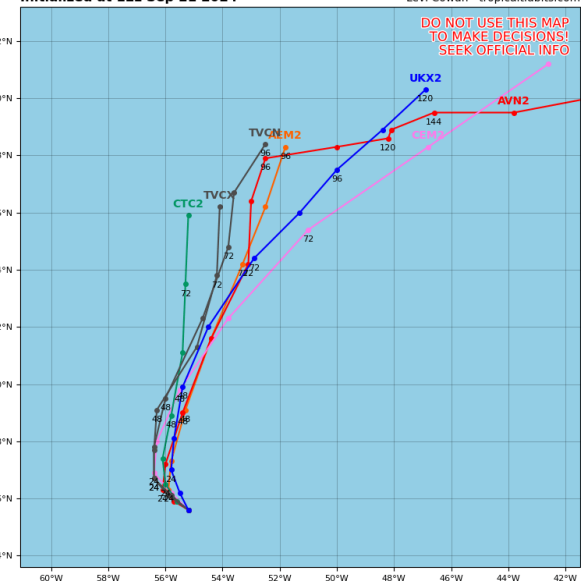
GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 13:45Z Sep 21, 2024



Invest 96L Model Track Guidance

Initialized at 12z Sep 21 2024

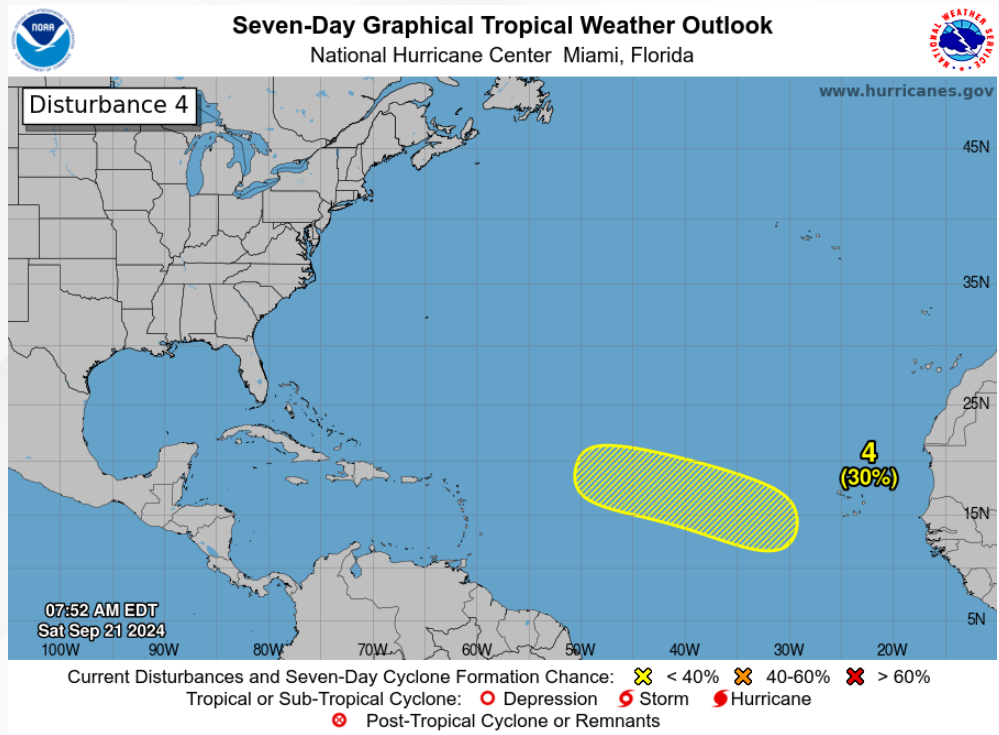
Levi Cowan - tropicaltidbits.com



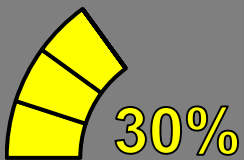


Tropical Weather Outlook

Eastern & Central Tropical Atlantic



48 Hour Formation



7 Day Formation

Shower activity associated with an area of low pressure, now identified as Invest 96L, is located about 650 miles northeast of the northern Leeward Islands. Shower activity has changed little in organization over the past several hours. Conditions appear only marginally conducive for some development of this system during the next couple of days while it drifts northwestward at about 5 mph over the central or western subtropical Atlantic.

This system poses no direct threat to Florida over the next 7-10 days at least but will continue to be monitored.

Chance of development through 48 hours... **low (near 0%)**

Chance of development through 7 days... **low (30%)**



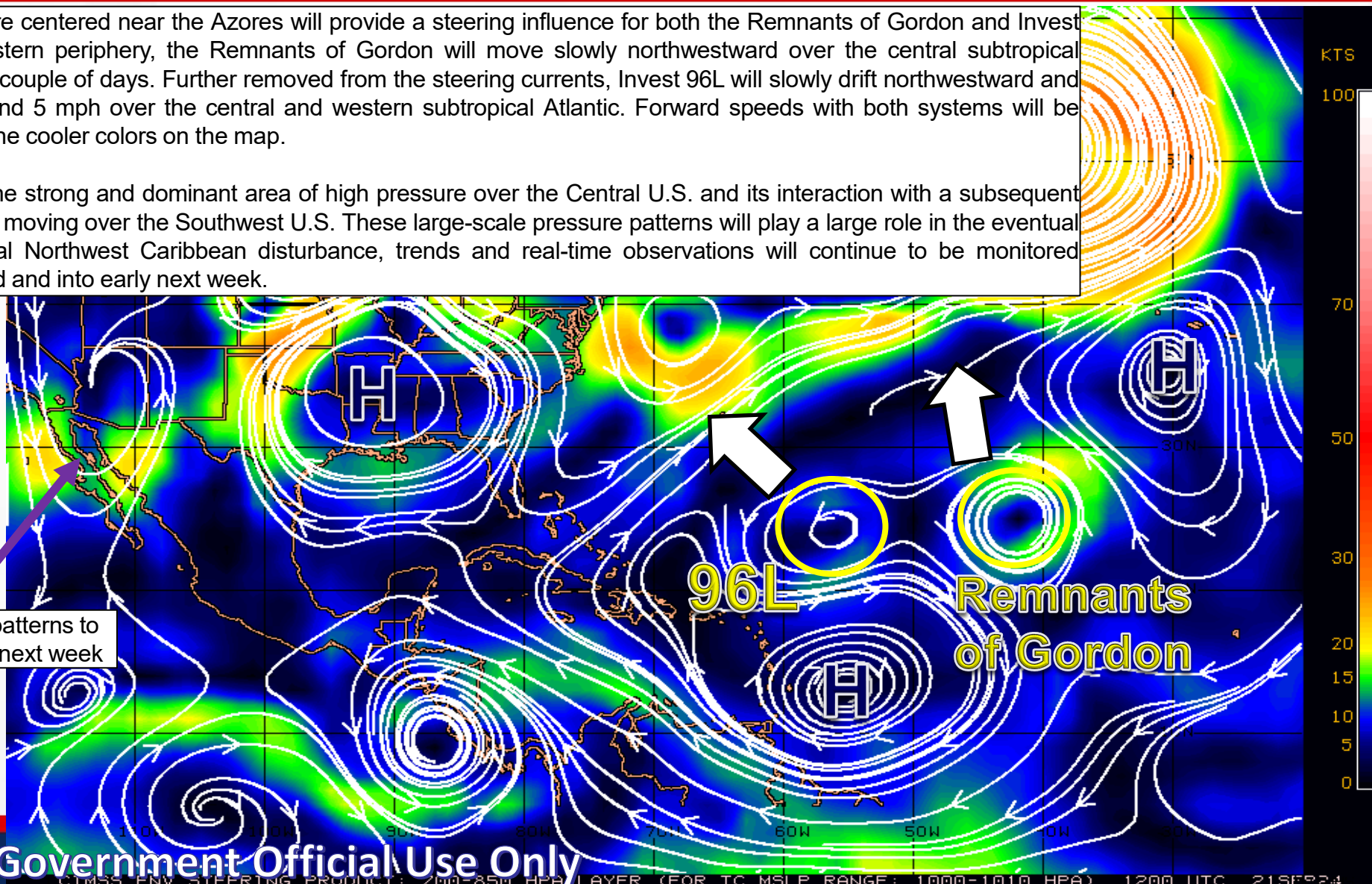
Steering Currents

What is Moving the System?

Color denotes the movement speed through the atmosphere and thin white lines denote direction. Tightly clustered white lines represent faster movement as well.

An area of high pressure centered near the Azores will provide a steering influence for both the Remnants of Gordon and Invest 96L. Closer to the western periphery, the Remnants of Gordon will move slowly northwestward over the central subtropical Atlantic during the next couple of days. Further removed from the steering currents, Invest 96L will slowly drift northwestward and then northward at around 5 mph over the central and western subtropical Atlantic. Forward speeds with both systems will be slower, as denoted by the cooler colors on the map.

Our attention turns to the strong and dominant area of high pressure over the Central U.S. and its interaction with a subsequent upper-level disturbance moving over the Southwest U.S. These large-scale pressure patterns will play a large role in the eventual steering of the potential Northwest Caribbean disturbance, trends and real-time observations will continue to be monitored throughout the weekend and into early next week.



Steering current patterns to monitor into early next week

Fast Moving Storm

Fast Moving Storm

Typical Moving Storm

Slow Moving Storm

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CIMSS ENV STEERING PRODUCT: 700-850 HPA LAYER (FOR TC MSLP RANGE: 1000-1010 HPA) 1200 UTC 21SEP24

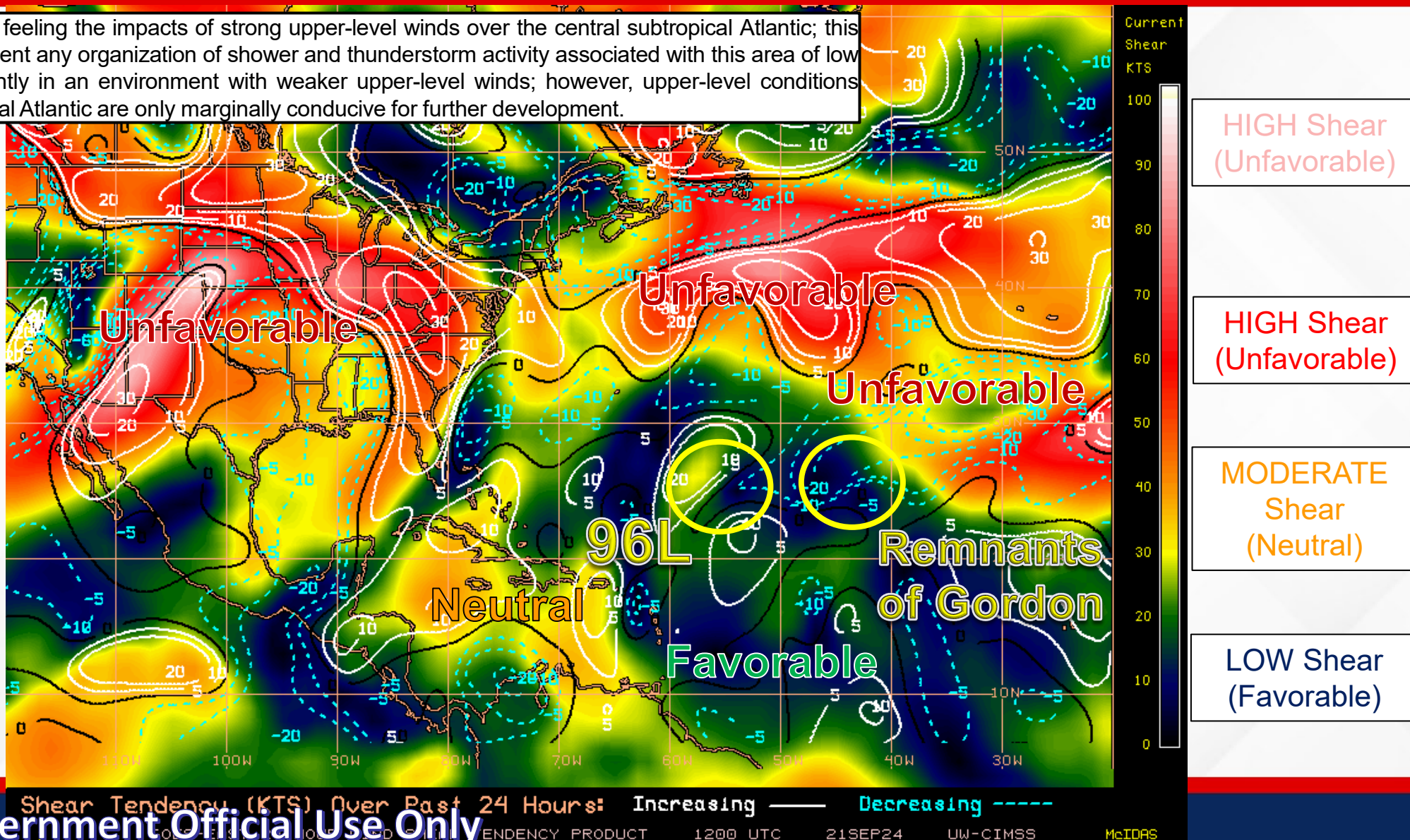


Wind Shear

Is the environment favorable for the system?

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).

The Remnants of Gordon are feeling the impacts of strong upper-level winds over the central subtropical Atlantic; this environment continues to prevent any organization of shower and thunderstorm activity associated with this area of low pressure. Invest 96L is currently in an environment with weaker upper-level winds; however, upper-level conditions further north into the subtropical Atlantic are only marginally conducive for further development.



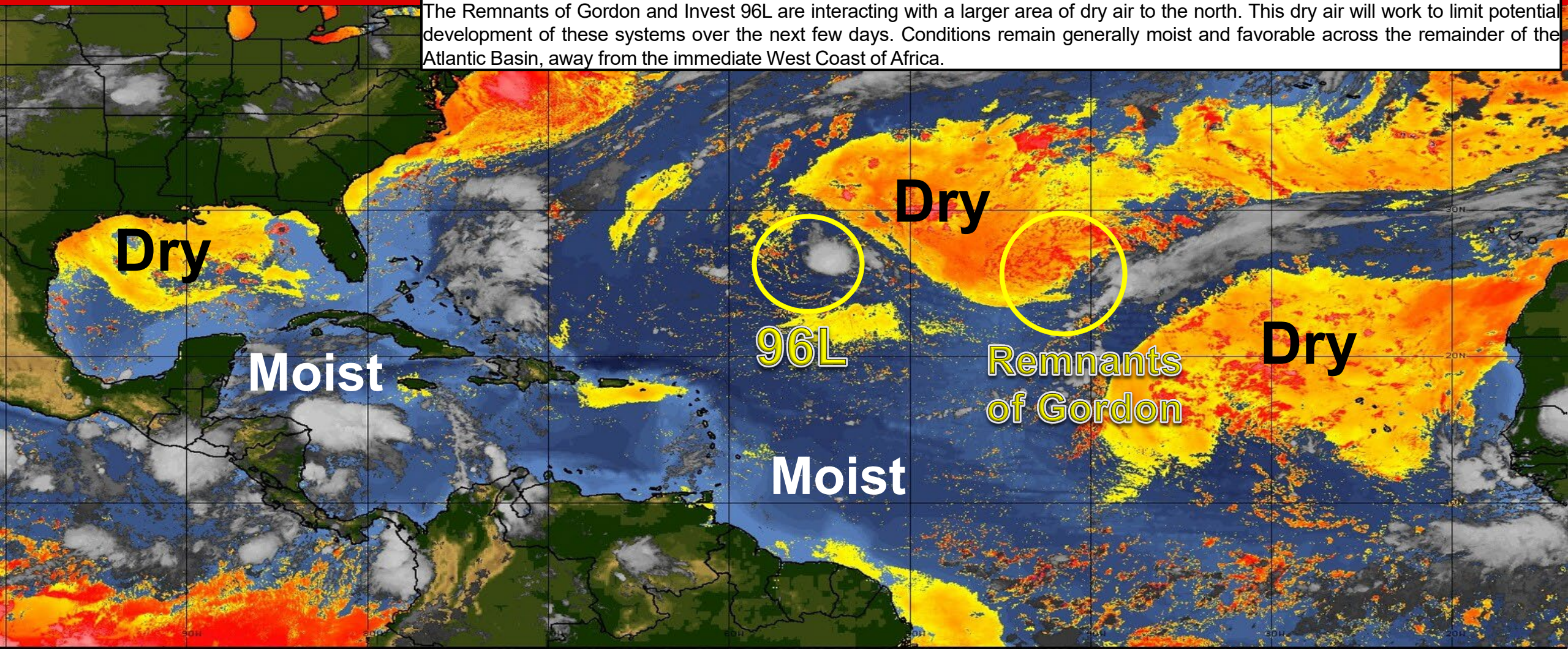


Dry Air & Saharan Dust

Is the environment favorable for the system?

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

The Remnants of Gordon and Invest 96L are interacting with a larger area of dry air to the north. This dry air will work to limit potential development of these systems over the next few days. Conditions remain generally moist and favorable across the remainder of the Atlantic Basin, away from the immediate West Coast of Africa.



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

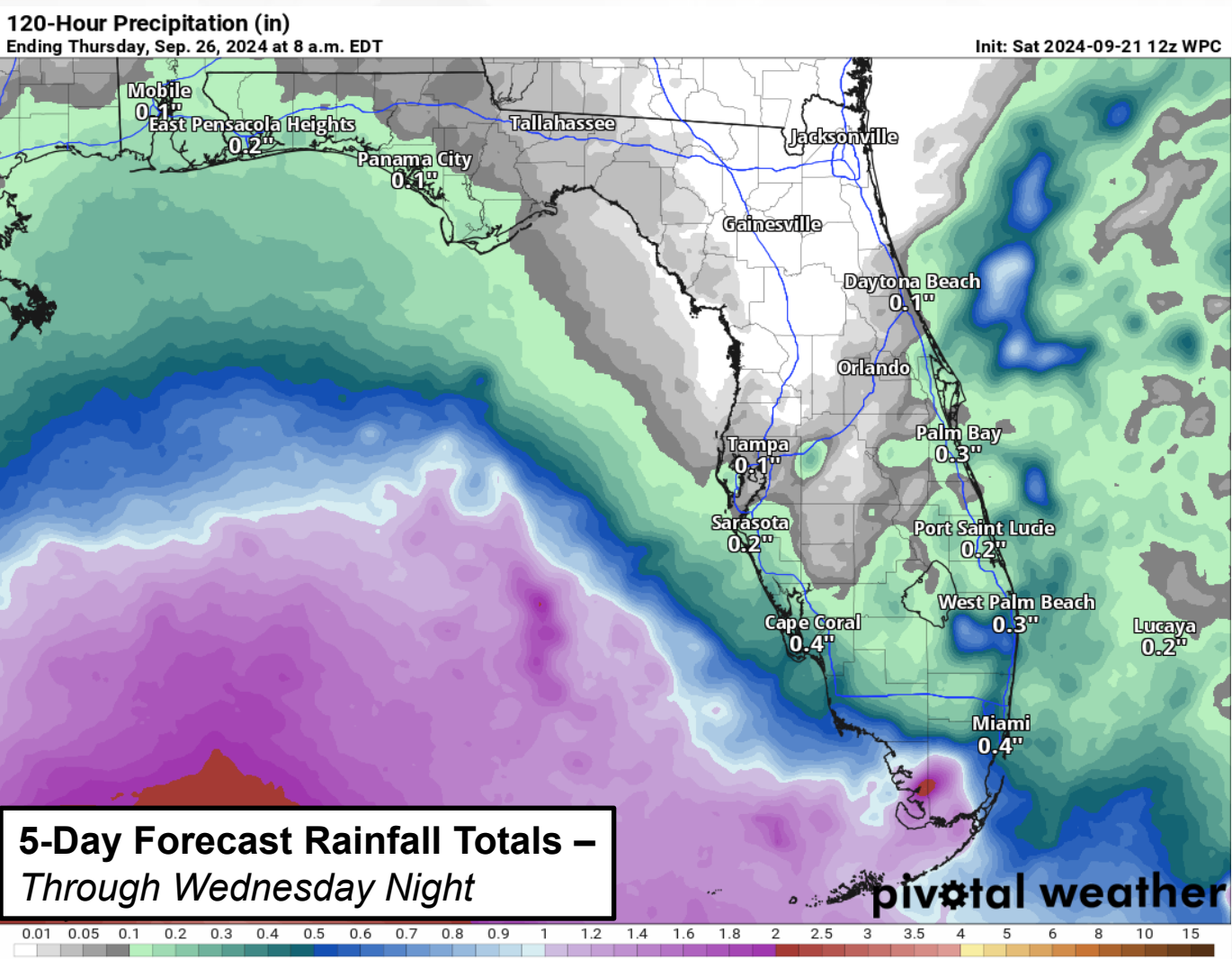
GOES-16: SAHARAN AIR LAYER TRACKING PRODUCT 12:00 UTC 21 SEPTEMBER 2024 UW-CIMSS/NOAA-HRD

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Rainfall Totals – Next 5-7 Days

From the Weather Prediction Center (WPC)

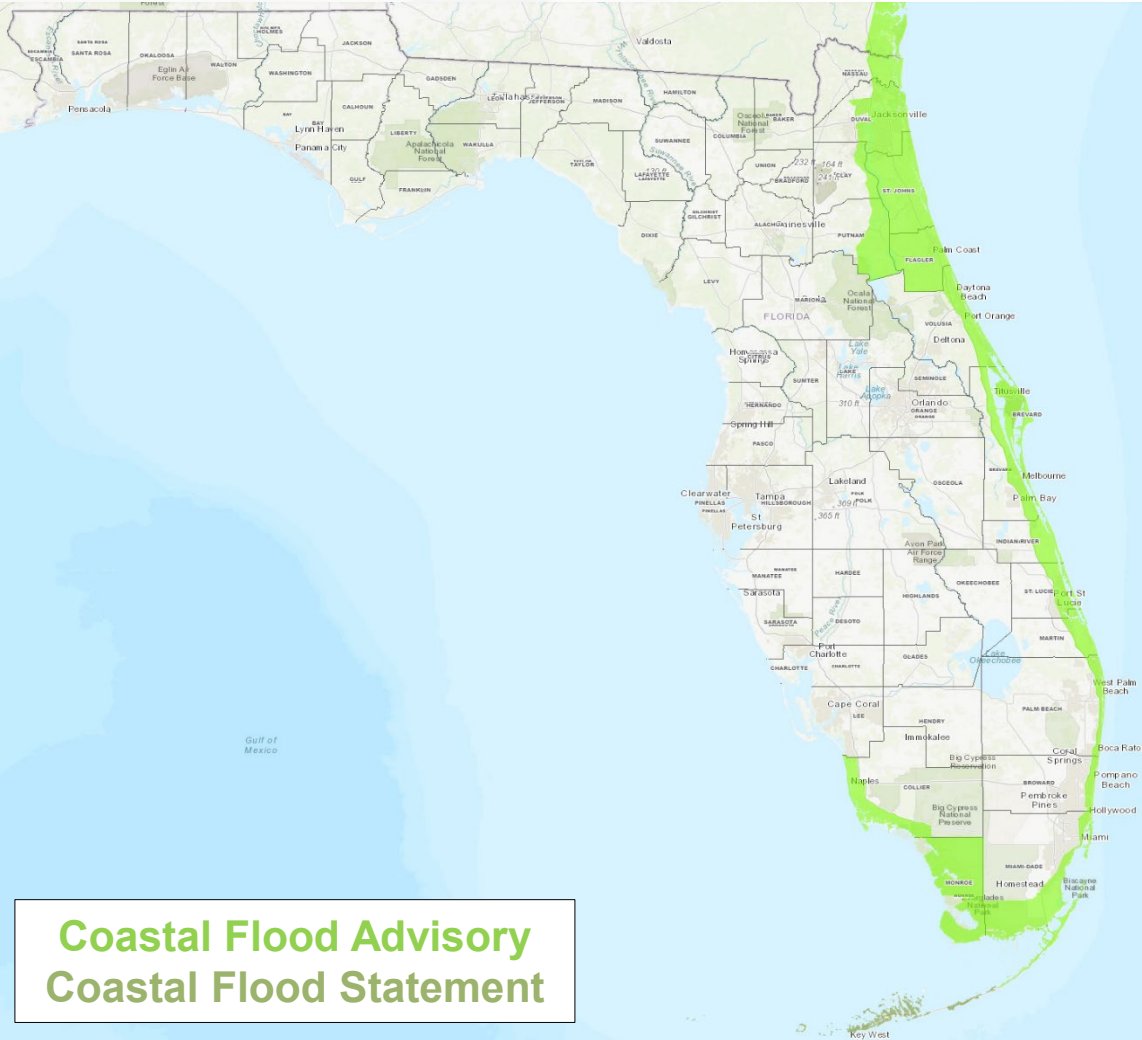


- Drier air and high pressure building in will limit shower and thunderstorm activity over the next few days across much of the state with isolated to widely scattered showers and thunderstorms possible along the Peninsula with the sea breezes.
- Widespread rainfall totals near 0.5-1" can be expected along and north of the I-4 corridor through the Florida Panhandle over the next 5 days with **locally higher totals near 1-3"** possible along the Panhandle and near Apalachicola.
- Widespread rainfall totals of 1-3" are currently forecast south of the I-4 corridor through the Peninsula and Keys over the next 5 days with **locally higher totals near 3-5"** possible.
- Increased rain chances will likely return statewide mid-to-late next week. *There is potential that heavy rainfall may begin impacting parts of the Gulf Coast by late next week; however, the timing and exact location for this potential is uncertain at this time as it will be depending on the future evolution and path of the broad area of low likely to develop in the Southwestern Caribbean and Gulf of Mexico.*



Coastal Flooding Continues

From the National Weather Service (NWS)



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 weekend. A **Coastal Flood Advisory** remains in effect throughout the basin and along the Intracoastal Waterway and Atlantic Coast. Tidal flooding concerns should lower through Sunday and Monday as the astronomical departures decrease and onshore flow eases.

Coastal Flood Advisories extending along the Florida East Coast will remain in effect through the weekend as instances of **minor coastal flooding** will be possible at times of high tide. The higher peak water levels will likely join the late morning/early afternoon high tide cycle.

Instances of **minor to moderate coastal flooding** continues during periods of high tide along the South Florida Coast. A decrease in the northerly swell should help reduce the risk for **moderate coastal flooding** but some **minor flooding** can still be possible through the weekend.



Summary

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Northwestern Caribbean Sea & Southeastern Gulf of Mexico:

- A broad area of low pressure is likely to form by the early to middle part of next week over the northwestern Caribbean Sea and adjacent portions of Central America.
- Thereafter, gradual development of this system is possible, and a tropical depression could form as the system moves slowly to the north or northwest over the northwestern Caribbean Sea and across the Gulf of Mexico through the end of next week.
- *This system poses no direct threat to Florida within the next 5 days; however, the organization and evolution of this system should be closely monitored through the weekend and into early next week.*
- The National Hurricane Center (NHC) is outlooking a **low (near 0%) chance of development** over the next 48 hours, and a **medium (60%) chance of development** over the next 7 days.

Remnants of Gordon:

- Strong upper-level winds continue to keep showers and thunderstorms displaced away from the center of an area of low pressure (the remnants of Gordon) located over one thousand miles southwest of the Azores.
- Significant development of this system is not expected while it moves slowly northwestward over the central subtropical Atlantic during the next couple of days.
- *The remnants of Gordon pose no threat to Florida.*
- The National Hurricane Center (NHC) is outlooking a **low (10%) chance of development** over the next 48 hours and 7 days.

Invest 96L (Central Subtropical Atlantic):

- An area of low pressure located about 700 miles northeast of the northern Leeward Islands is producing some disorganized shower and thunderstorm activity.
- Environmental conditions do not appear conducive for significant development of this system during the next couple of days while it drifts northwestward and then northward at about 5 mph over the central or western subtropical Atlantic.
- *Invest 96L poses no direct threat to Florida.*
- The National Hurricane Center (NHC) is outlooking a **low (10%) chance of development** over the next 48 hours and 7 days.

Invest 96L (Central Subtropical Atlantic):

- A tropical wave is expected to move westward from the coast of Africa on Sunday or Monday.
- Gradual development of this system is possible next week as it moves west-northwestward over 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 (near 0%) chance of development** over the next 48 hours and a **low (30%) chance of development** 7 days.
- *The next name on the list is Helene (heh-LEEN).*

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



Tropical Update

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State Meteorological Support Unit

Florida Division of Emergency Management

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