



Tropical Update



12:30 PM EDT

Wednesday, October 2, 2024

Helene Recovery Weather

Hurricane Kirk & Tropical Depression Thirteen

Northwestern Caribbean Sea and Gulf of Mexico Disturbance (40%)

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

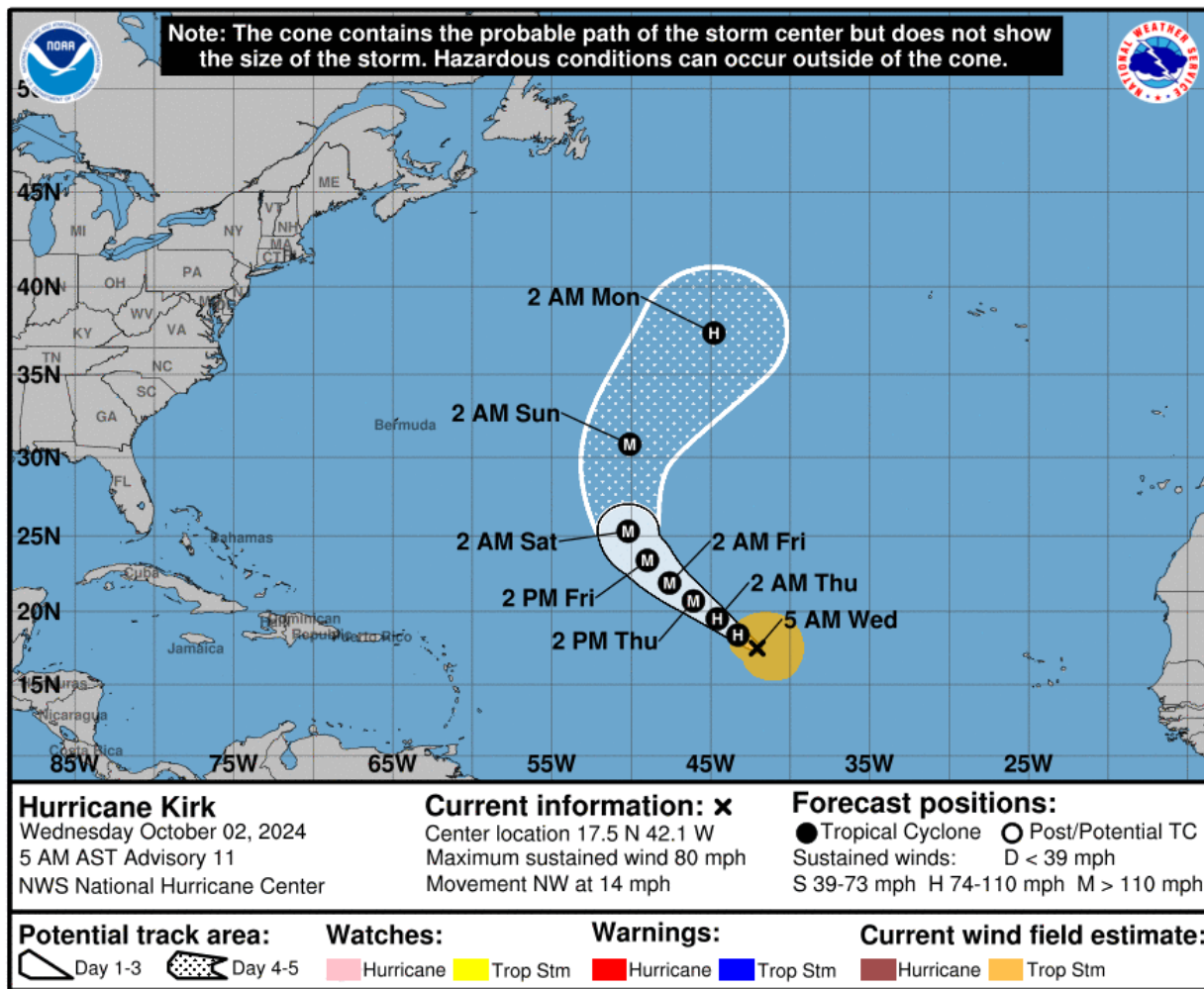
Chance of development: None Low Medium High





Hurricane Kirk

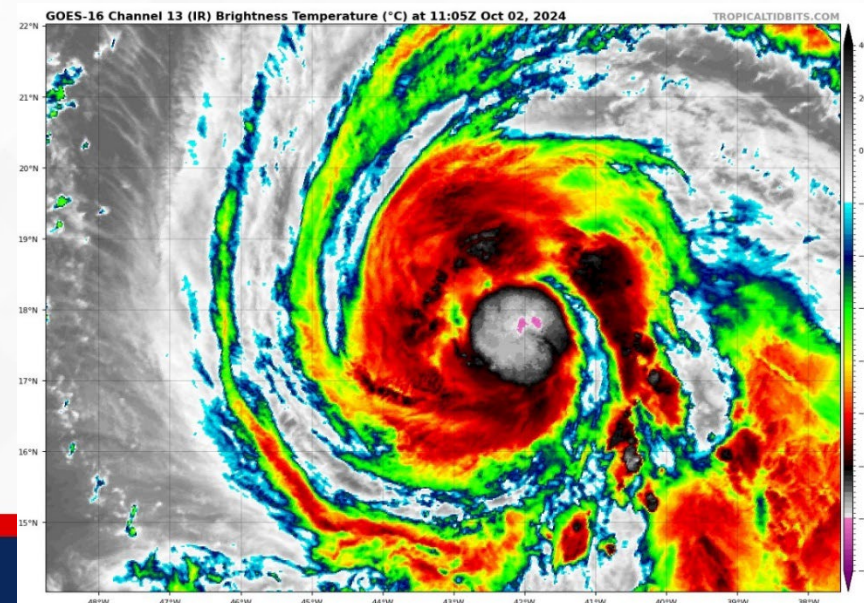
From the National Hurricane Center (NHC)



- **Location:** 1260 miles W of the Cabo Verde Islands; 1225 miles E of the Lesser Antilles
- **Maximum Sustained Winds:** 85 mph; Category 1
- **Current Movement:** NW at 12 mph

This motion is expected to continue over the next few days with a gradual turn more to the north-northwest by the end of the week. Additional strengthening is forecast during the next few days, and Kirk is expected to become a major hurricane tomorrow.

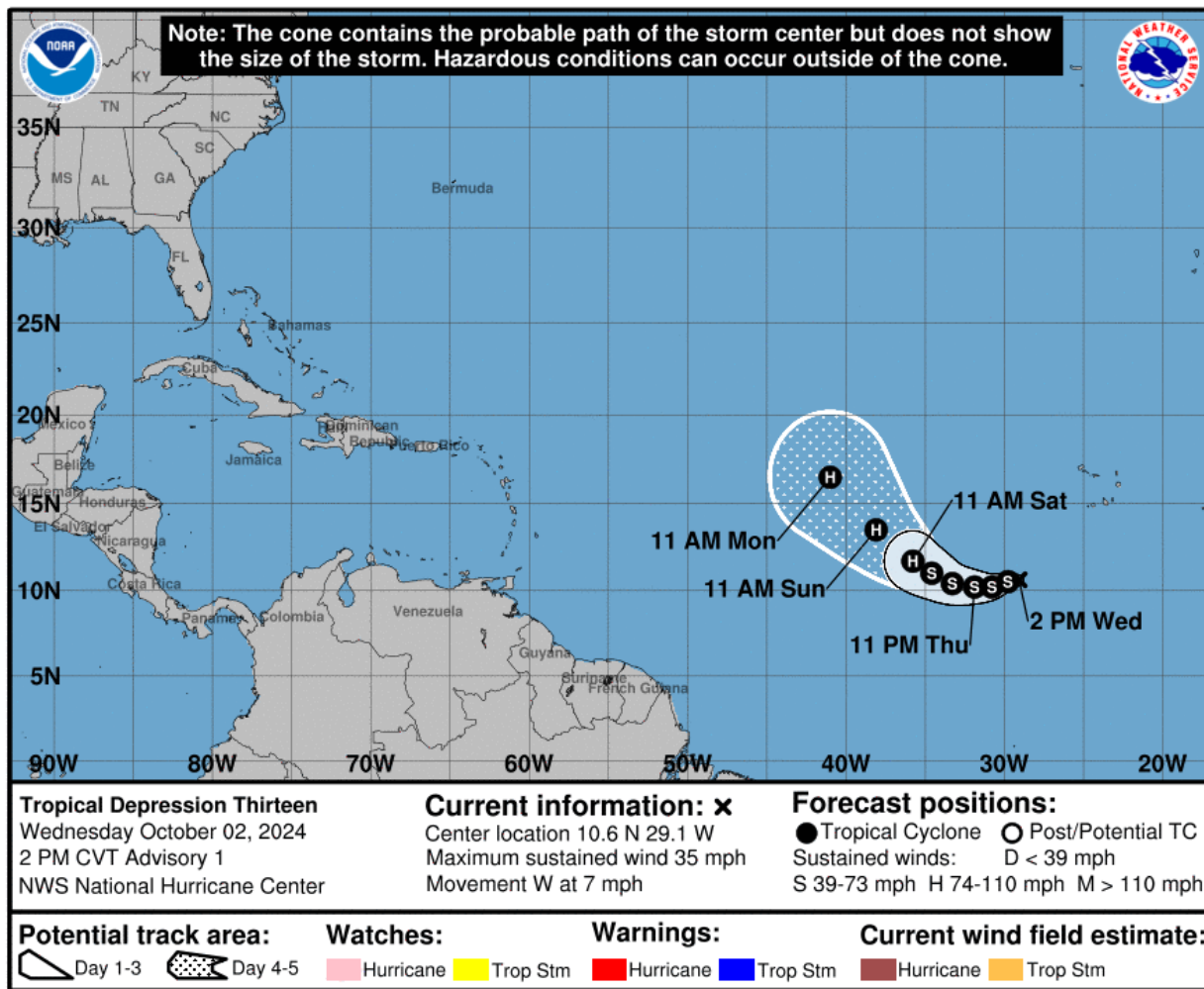
Kirk poses no direct threat to Florida at this time.





Tropical Depression Thirteen

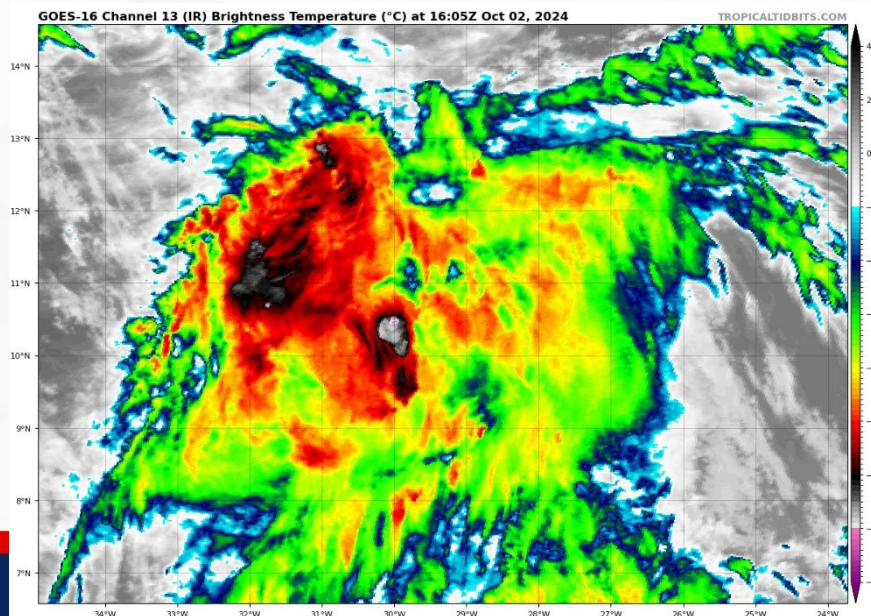
From the National Hurricane Center (NHC)



- **Location:** 430 miles SW of the Southermost Cabo Verde Islands
- **Maximum Sustained Winds:** 35 mph
- **Current Movement:** W at 7 mph

A general westward motion is expected for the next day or so followed by a turn more west-northwestward by the weekend. Gradual strengthening is forecast, and the depression could become a tropical storm by tonight.

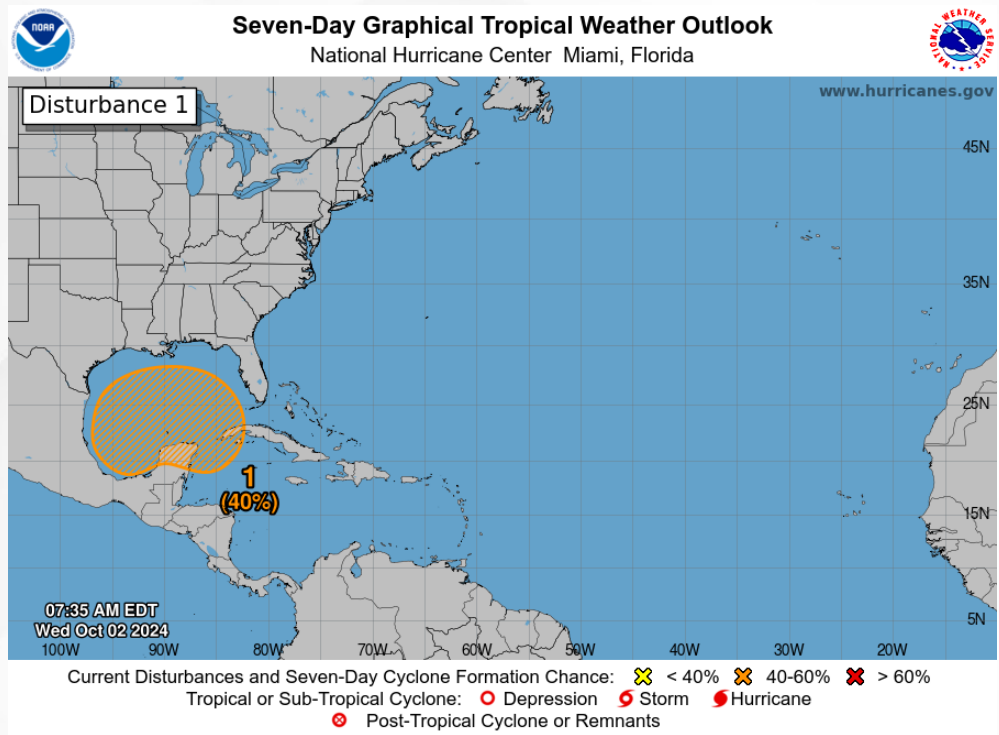
Tropical Depression Thirteen poses no direct threat to Florida over the next 10 days, at least.





Tropical Weather Outlook

Disturbance 1 – Northwestern Caribbean Sea & Gulf of Mexico



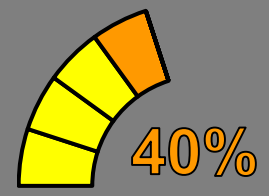
A broad trough of low pressure is producing a large area of disorganized showers and thunderstorms from the southwestern Caribbean Sea into the southern Gulf of Mexico. Environmental conditions could support some gradual development of this system, and a tropical depression could form over the weekend as the broader disturbance moves fully into the Gulf of Mexico. Interests along the U.S. Gulf Coast should continue to monitor the progress of this system.

This system poses no direct threat to Florida through the next 5 days, but trends with its development/organization and within the computer forecast models will be closely monitored.

Chance of development through 48 hours... **low...near 0%**
Chance of development through 7 days... **medium...40%**

Near 0%

48 Hour Formation



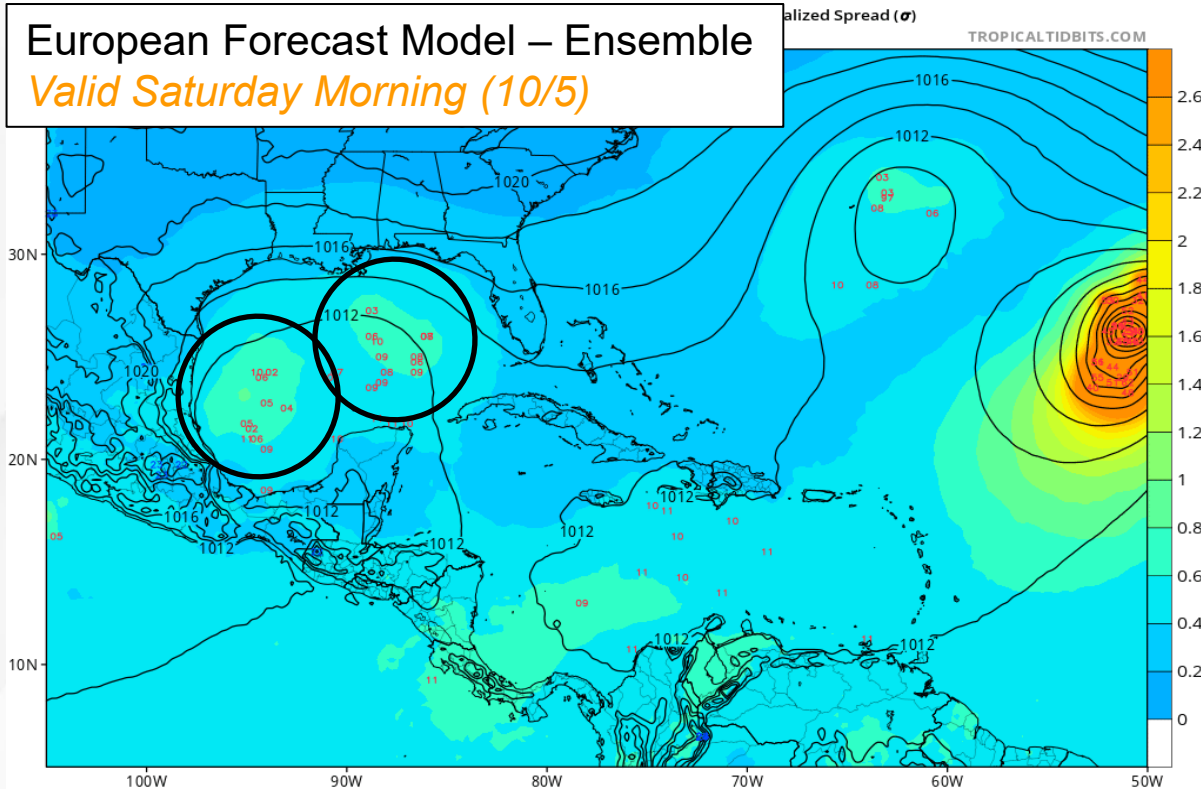
7 Day Formation



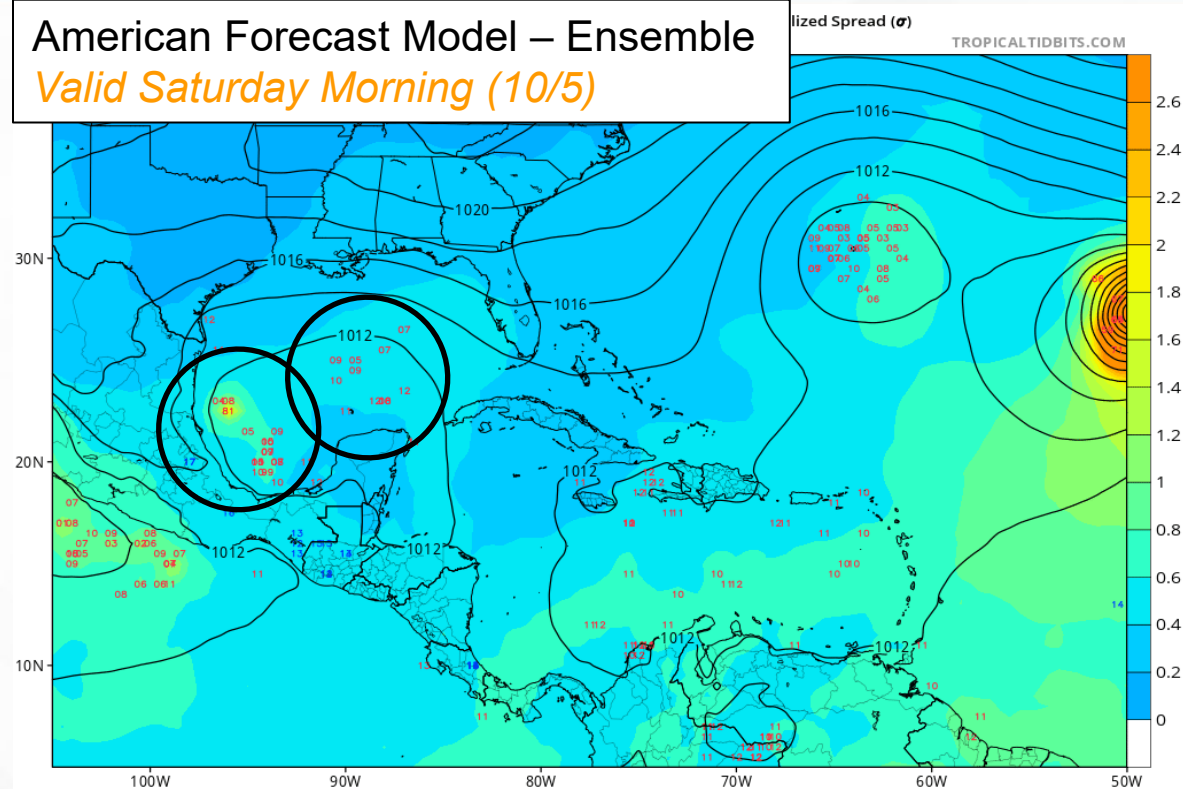
Ensemble Forecast Computer Models

Disturbance 1 – Northwestern Caribbean Sea & Gulf of Mexico

European Forecast Model – Ensemble
Valid Saturday Morning (10/5)



American Forecast Model – Ensemble
Valid Saturday Morning (10/5)



There is a **wide range of possibilities** in the eventual path and timeline of the western Caribbean low pressure next week, with little agreement across the forecast computer models – large changes and shifts in the model guidance can be expected, as well as which area of low pressure becomes the more dominant feature.

- Computer forecast models have been hinting at showers and thunderstorms becoming increasingly organized near Central America and the southwestern Gulf of Mexico this weekend and into next week.
- There is a decent signal that a more concentrated area of low pressure could form over the western Caribbean Sea or southwestern Gulf of Mexico, moving out into the Gulf of Mexico later this week into the weekend; however, much development or uptick in organization will likely be slow.
- Computer models indicate a continued trend towards a broader, weaker, and more southerly system as frontal boundary is forecast to push into the southeast U.S. this weekend into early next week, likely interact with the disturbance as it moves through the Gulf of Mexico and supporting a weaker solution; however, the timing and placement of these systems and their possible interactions will continue to be monitored.
- There remains considerable disagreement across forecast computer model ensembles, so **it is important to not only look at one-run model solutions** as large shifts in the computer models can be expected in the coming days until a more defined system forms.



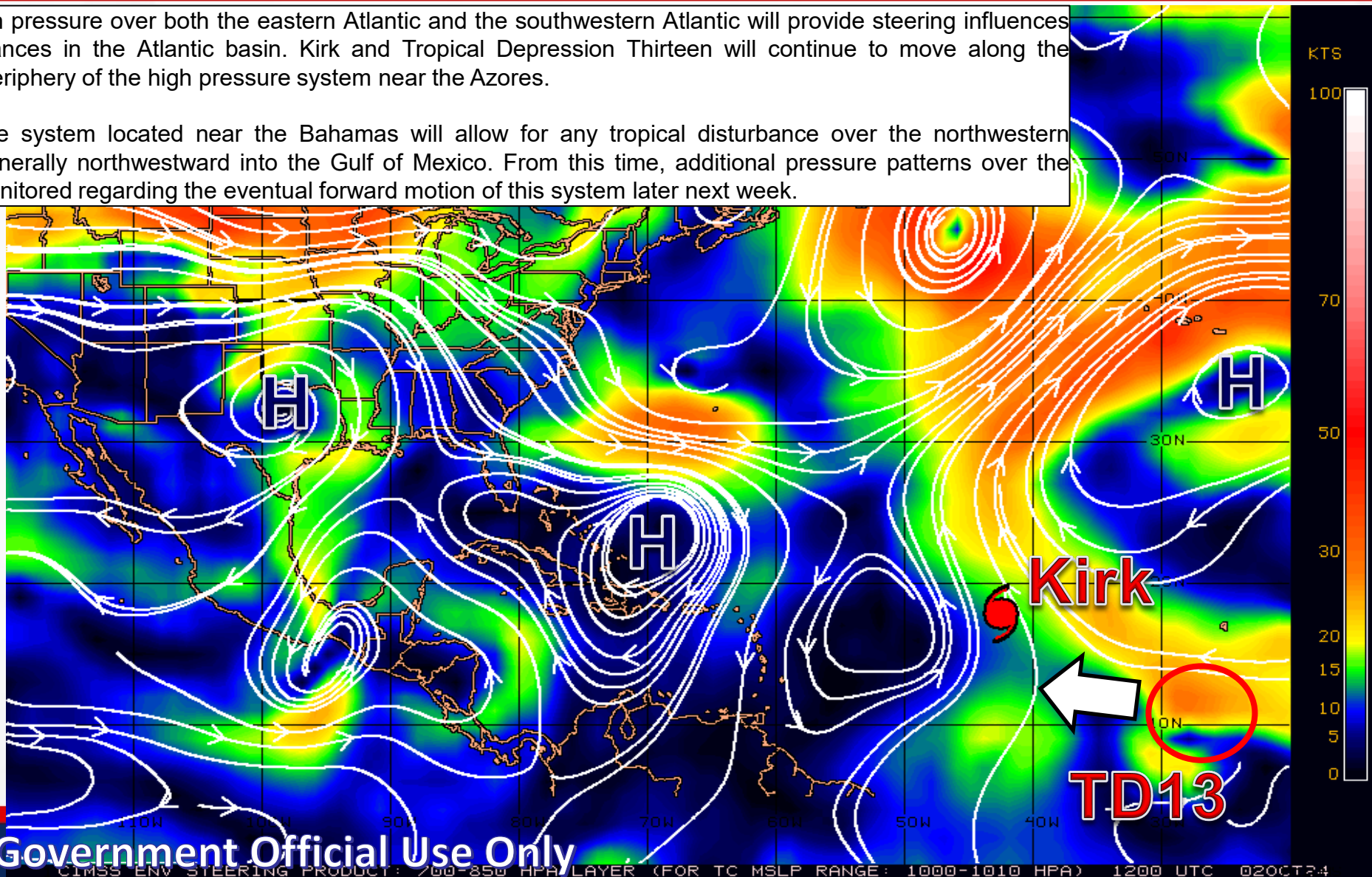
Steering Currents

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.

Dominant areas of high pressure over both the eastern Atlantic and the southwestern Atlantic will provide steering influences for all tropical disturbances in the Atlantic basin. Kirk and Tropical Depression Thirteen will continue to move along the southern and wester periphery of the high pressure system near the Azores.

A strong high pressure system located near the Bahamas will allow for any tropical disturbance over the northwestern Caribbean to move generally northwestward into the Gulf of Mexico. From this time, additional pressure patterns over the U.S. will need to be monitored regarding the eventual forward motion of this system later next week.



Fast Moving Storm

Fast Moving Storm

Typical Moving Storm

Slow Moving Storm



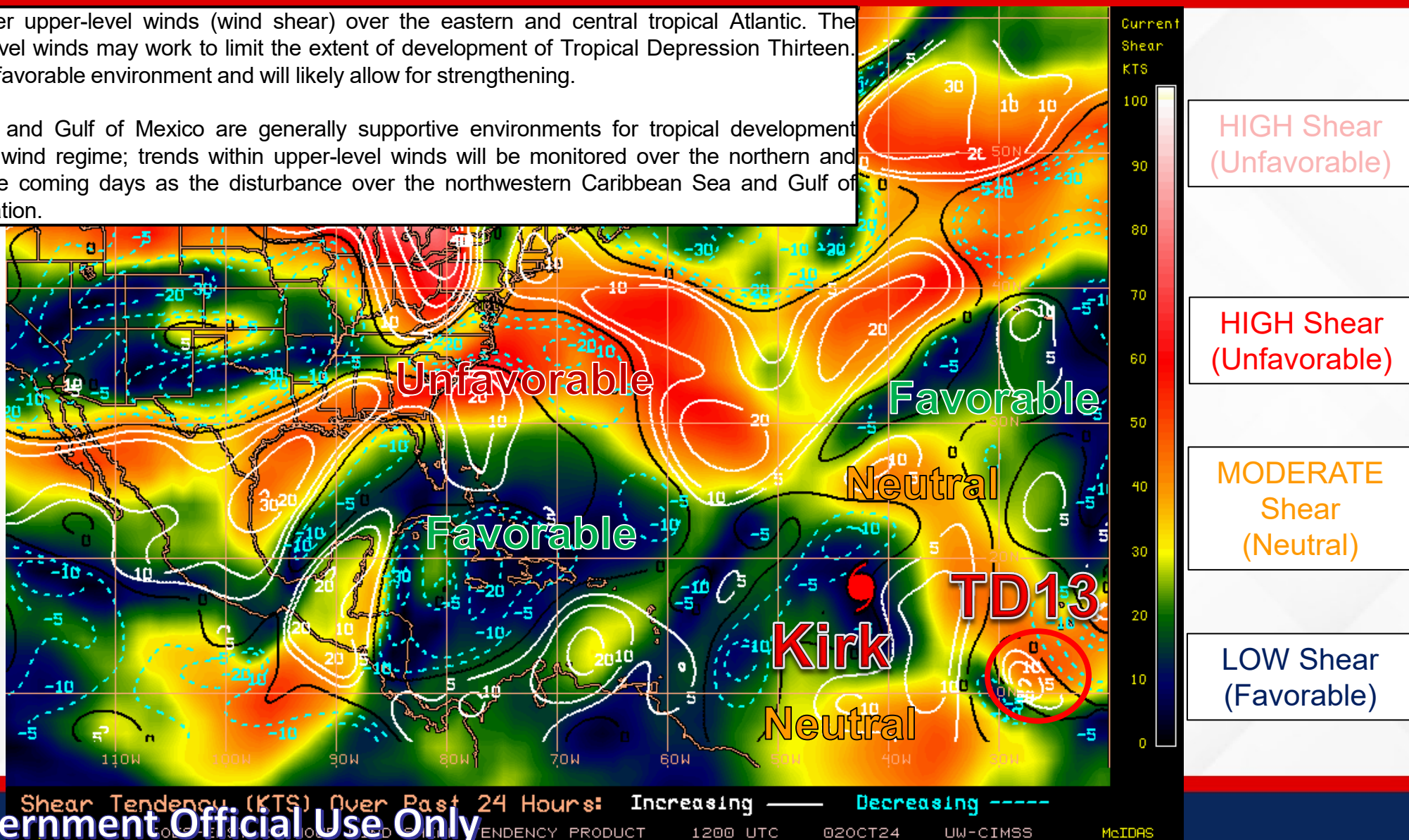
Wind Shear

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).

There are pockets of stronger upper-level winds (wind shear) over the eastern and central tropical Atlantic. The presence of stronger upper-level winds may work to limit the extent of development of Tropical Depression Thirteen. Kirk will remain within a more favorable environment and will likely allow for strengthening.

The western Caribbean Sea and Gulf of Mexico are generally supportive environments for tropical development featuring a weak upper-level wind regime; trends within upper-level winds will be monitored over the northern and western Gulf of Mexico in the coming days as the disturbance over the northwestern Caribbean Sea and Gulf of Mexico works toward organization.



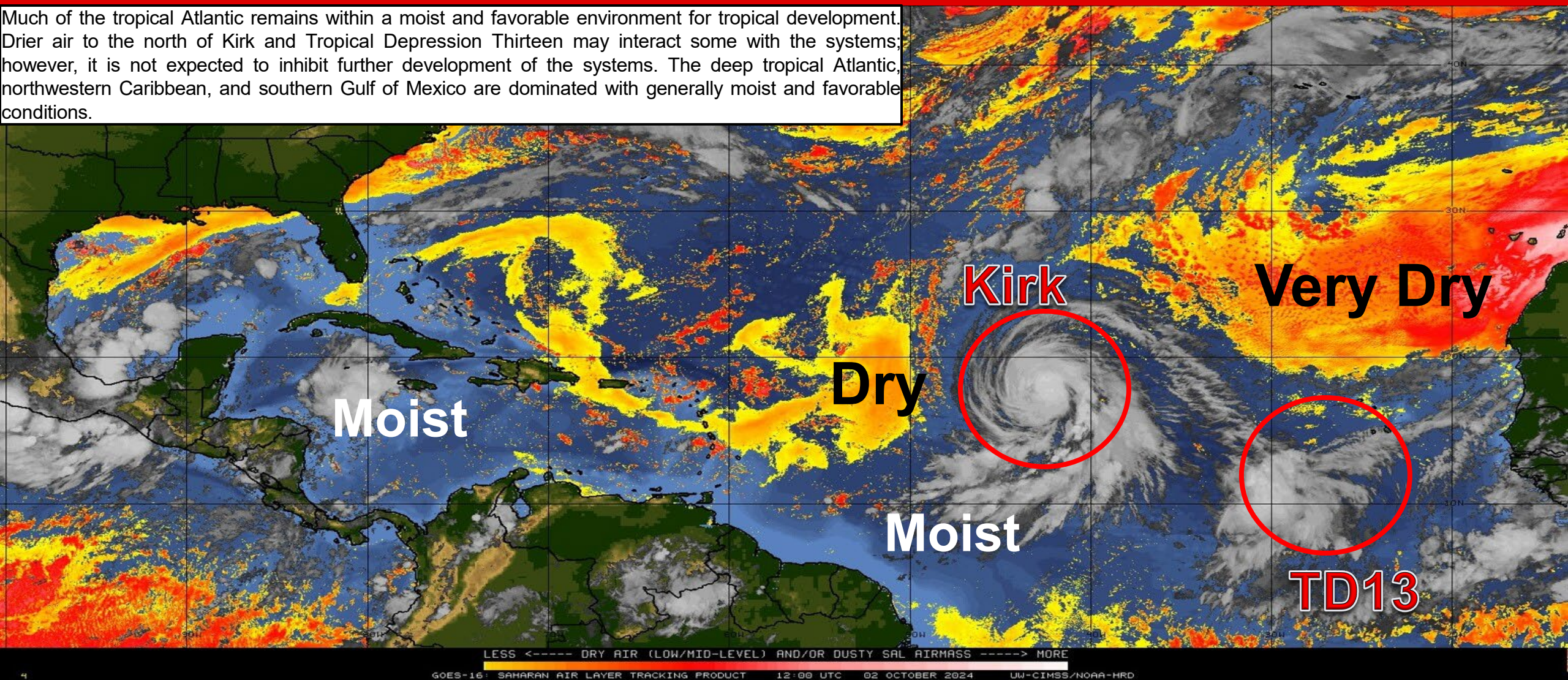


Dry Air & Saharan Dust

Is the environment favorable for the system?

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

Much of the tropical Atlantic remains within a moist and favorable environment for tropical development. Drier air to the north of Kirk and Tropical Depression Thirteen may interact some with the systems; however, it is not expected to inhibit further development of the systems. The deep tropical Atlantic, northwestern Caribbean, and southern Gulf of Mexico are dominated with generally moist and favorable conditions.



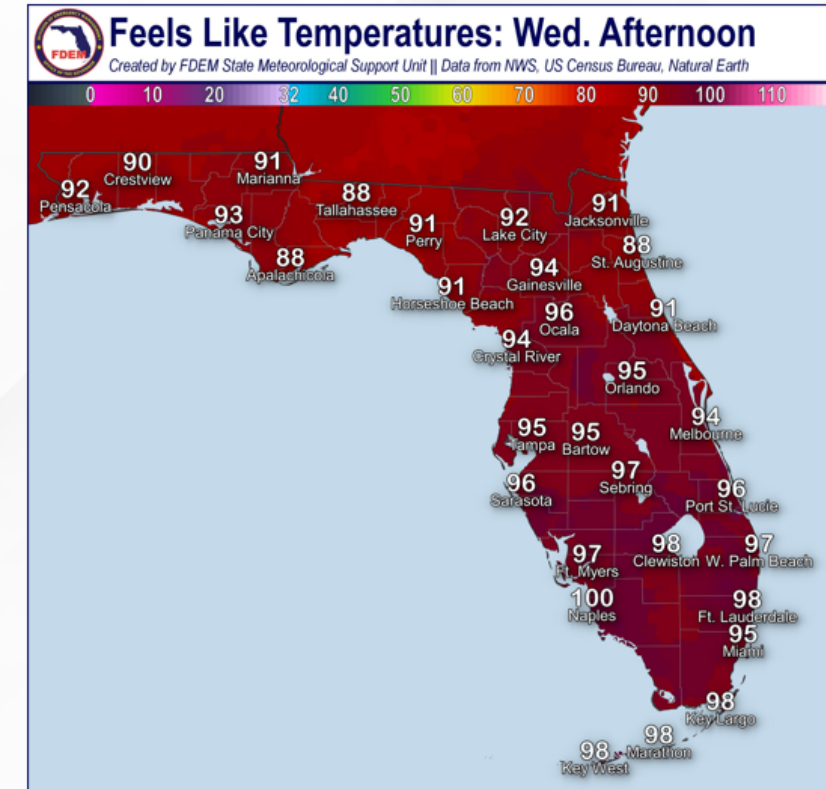
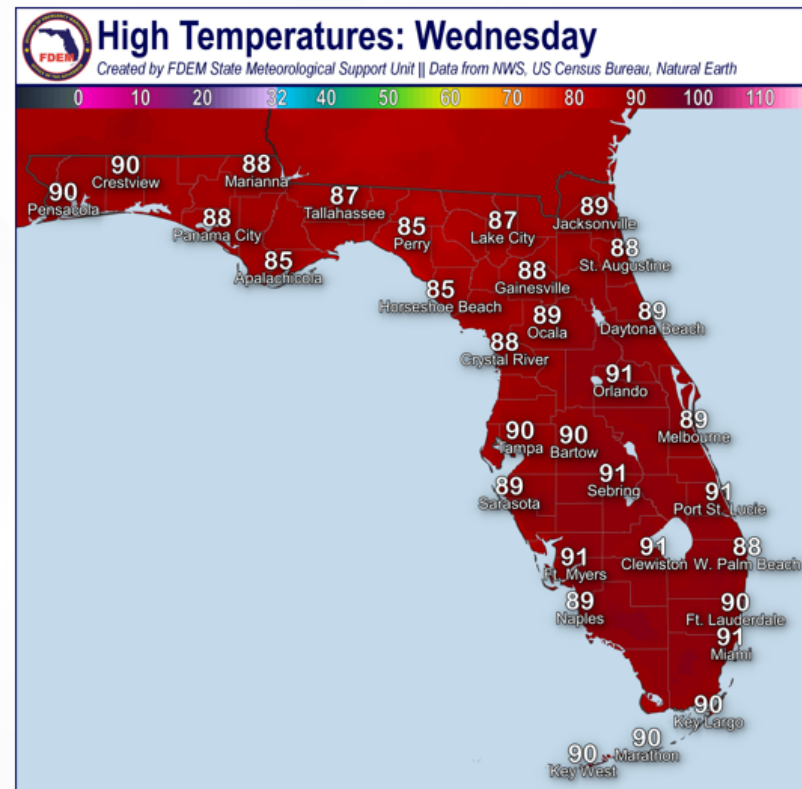
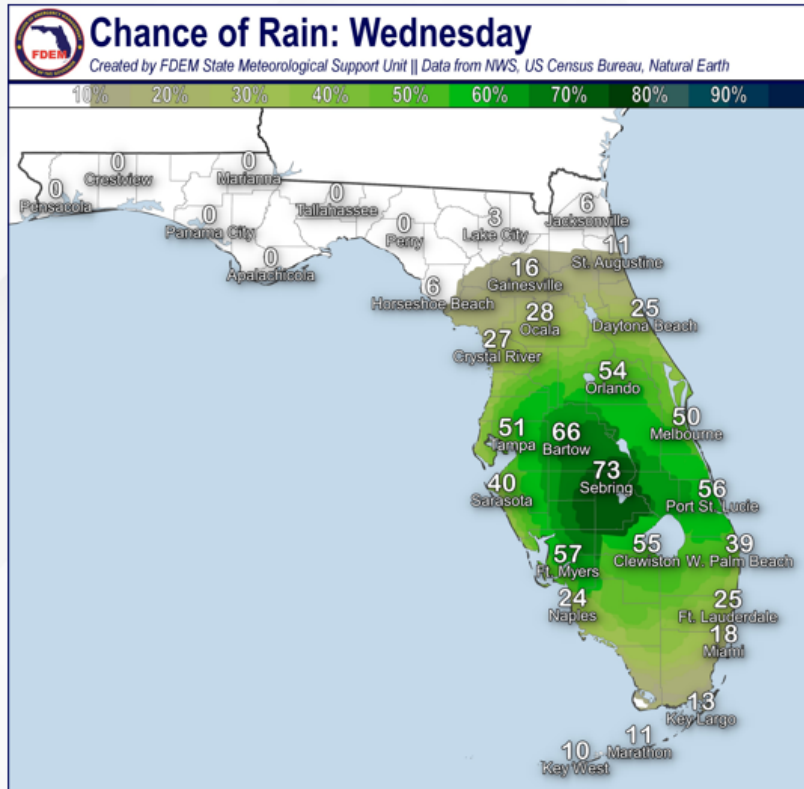
GOES-16: SAHARAN AIR LAYER TRACKING PRODUCT 12:00 UTC 02 OCTOBER 2024 UW-CIMSS/NOAA-HRD

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Recovery Weather - Wednesday

Rain Chances, High Temperature & Feels-Like Temperature





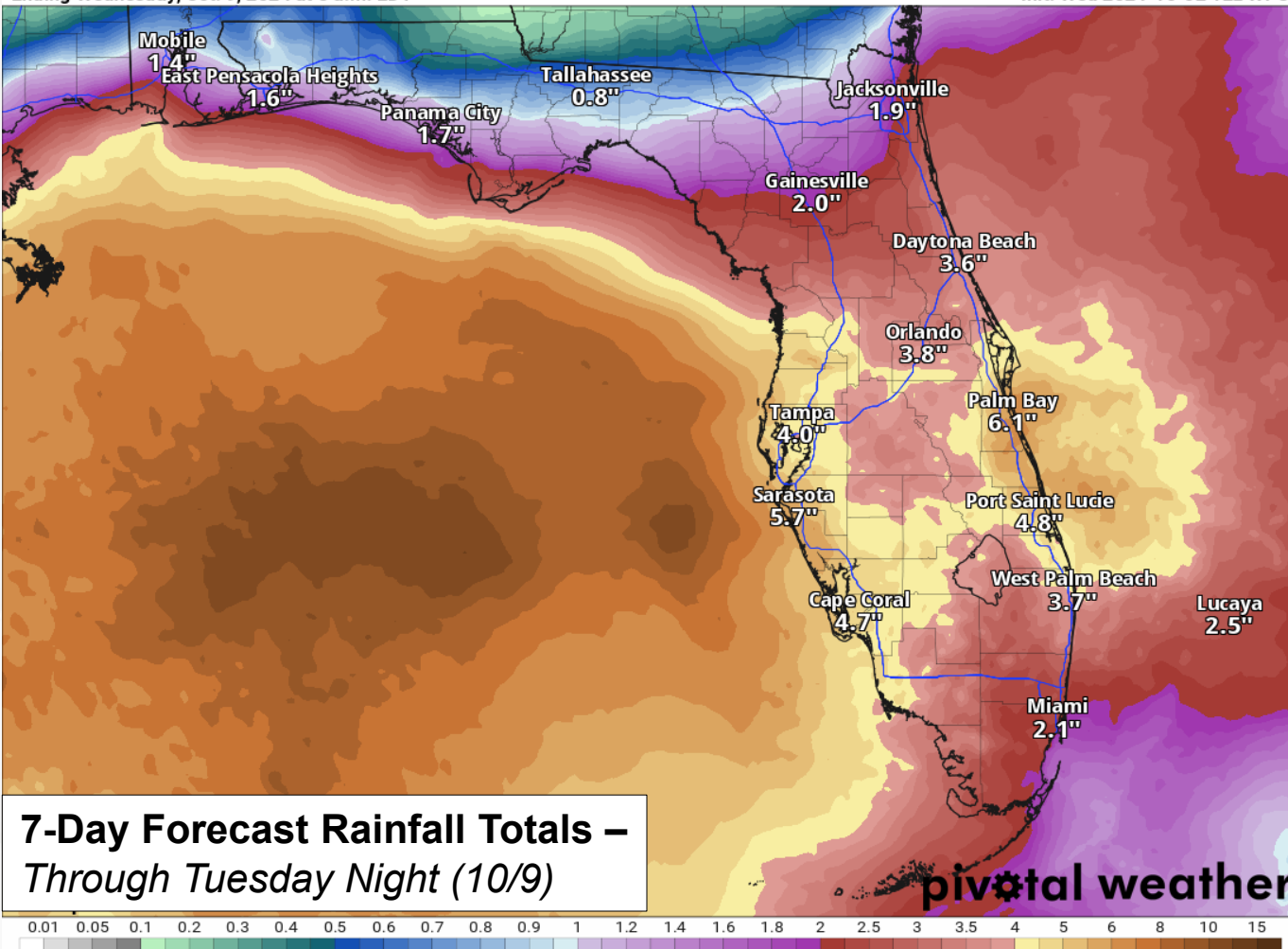
Rainfall Totals – Next 7 Days

From the Weather Prediction Center (WPC)

7-Day Precipitation (in)

Ending Wednesday, Oct. 9, 2024 at 8 a.m. EDT

Init: Wed 2024-10-02 12z WPC

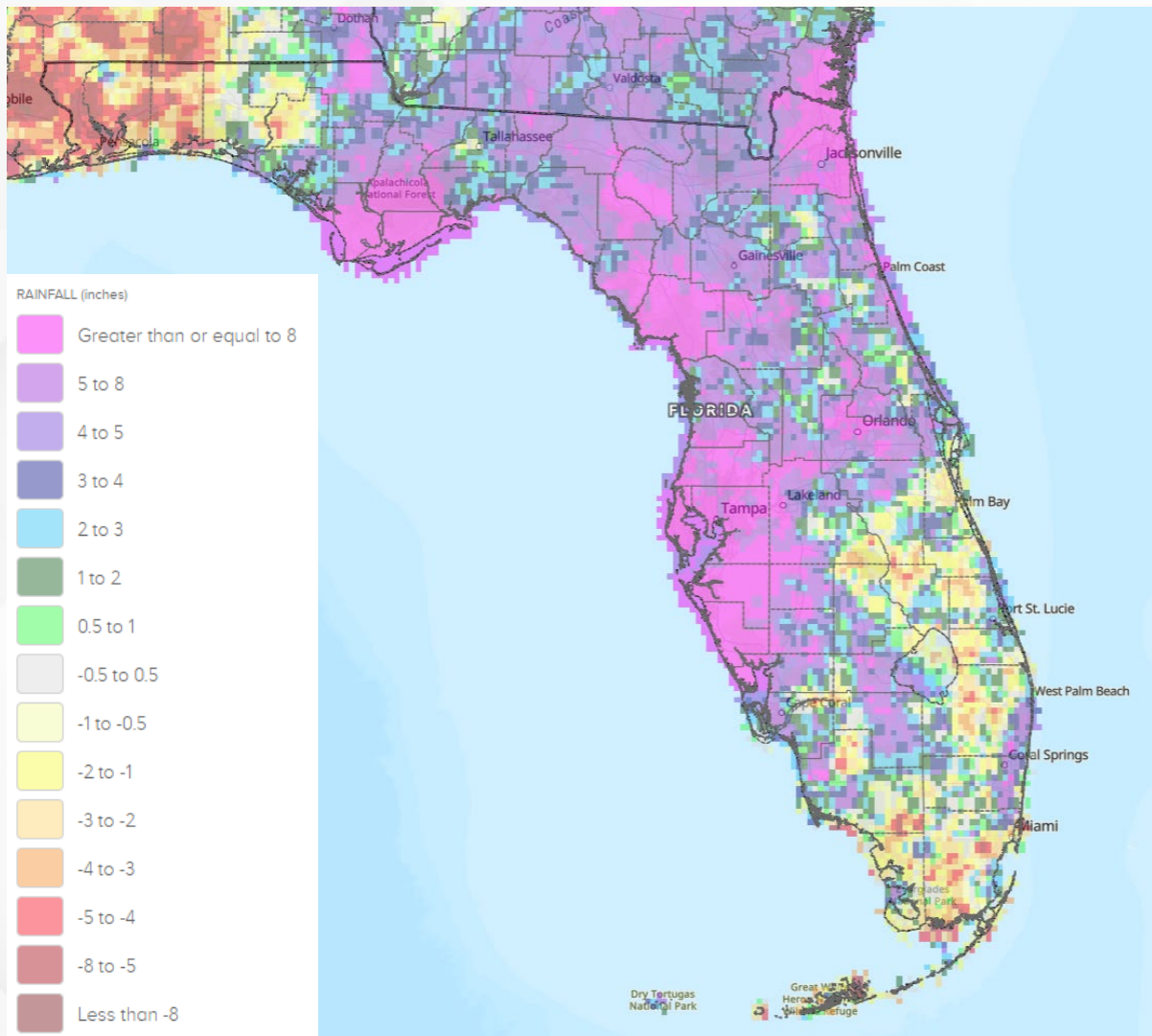


- Scattered showers and thunderstorms are forecast to continue across much of Florida Peninsula today and nearly statewide through the rest of the week, with more concentrated rainfall totals arriving this weekend and early next week as we monitor potential development in the northwestern Caribbean and Gulf of Mexico.
- Rainfall totals will be highly dependent upon the evolution of the next tropical disturbance over the northwestern Caribbean and Gulf of Mexico, with most of this activity not beginning until later this week and early next week.
- A frontal boundary is expected to push through the southeast U.S. late this weekend into early next week, likely interact with the disturbance and supporting a wet and active weather pattern. The timing and placement of these systems and their possible interactions will continue to be monitored.
- Widespread rainfall totals near 2-4" can be expected statewide, with higher amounts of 5-7" along Western Peninsula, along the I-4 corridor southward to Lake Okeechobee, and along the Central-East Coast.
 - Heaviest rainfall of 6-8", with locally higher amounts eclipsing 8-12" cannot be ruled out; however, the exact placement of these more significant totals will continue to be modified depending on the tropical disturbance's organization and track.
 - **Please continue to stay tuned for the latest computer forecast model guidance and trends in the subsequent days.**



60-Day Rainfall Departure From Normal

From the National Weather Service



Much of the Big Bend and Northern Peninsula southward through the I-4 corridor and into West-Central and Southwest Florida have experienced rainfall totals greater than 5-10" above normal over the past 60-days. More localized areas have seen rainfall totals near 10-15" above normal over the past 60-days across with isolated higher totals near 15-20" over the past 60 days across portions of Apalachicola, the Suwannee Valley, Northeast Florida, and West-Central Florida.

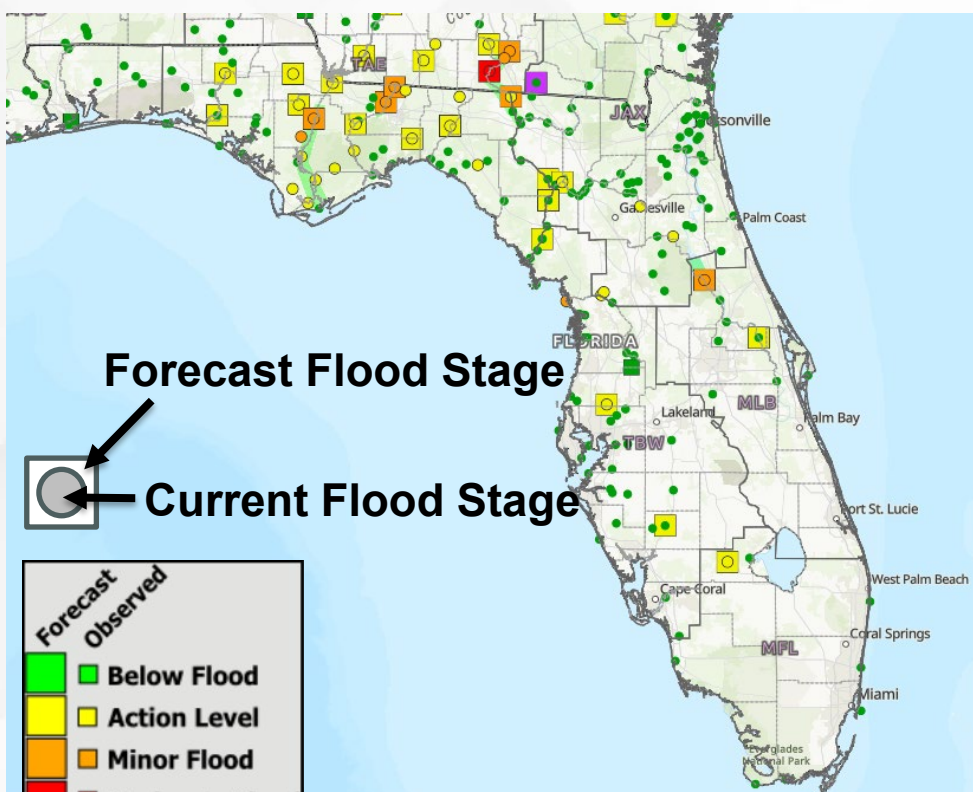
Numerous North, West-Central, and Southwest Florida rivers are already running high and/or within flood stage at this time.

Saturated areas will be more vulnerable to heavy rainfall and a faster onset of flooding.



Current & Forecast River Conditions

From the National Weather Service



A **River Flood Warning** remain in effect along the [St. Johns River at Astor](#) as water levels hold relatively steady within **Minor Flood Stage**.

Several **River Flood Warnings** remain in effect across the eastern Florida Panhandle and Big Bend as elevated water levels continue in the wake of Helene. The [Ochlockonee River near Concord \(CR-12\)](#) and [near Havana \(US-27\)](#) and the [Apalachicola River near Blountstown](#) continue to run in **Minor Flood Stage** as water levels gradually decline.

The [Withlacoochee River near Pinetta \(CR-150\)](#) has seen water levels rise into Action Stage (bank-full) over the last few days and is forecast to reach **Minor Flood Stage** in the next day or so.

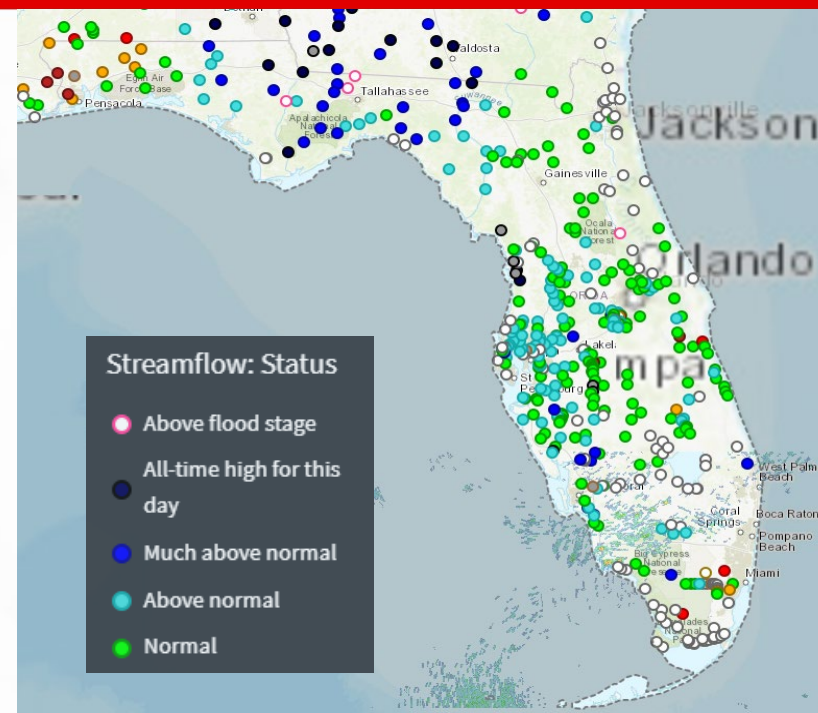
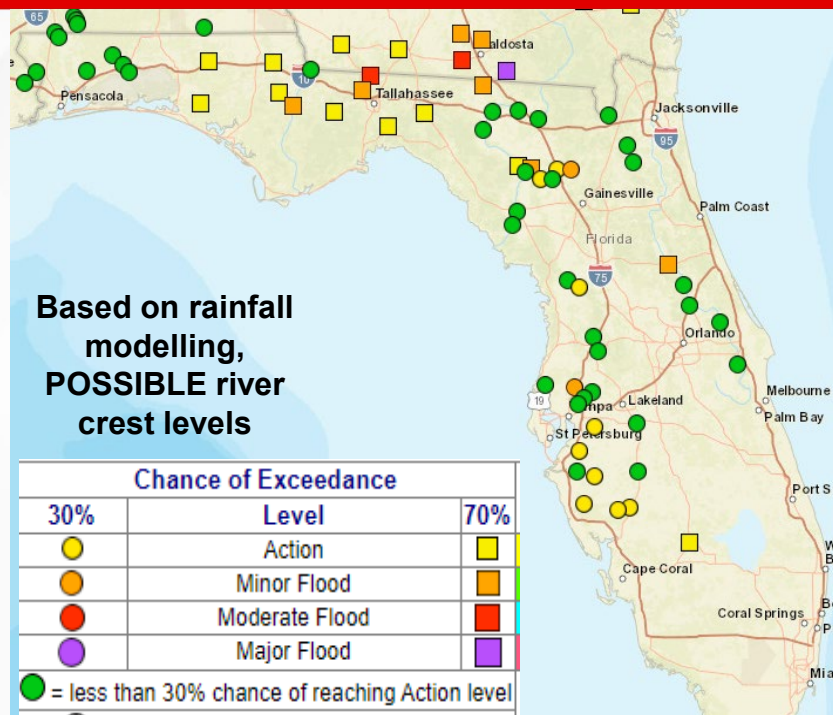
Additional rises in water level will be possible along the Withlacoochee and Ochlockonee Rivers and along Suwannee Valley mainstem rivers (including the Suwannee, Alapaha, and Santa Fe) as excess heavy rainfall discharge through the basin from the Georgia headwaters. With the return of a wet and active weather pattern next week, additional water level rises will be possible along Florida rivers, creeks, and waterways. For more details, please visit the [River Forecast Center](#).

River Gauge	County(ies) Affected	Current Level	Crest Level	Record Level	Status	Crest Date	Warning Expires
Apalachicola River near Blountstown	Calhoun, Franklin, Gulf, Liberty	Minor: 19.89 ft	Minor: 21.00 ft	28.60 ft	Falling	Crested	2124 CDT 4-Oct
Ochlockonee River near Concord (CR-12)	Gadsden, Leon	Minor: 37.87 ft	Moderate: 39.80 ft	45.70 ft	Falling	Crested	1400 EDT 4-Oct
Ochlockonee River near Havana (US-27)	Gadsden, Leon	Minor: 27.63 ft	Minor: 28.38 ft	35.10 ft	Falling	Crested	2000 EDT 4-Oct
Withlacoochee River near Pinetta	Hamilton, Madison	Action: 65.05 ft	Minor: 76.70 ft	87.80 ft	Rising	4-Oct	Until Further Notice
St. Johns River at Astor	Volusia, Lake	Minor: 2.42 ft	Minor: 2.70 ft	4.70 ft	Steady	Crested	Until Further Notice



Riverine Flooding

Chance of River Flooding Based on Range of Forecast Rainfall



Rivers, creeks/streams, and waterways across North and West-Central Florida are already running above normal for this time of year due to widespread heavy rainfall from Hurricane Debby. Several **River Flood Warnings** remain in effect across several mainstems and branches in the Big Bend including the Apalachicola, Ochlockonee, and Withlacoochee rivers as **minor flooding persists**. Additional **River Flood Warnings** remain in effect for the St. Johns River as minor flooding continues due to trapped tides.

Water continues to filter through the river basins and further downstream from heavy rainfall across the Southeast U.S. from Hurricane Helene over the next few weeks. Computer models are suggesting the potential for **minor flooding** along portions of the Suwannee River as excess heavy rainfall discharge through the basin from the Georgia headwaters with **minor backwater flooding** possible along the Santa Fe River. The Alapaha River near Jennings may also see water levels rise above flood stage in the coming weeks as the Alapaha River at Statenville, Georgia crests in major flood stage early next week and the crest wave moves further downstream. Additional heavy rainfall is expected this weekend as a frontal boundary likely interacts with the tropical disturbance entering the Gulf of Mexico and supports a wet and active weather pattern.



Summary

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Hurricane Kirk:

- As of 11:00 AM EDT, Kirk is located about 1260 miles west of the Cabo Verde Islands and 1225 miles east of the Lesser Antilles and moving northwestward at 14 mph.
- This motion is expected to continue over the next few days with a gradual turn more to the north-northwest by the end of the week.
- Maximum sustained winds are near 80 mph with higher gusts, making Kirk a Category 1 hurricane on the Saffir-Simpson scale.
- Additional strengthening is forecast during the next few days, and Kirk is expected to become a major hurricane by Thursday.
- *Kirk poses no direct threat to Florida at this time.*

Tropical Depression Thirteen:

- As of 11:00 AM EDT, Tropical Depression Thirteen is located about 430 miles southwest of the southernmost Cabo Verde Islands and moving westward at 7 mph.
- A general westward motion is expected for the next day or so followed by a turn more west-northwestward by the weekend.
- Maximum sustained winds are near 35 mph with higher gusts.
- Gradual strengthening is forecast, and the depression could become a tropical storm by tonight.
- *This system poses no direct threat to Florida over the next 10 days, at least.*

Northwestern Caribbean Sea and Gulf of Mexico:

- A broad trough of low pressure is producing a large area of disorganized showers and thunderstorms from the southwestern Caribbean Sea into the southern Gulf of Mexico.
- Environmental conditions could support some gradual development of this system, and a tropical depression could form over the weekend as the broader disturbance moves fully into the Gulf of Mexico.
- Interests along the U.S. Gulf Coast should continue to monitor the progress of this system.
- *This system poses no direct threat to Florida through the next 5 days, but trends with its development/organization and within the computer forecast models will be closely monitored.*
- The NHC is outlooking a **low (near 0%) chance of development** over the next 48 hours, and a **medium (40%) chance of development** over the next 7 days.

The next names on the list are Leslie (LEHZ-lee) and Milton (MIL-ton).

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



Summary

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Florida Outlook:

- Scattered to numerous showers and thunderstorms can be expected across much of Central and Southwest Florida with the sea breezes this afternoon and evening thanks to high pressure building in from the Atlantic, high pressure over the Midwest U.S., and deep moisture remaining over portions of the state; Isolated to scattered activity will extend into northern and southern portions of the Peninsula this afternoon.
- An isolated strong thunderstorm or two may be possible during the peak heating hours of the day.
- Locally heavy downpours along urban and low-lying/poor drainage areas and over saturated grounds, especially with slow moving or training shower and thunderstorm activity, may give way to localized instances of flooding.
 - Coastal and low-lying areas along Florida's Gulf Coast will remain vulnerable to additional rounds of rainfall thanks to recent and lingering flooding and saturated grounds.
- **Heat Advisories** are not anticipated at this time; however, isolated areas approaching or briefly reaching Advisory criteria cannot be ruled out.
- Several **River Flood Warnings** remain in effect across the eastern Florida Panhandle and Big Bend as elevated water levels continue in the wake of Helene.
 - Water levels along the Ochlockonee River near Concord (CR-12) and near Havana (US-27) and the Apalachicola River near Blountstown continue to run in **Minor Flood Stage** as water levels gradually decline.
 - The Withlacoochee River near Pinetta (CR-150) is forecast to reach **Minor Flood Stage** in the next day or so.
 - Additional rises in water level will be possible along the Withlacoochee and Ochlockonee Rivers and along Suwannee Valley mainstem rivers (including the Suwannee, Alapaha, and Santa Fe) as excess heavy rainfall discharge through the basin from the Georgia headwaters. With the return of a wet and active weather pattern next week, additional water level rises will be possible along Florida rivers, creeks, and waterways.
- Rainfall totals in the 7-day timeframe will be highly dependent upon the evolution of the next tropical disturbance over the northwestern Caribbean and Gulf of Mexico, with most of this activity not beginning until later this week and early next week.
 - Current computer forecast model guidance shows widespread rainfall totals near 1-3" can be expected statewide, with higher amounts of 4-6" along Western Peninsula, along the I-4 corridor southward to Lake Okeechobee, and along the Central-East Coast.
 - Heaviest rainfall of 6-8", with locally higher amounts eclipsing 8-12" cannot be ruled out; however, the exact placement of these more significant totals will continue to be modified depending on the tropical disturbance's organization and track.
 - A frontal boundary is expected to push through the southeast U.S. late this weekend into early next week, likely interact with the disturbance and supporting a wet and active weather pattern; The timing and placement of these systems and their possible interactions will continue to be monitored.
 - **Please continue to stay tuned for the latest computer forecast model guidance and trends in the subsequent days.**

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



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State Meteorological Support Unit

Florida Division of Emergency Management

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