



TROPICAL UPDATE



8 AM EDT

Wednesday, September 4, 2019

Hurricane Dorian, Tropical Storm Fernand, Tropical Storm Gabrielle, Invest 92L (50%) & African Wave (60%)

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.

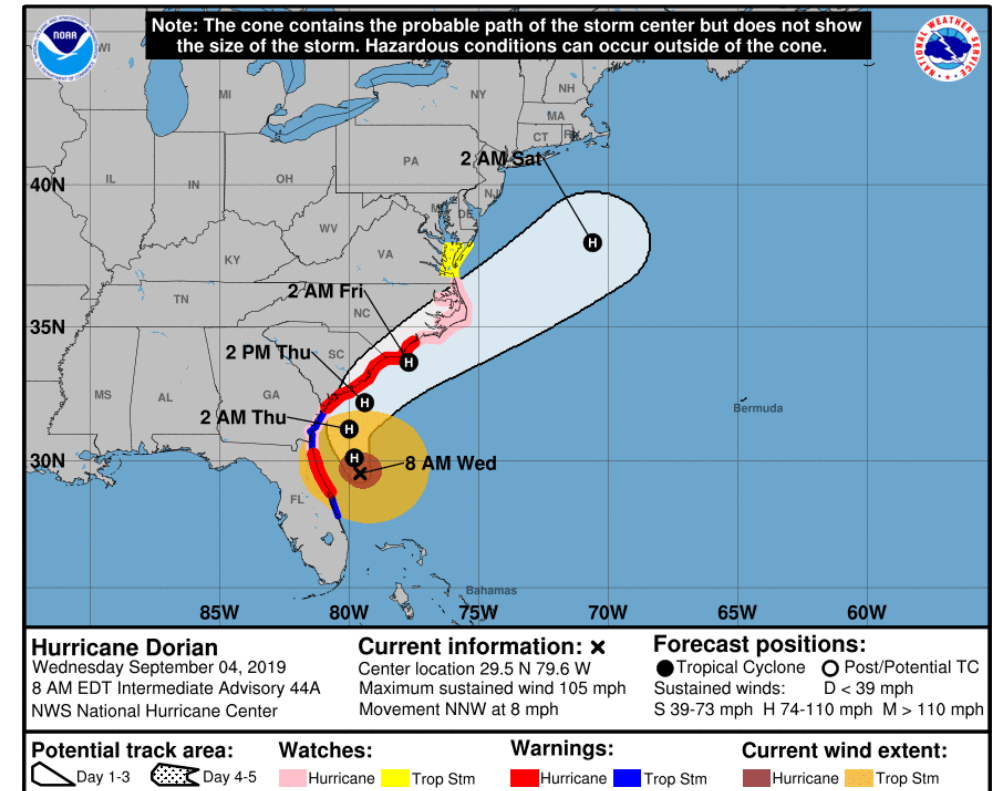
Hurricane Dorian

Wed, September 4, 8 AM ET

	MINIMAL	Low	MODERATE	HIGH	EXTREME
 WINDS					
 STORM SURGE					
 FLOODING					
 TORNADOES					

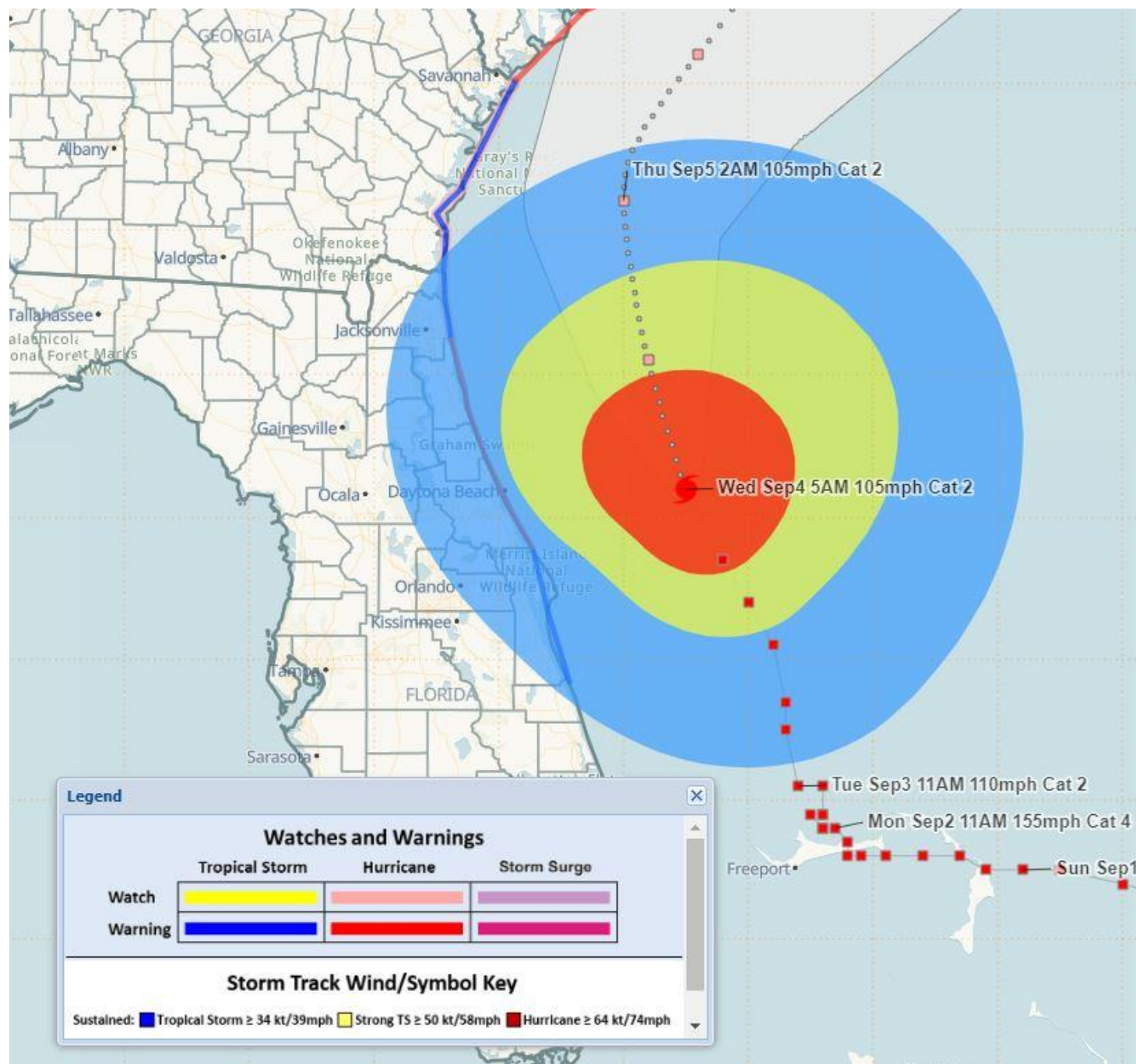
	Low	MODERATE	HIGH
 RIP CURRENTS			

National Hurricane Center Map



Changes Overnight:

- Dorian is now a Category 2 hurricane with maximum sustained winds of 105 mph, but the wind field is expanding.
- Dorian is moving slowly to the north-northwest parallel to the Florida coastline
- Tropical Storm Warnings and Hurricane Warnings have been cancelled from Indian River southward

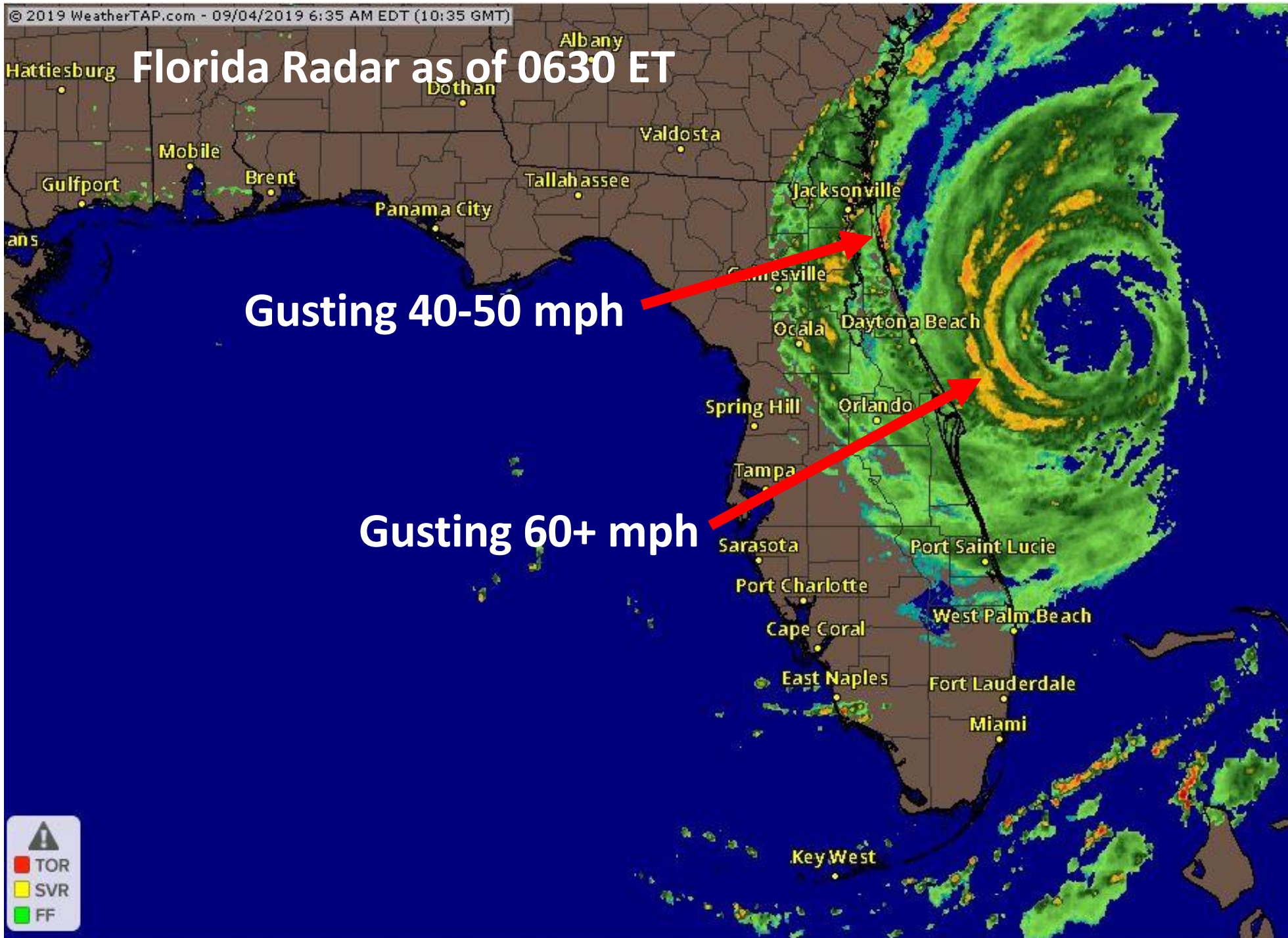


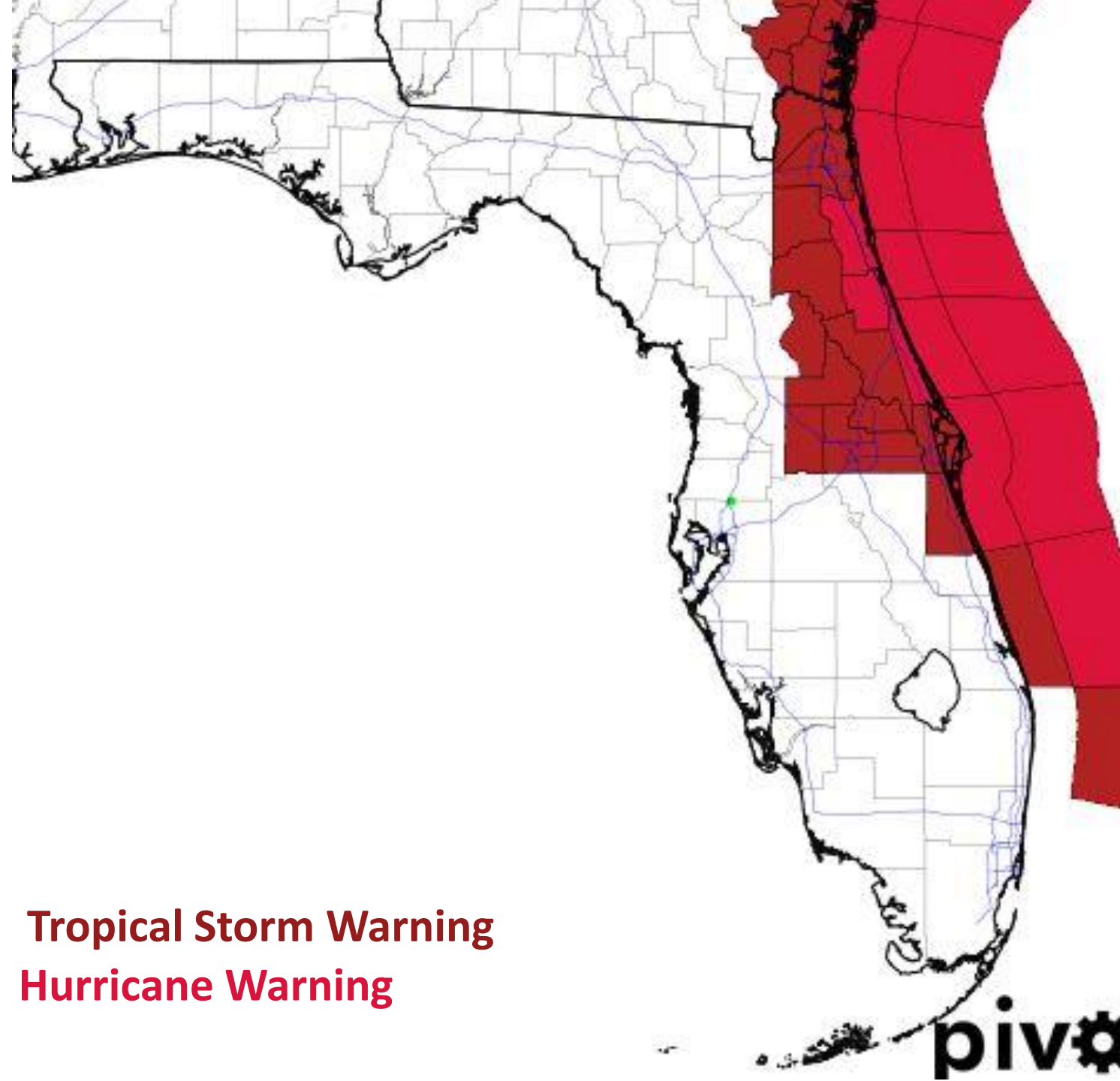
Hurricane Dorian is located about **95 miles east of Daytona Beach**. Dorian is moving parallel to the Florida coastline, to the north-northwest at 8 mph. Maximum **sustained winds** have decreased to **105 mph**, making Dorian a **Category 2 Hurricane**.

Dorian will continue to the north through tonight before starting a turn to the northeast once north of Jacksonville.

Hurricane force winds extend 60 miles from the center and **tropical storm force winds extend up to 175 miles**.

Tropical storm force winds have begun in Northeast Florida and ended along the Treasure Coast.



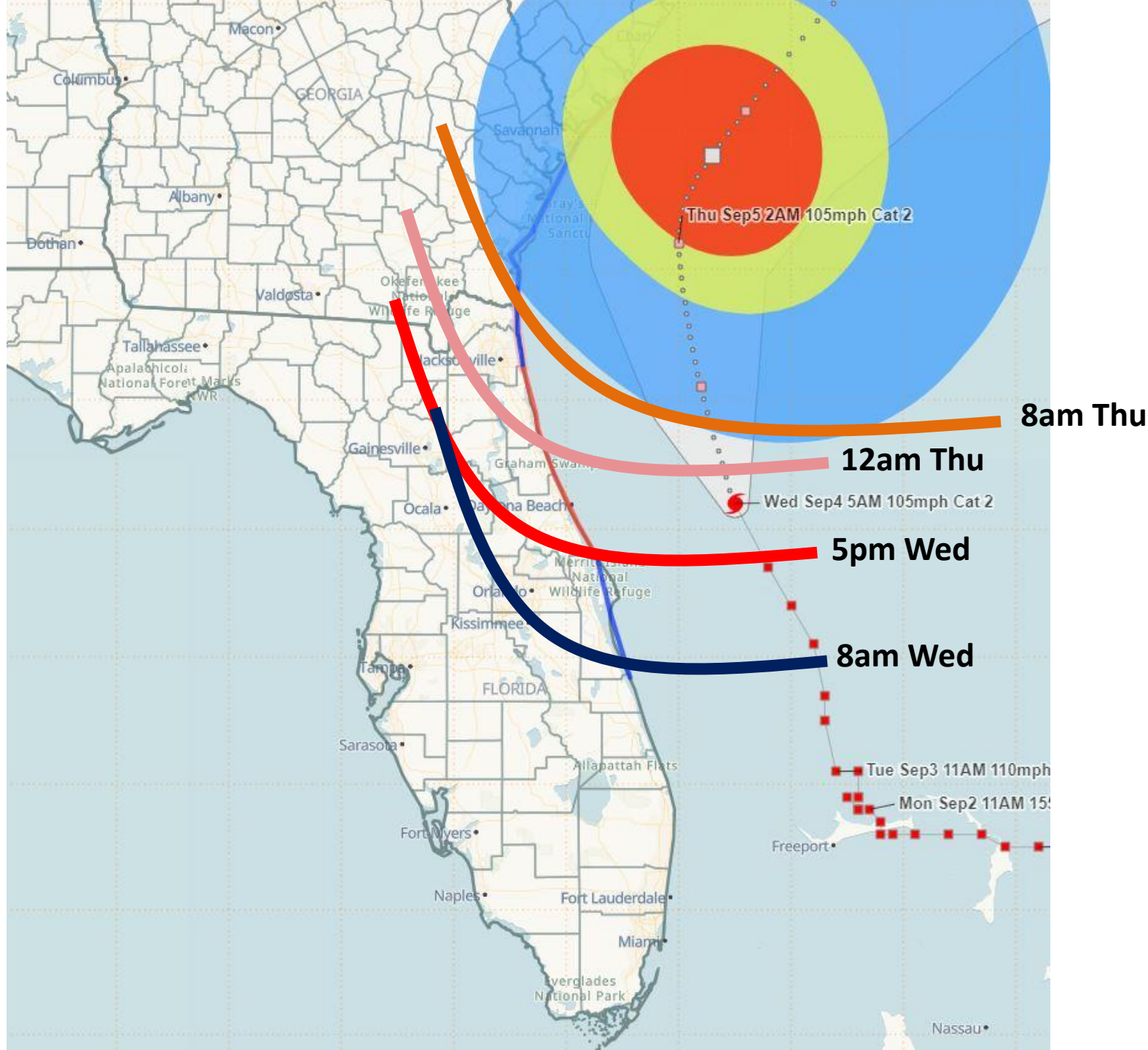


Hurricane Warning in effect for St. Johns, Flagler, and coastal Volusia

Hurricane Watch for coastal Nassau and coastal Duval

Tropical Storm Warning for Nassau, Duval, Clay, Putnam, eastern Marion, Lake, inland Volusia, Seminole, Orange, and Brevard Counties

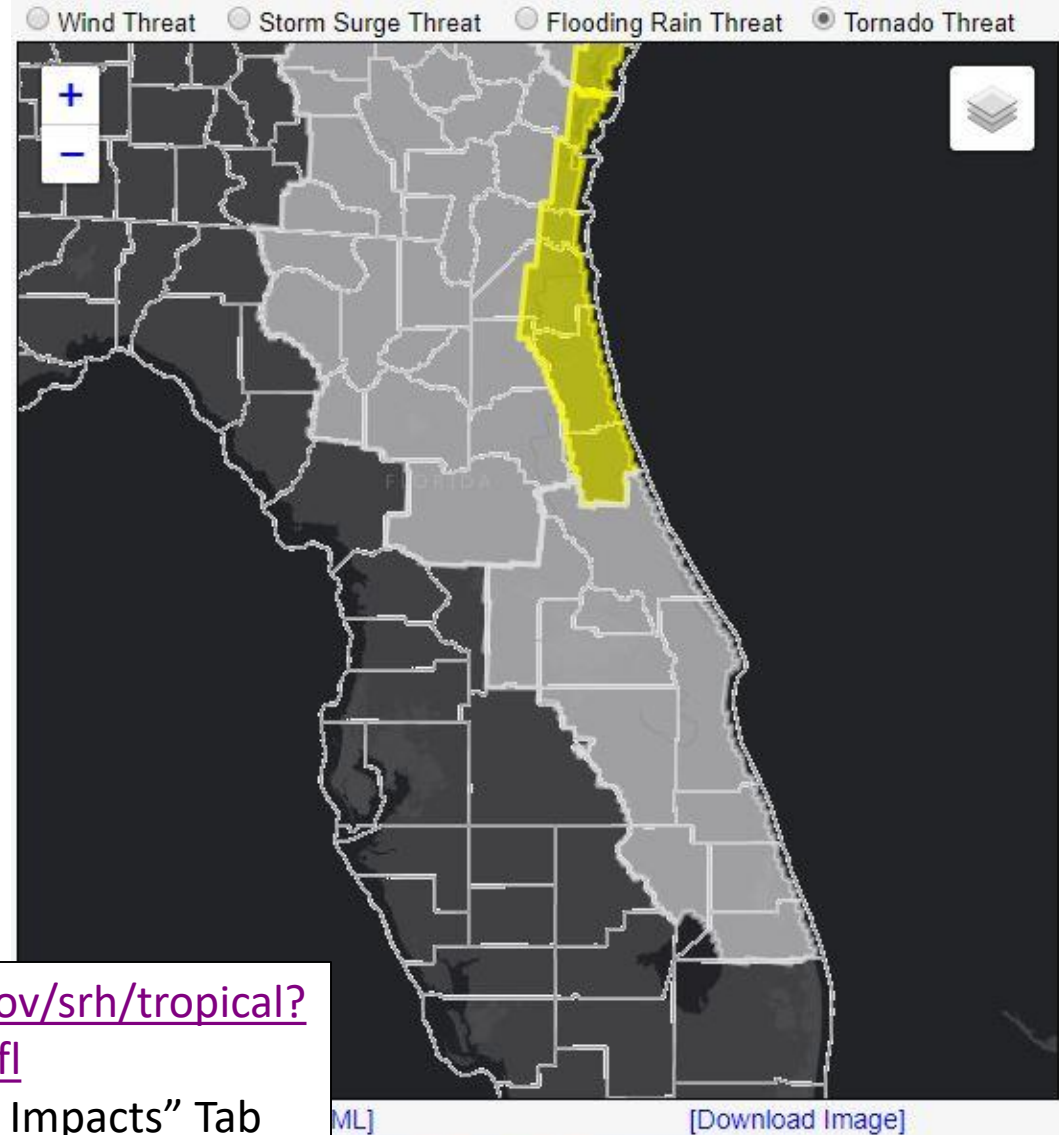
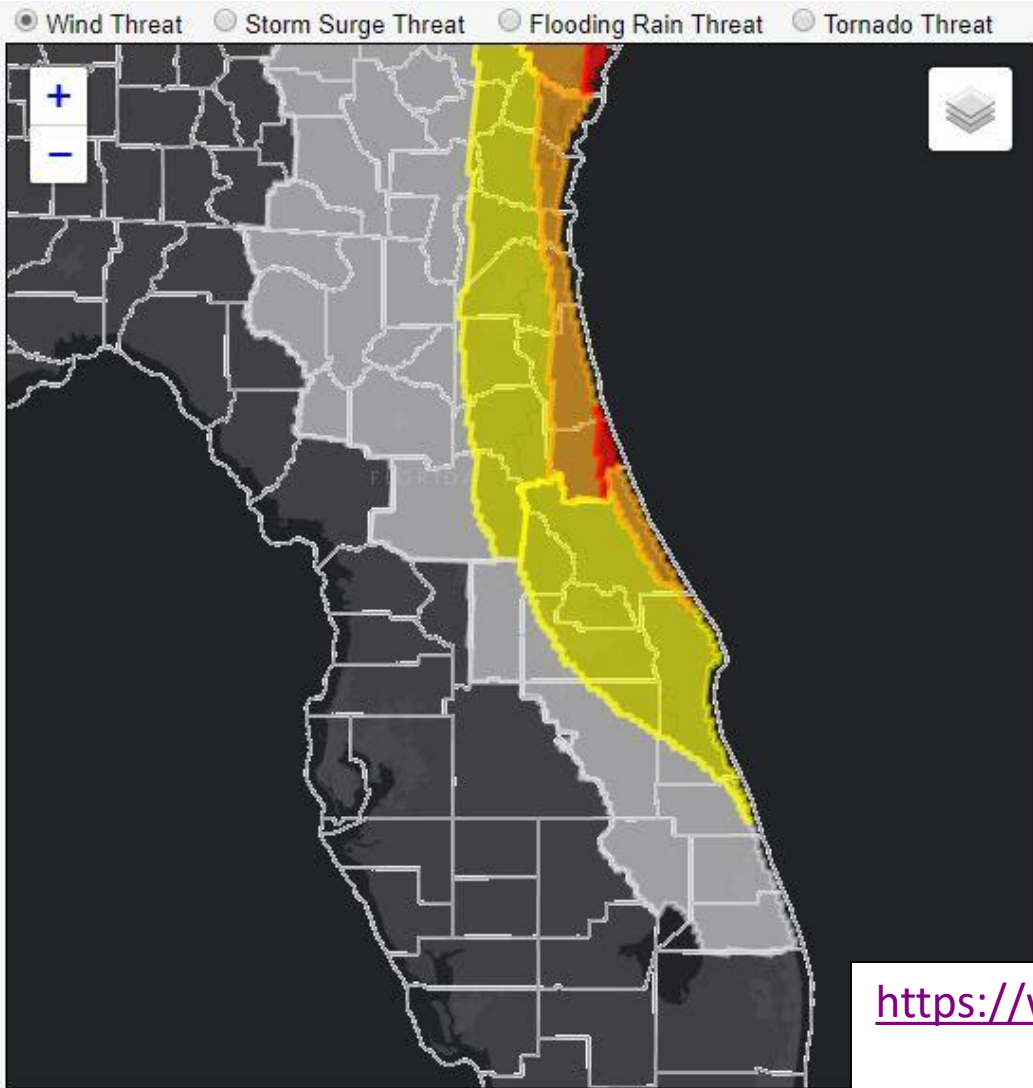
Tropical Storm Warning
Hurricane Warning



Estimates of the Ending of Tropical Storm Force Winds

Note: Assumes a perfect forecast. Winds will come in intermittent bands.

Conditions should improve for the Space Coast this afternoon and for Northeast Florida after sunrise tomorrow.



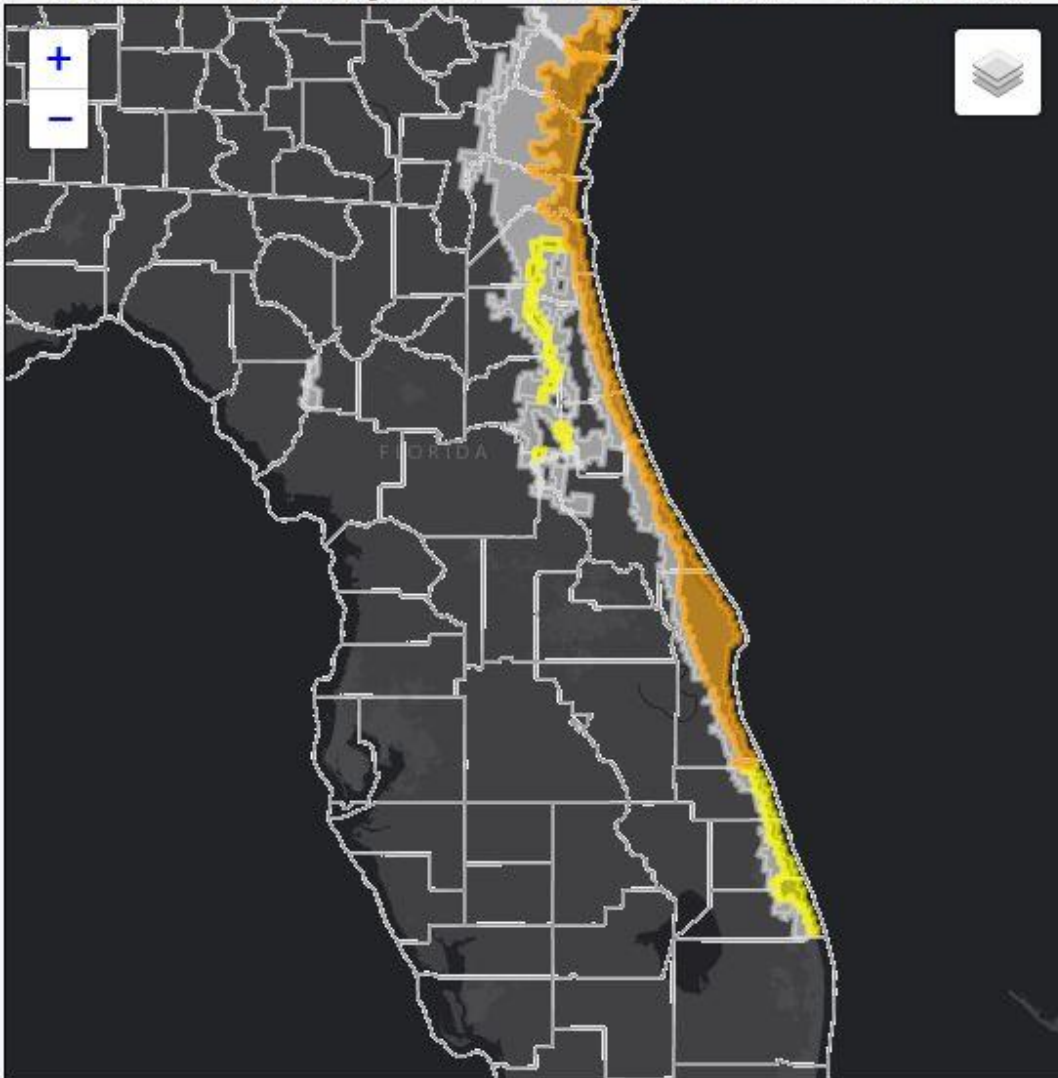
<https://www.weather.gov/srh/tropical?office=mfl>

Click on “Threats and Impacts” Tab

Wind Threat
Potential for wind greater than 110 mph
Potential for wind 74 to 110 mph
Potential for wind 58 to 73 mph
Potential for wind 39 to 57 mph
Wind less than 39 mph

Tornado Threat
Potential for outbreak of tornadoes
Potential for many tornadoes
Potential for several tornadoes
Potential for a few tornadoes
Tornadoes not expected

☐ Wind Threat ☒ Storm Surge Threat ☐ Flooding Rain Threat ☐ Tornado Threat

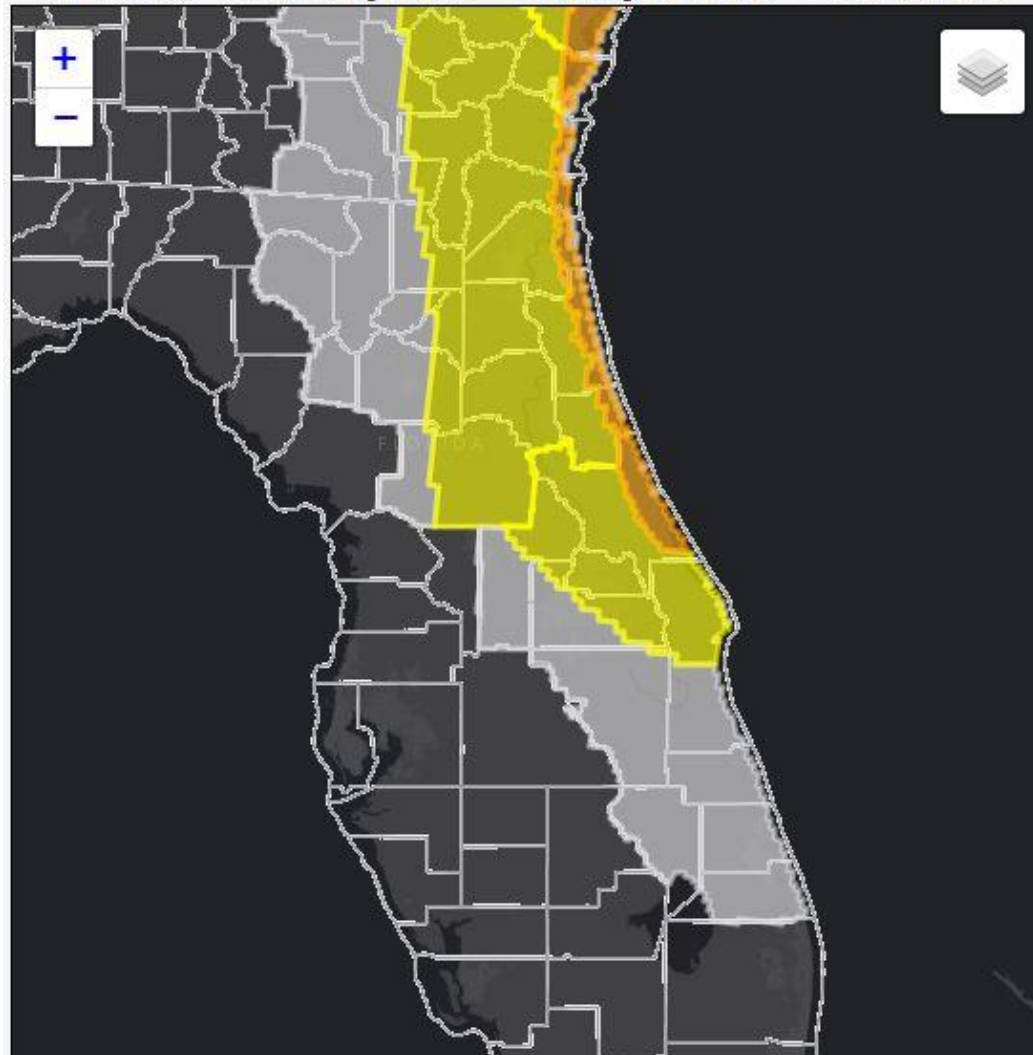


[\[Download KML\]](#)

[\[Download Image\]](#)

Storm Surge Threat
Potential for storm surge flooding greater than 9 ft above ground
Potential for storm surge flooding greater than 6 ft above ground
Potential for storm surge flooding greater than 3 ft above ground
Potential for storm surge flooding greater than 1 ft above ground
Little to no storm surge flooding

☐ Wind Threat ☐ Storm Surge Threat ☒ Flooding Rain Threat ☐ Tornado Threat



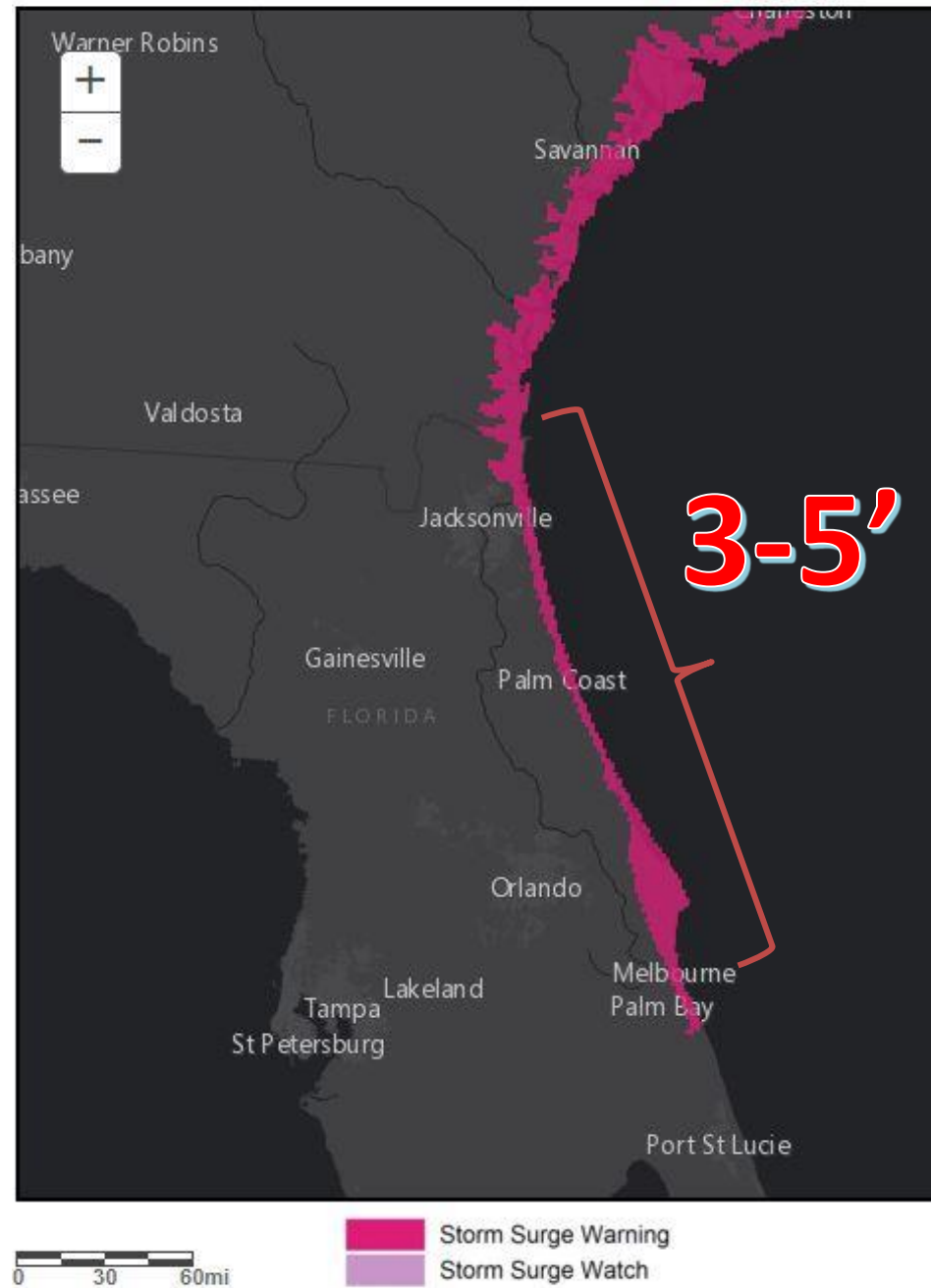
[\[Download KML\]](#)

[\[Download Image\]](#)

Flooding Rain Threat
Potential for extreme flooding rain
Potential for major flooding rain
Potential for moderate flooding rain
Potential for localized flooding rain
Little to no potential for flooding rain

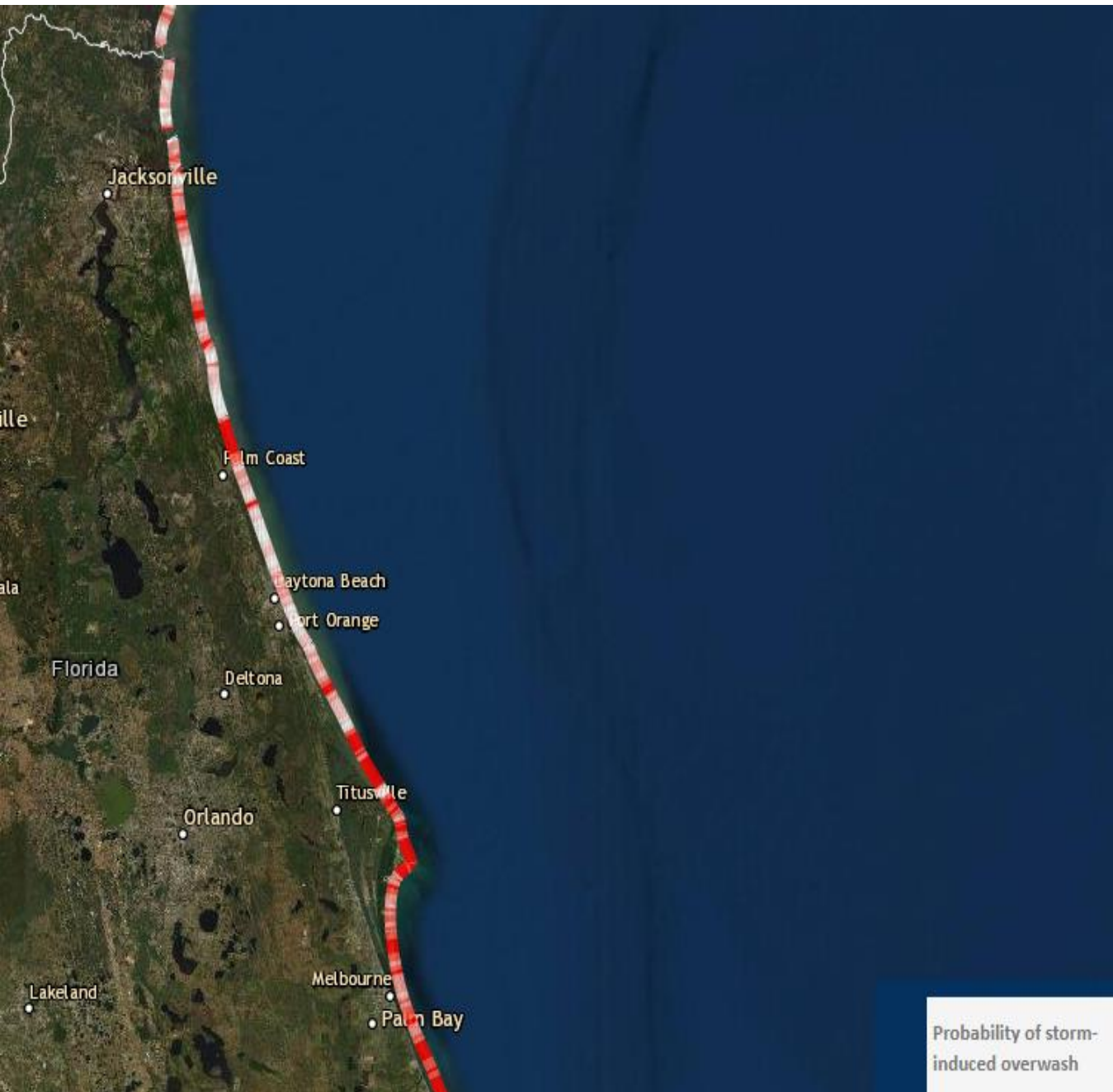
Storm Surge Forecasts Watches/Warnings

- Storm Surge Warning
 - Nassau, Duval, St. Johns, Flagler, Volusia, and Brevard Counties
- Coastal Flood Warning (St. Johns River and Tributaries)
 - Inland Duval, Clay, Inland St. Johns, Putnam, and Inland Flagler Counties
 - 2-3' of inundation possible



https://www.nhc.noaa.gov/refresh/graphics_at5+shtml/155815.shtml?inundation#contents

Interactive P-Surge Inundation Map



USGS Modeling

- Probability of overwash, or the likelihood that wave runup and storm surge will overtop the dune crest, during Hurricane Dorian
- Potential overwash spots:
 - Patrick AFB & Cape Canaveral (Brevard Co)
 - Flagler Beach, Palm Coast, Marineland (Flagler Co)
 - St. Augustine Inlet, Villano Beach, Ponte Vedra Beach (St. Johns Co)
 - Jacksonville Beach, Neptune Beach, Little Talbot Island (Duval Co)

Rainfall Forecast Next 24 Hours

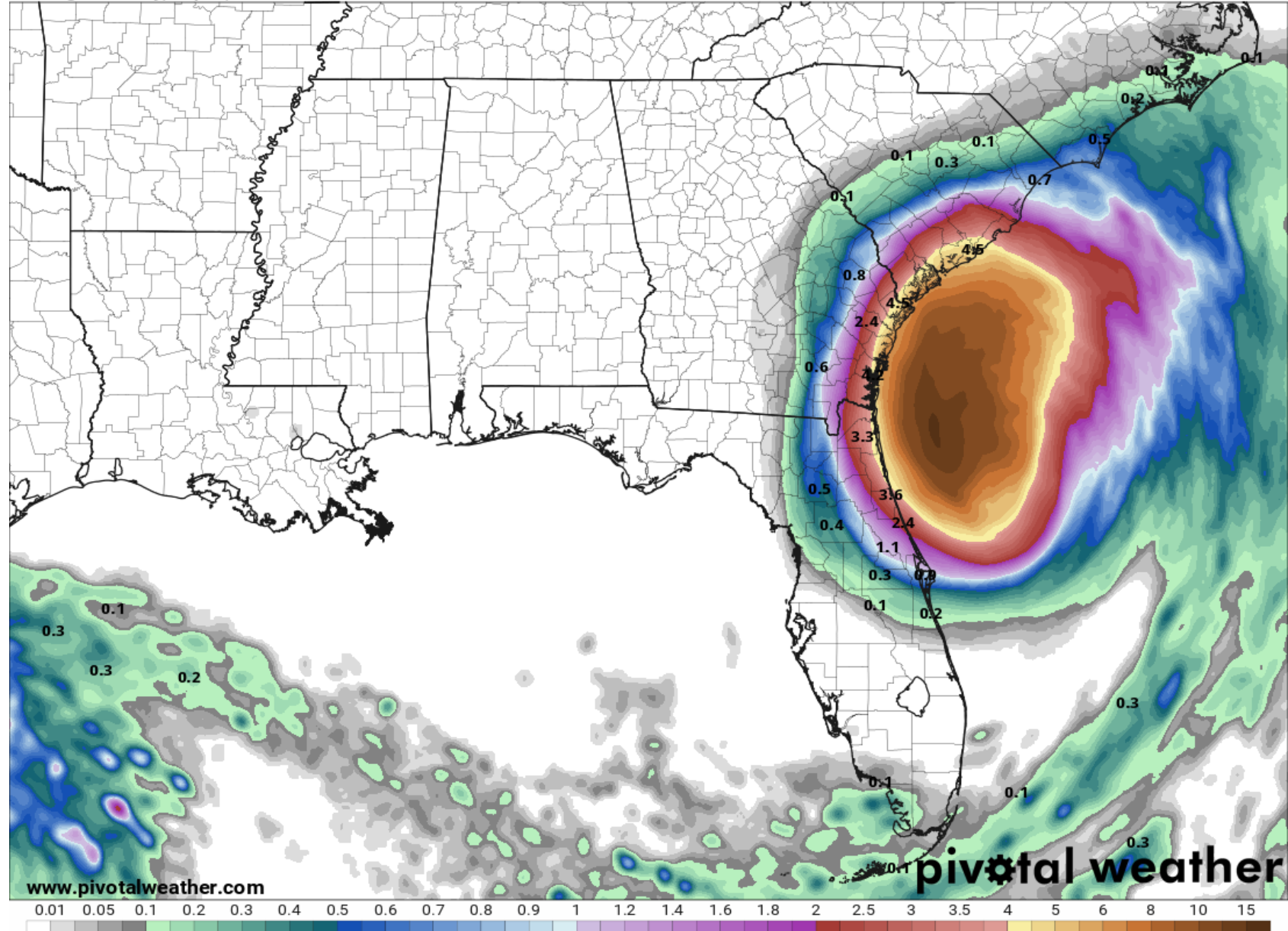
Dorian is forecast to bring 2-4" of rain to Northeast Florida through the next 24 hours.

Given the recent stretch of wet weather, these rainfall amounts could still create urban and minor river flooding along the East Coast.

The highest rainfall totals will be near the coast in Northeast Florida.




24-Hour Precipitation (in)
Ending Thursday, Sep. 5, 2019 at 8 a.m. EDT

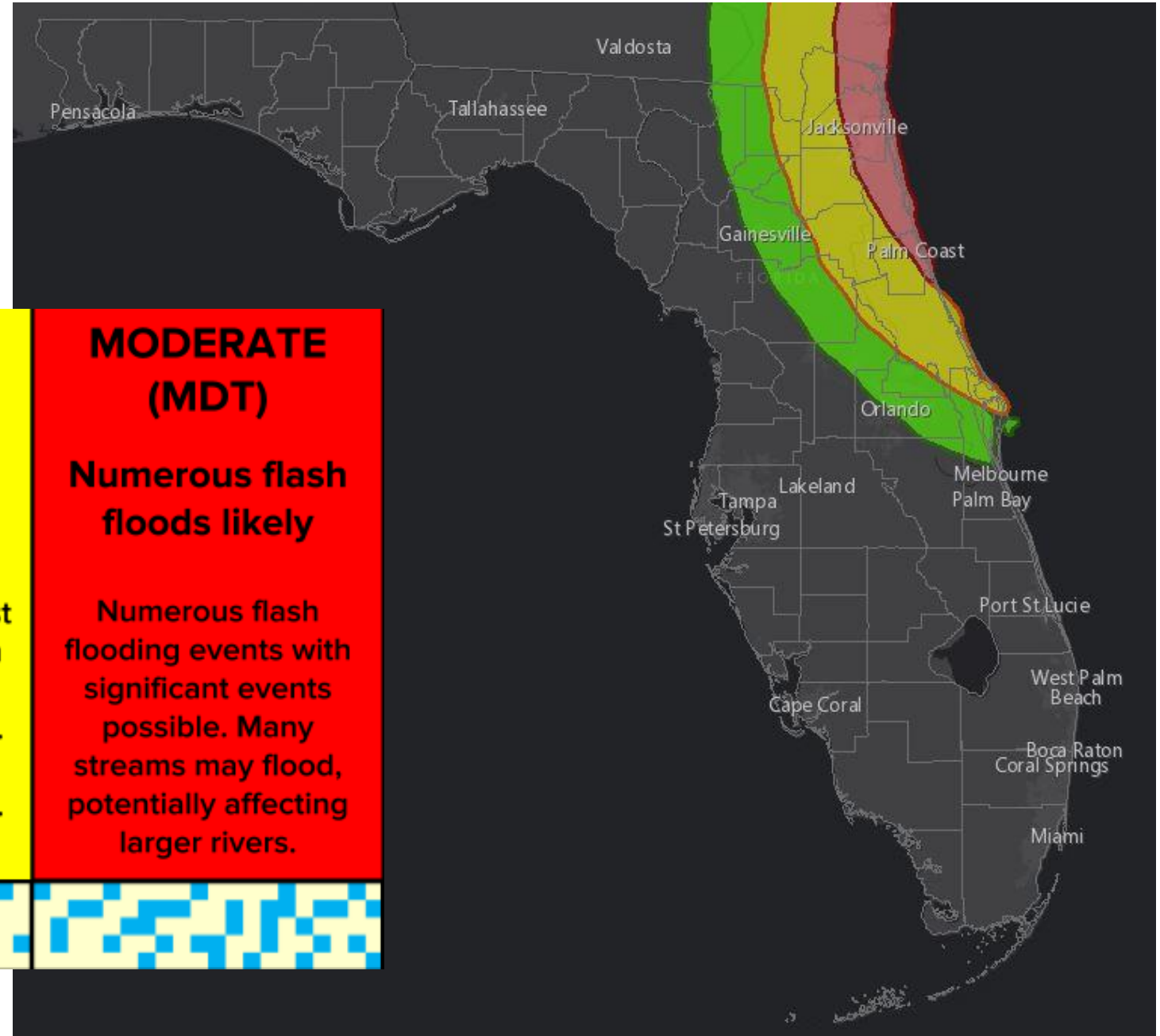
Init: Wed 2019-09-04 12z WPC



Flash Flood Outlook Today

Flash Flood Watch through late tonight for Nassau, Duval, St. Johns, and Flagler County.

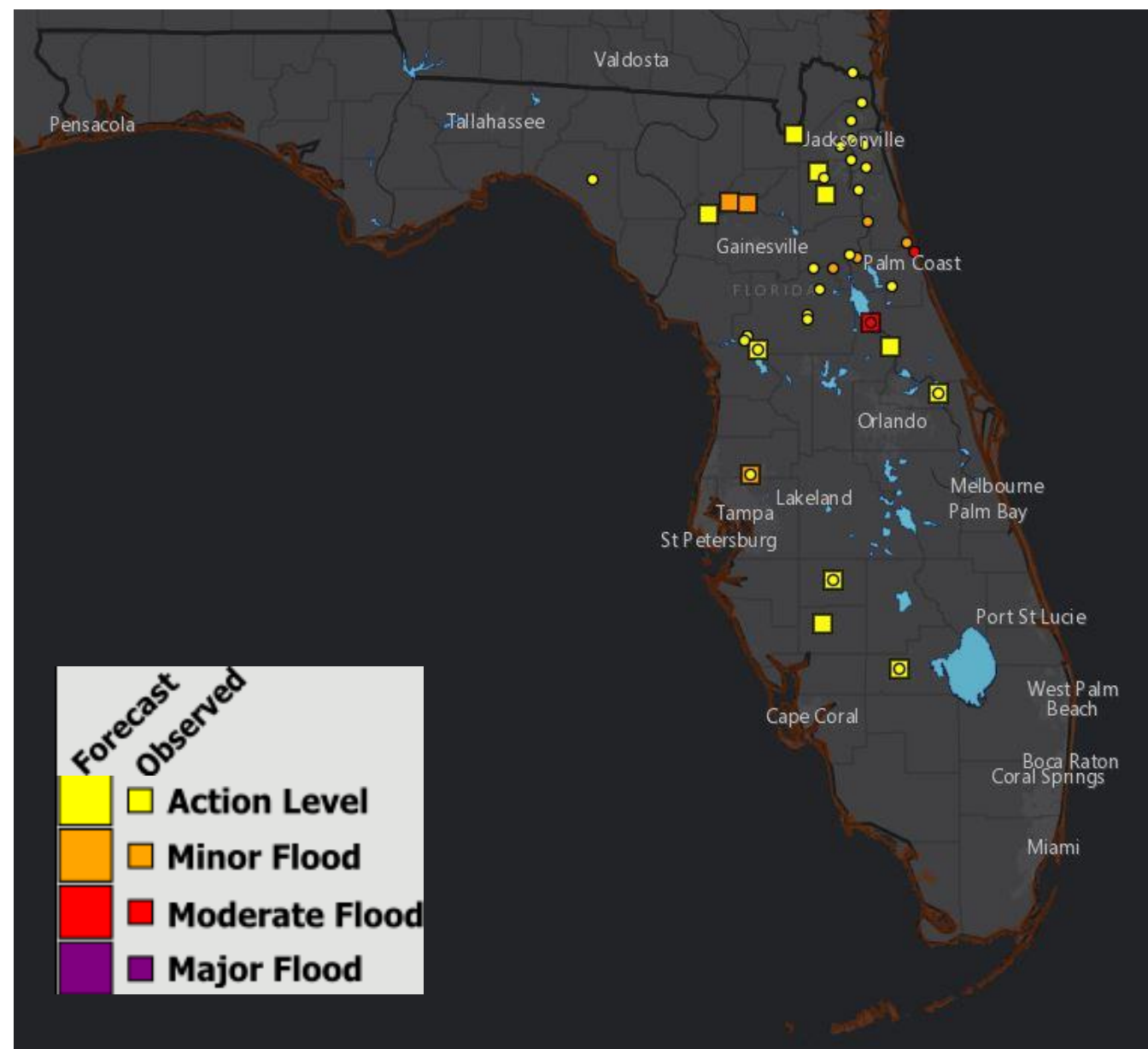
MARGINAL (MRGL)	SLIGHT (SLGT)	MODERATE (MDT)
Isolated flash floods possible	Scattered flash floods possible	Numerous flash floods likely
Localized and primarily affecting places that can experience rapid runoff with heavy rainfall.	Mainly localized. Most vulnerable are urban areas, roads, small streams and washes. Isolated significant flash floods possible.	Numerous flash flooding events with significant events possible. Many streams may flood, potentially affecting larger rivers.
		



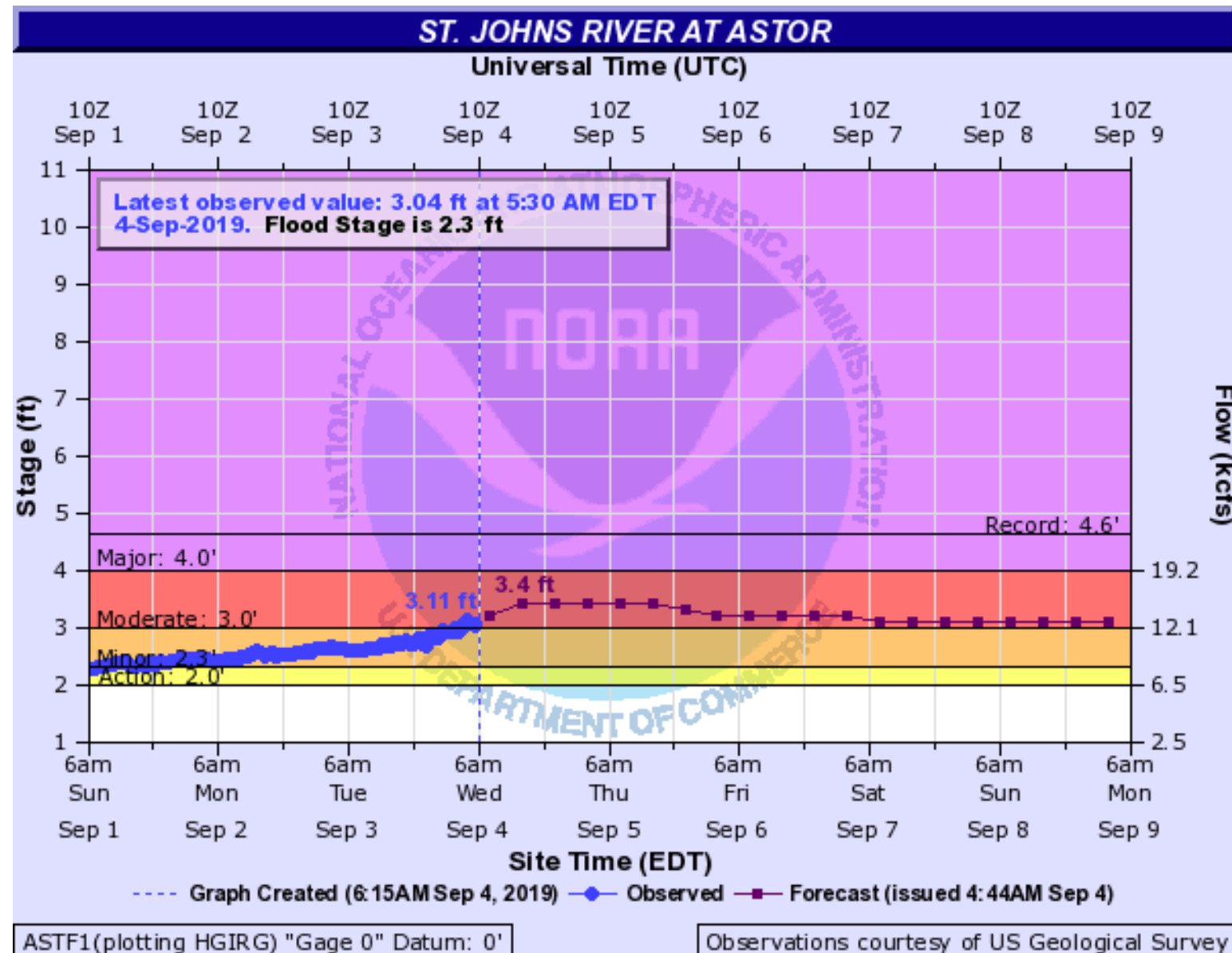
River Observations/Forecasts Across the Peninsula

Rivers Currently in or Forecast to Reach Flood Stage:

- [Santa Fe River at Worthington Springs](#)
- [Santa Fe River at O'Leno State Park](#)
- [Santa Fe River near Fort White](#)
- [Cypress Creek at Worthington Gardens](#)
- [St. Johns River above Lake Harney](#)
- [St. Johns River at Astor](#)
- [St. Johns River at Racy Point](#)
- [St. Johns River at Shands Bridge](#)
- [Ocklawaha River at Rodman Dam](#)
- [Dunns Creek near Satsuma](#)

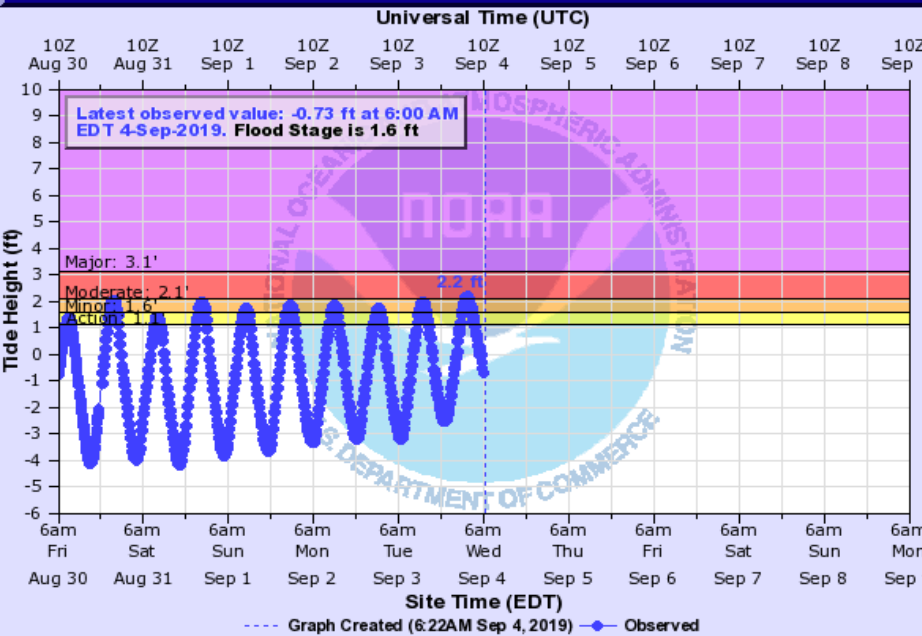


St. Johns River at Astor – Moderate Flooding

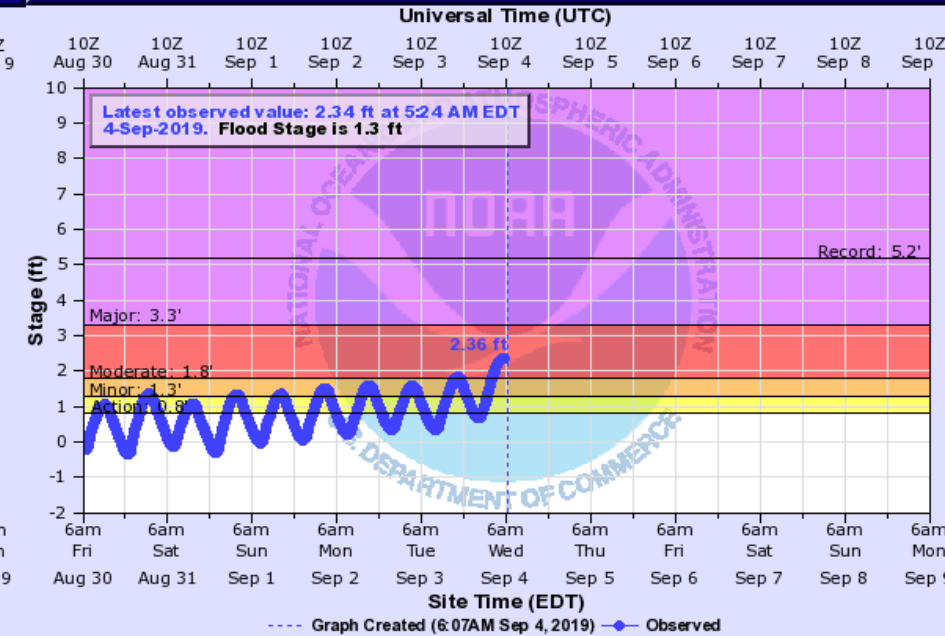


- **3.5 feet:** Many yards and streets along the river, and with canals flooded, water enters the first floor of low lying homes. Flooding to docks and yards at condominiums on Juno Trail and docks at Astor Bridge Marina. Roads flooded in South Moon Fish Camp and starting to move over the sea wall at Blair's Jungle Den.
- **3 feet:** Moderate flooding, with water covering yards and further encroaching on many low lying homes near the river. Flooding of many yards and low lying roads near the river.
- **2.8 feet:** Docks and boat ramps covered at South Moon Fish Camp and approaching sea wall at Blair's Jungle Den.
- **2.3 feet:** Minor flooding of low lying streets and yards north of Fox Road on Lake County side of Astor, and from River Road northward on Volusia side of river. Water begins to cover docks at South Moon Fish Camp.
- **2 feet:** Water begins to move into yards and cover boat ramps in low lying areas along the river.

TOLOMATO RIVER AT ST AUGUSTINE (IN MHHW)

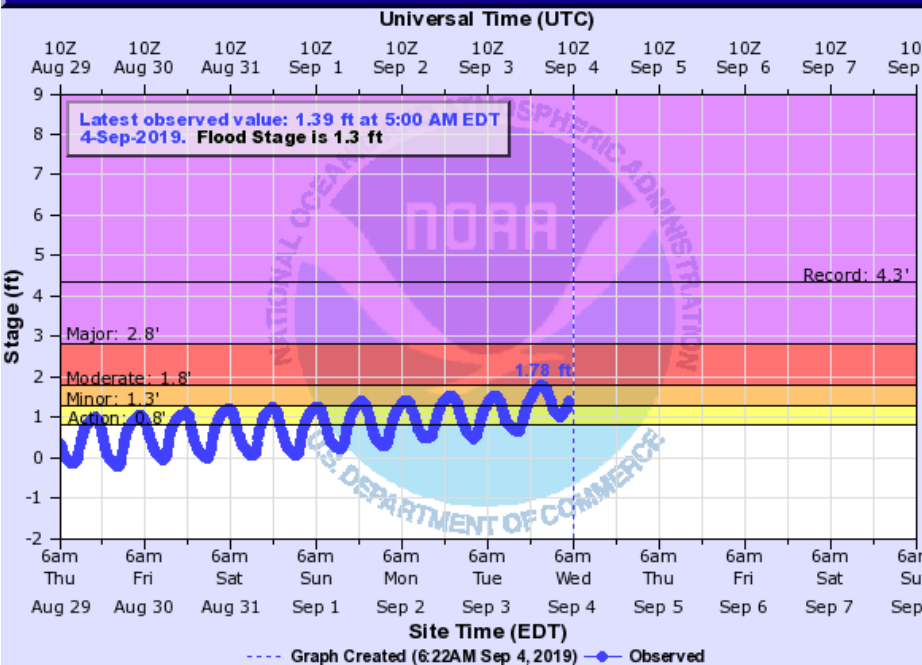


MATANZAS RIVER AT BINGS LANDING (IN MHHW)

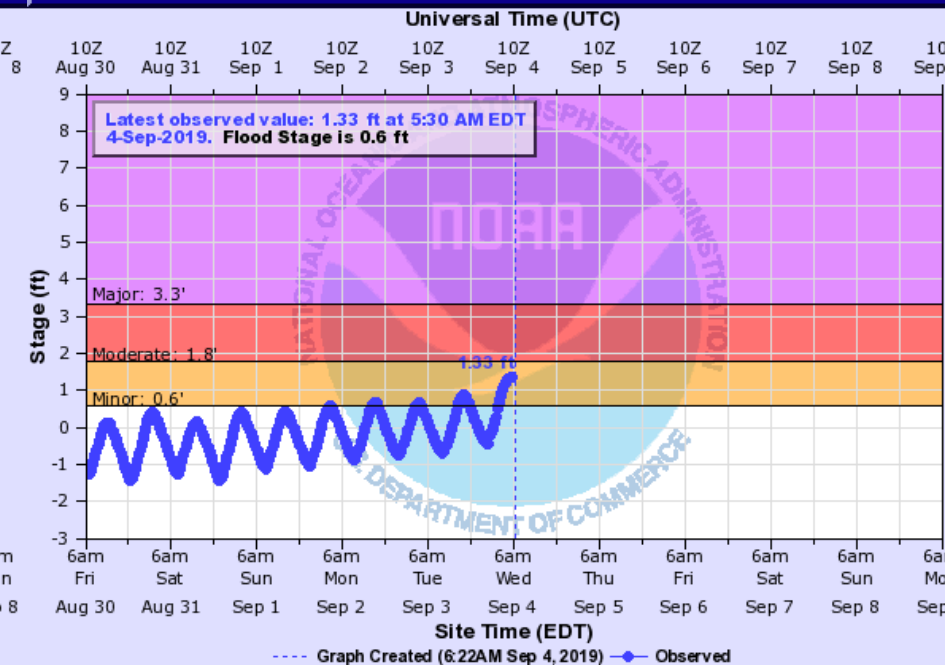


Minor to moderate coastal flooding is occurring along the East Coast. These levels will likely peak at high tide this afternoon and early tonight.

DUNNS CREEK NEAR SATSUMA (IN MHHW)



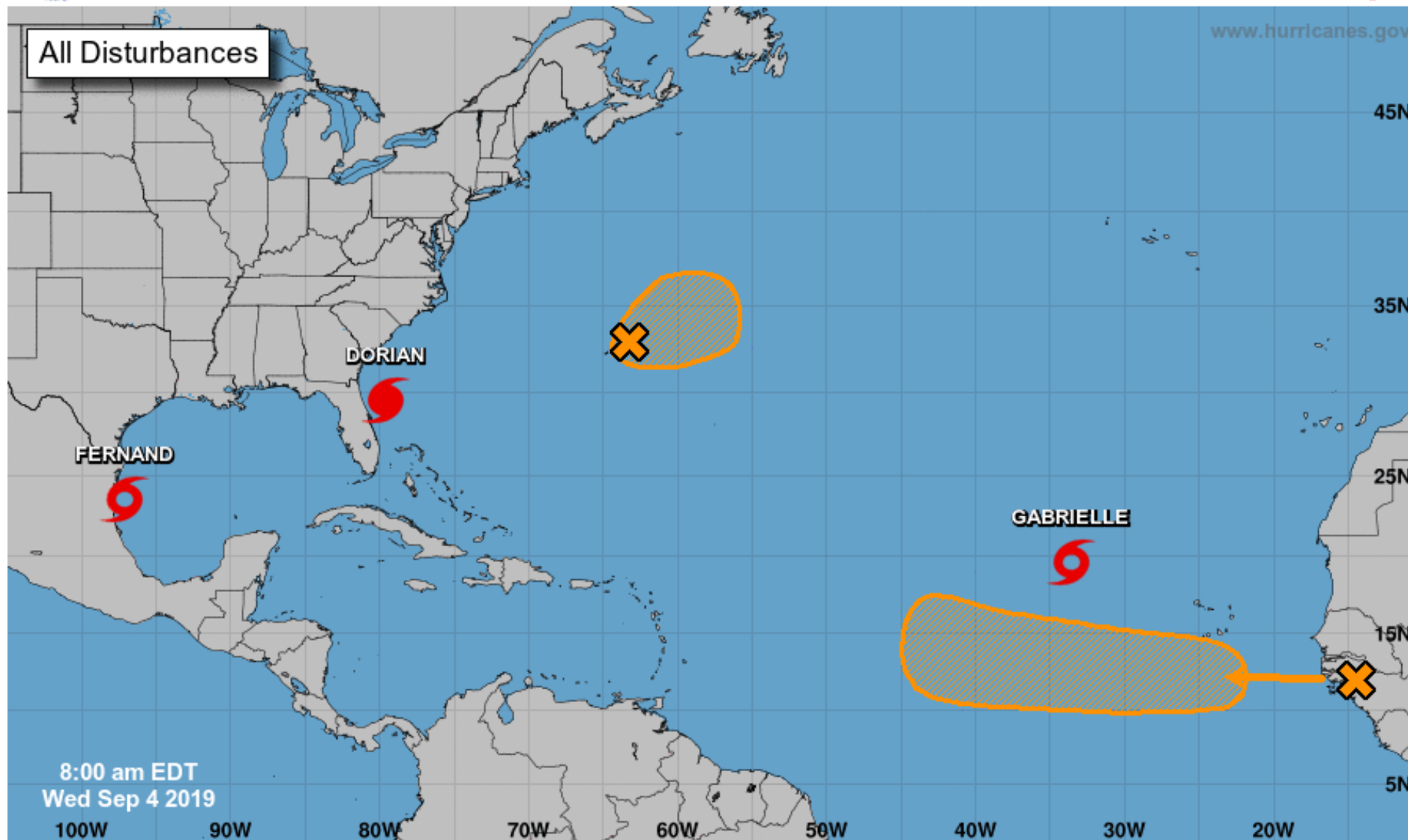
PELLICER CREEK NEAR ESPANOLA (IN MHHW)





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



Current Disturbances and Five-Day Cyclone Formation Chance:

✕ < 40%

✕ 40-60%

✕ > 60%

Tropical or Sub-Tropical Cyclone:

○ Depression

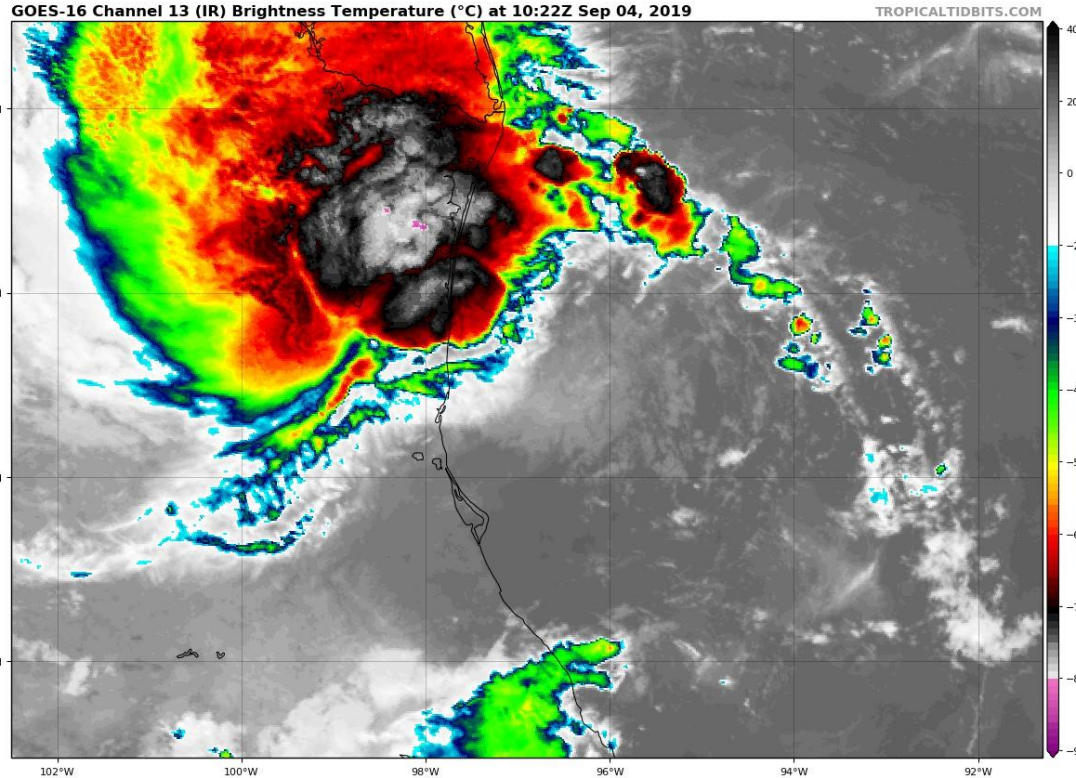
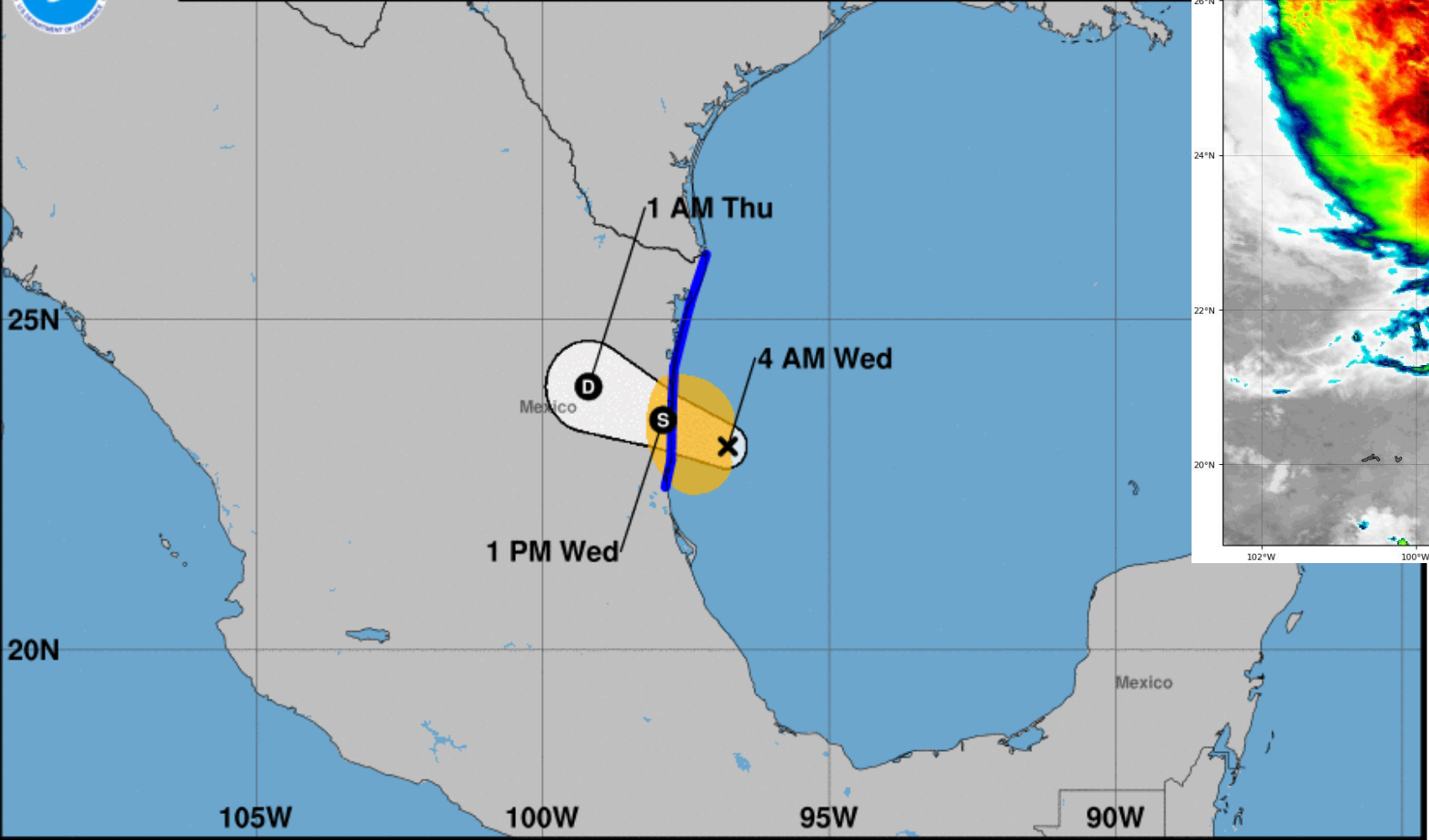
⤿ Storm

⤿ Hurricane

⊗ Post-Tropical Cyclone or Remnants

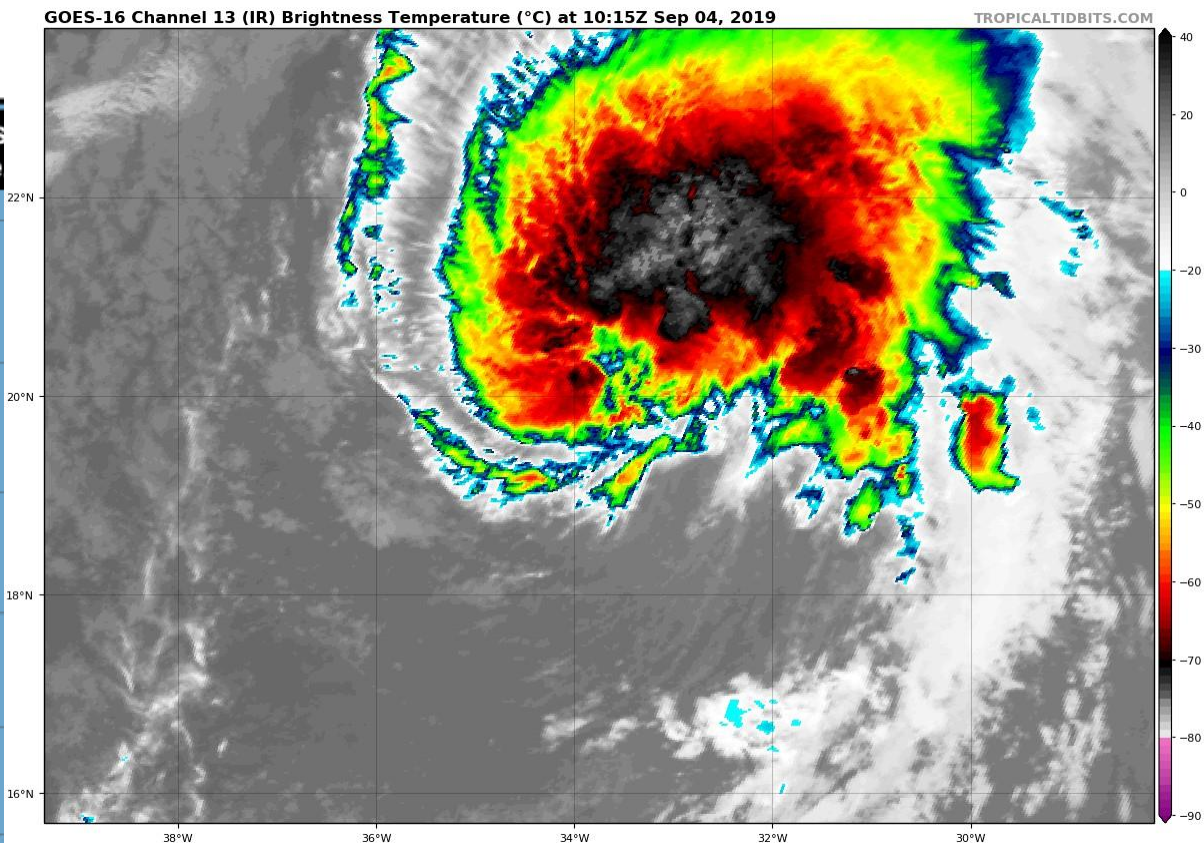
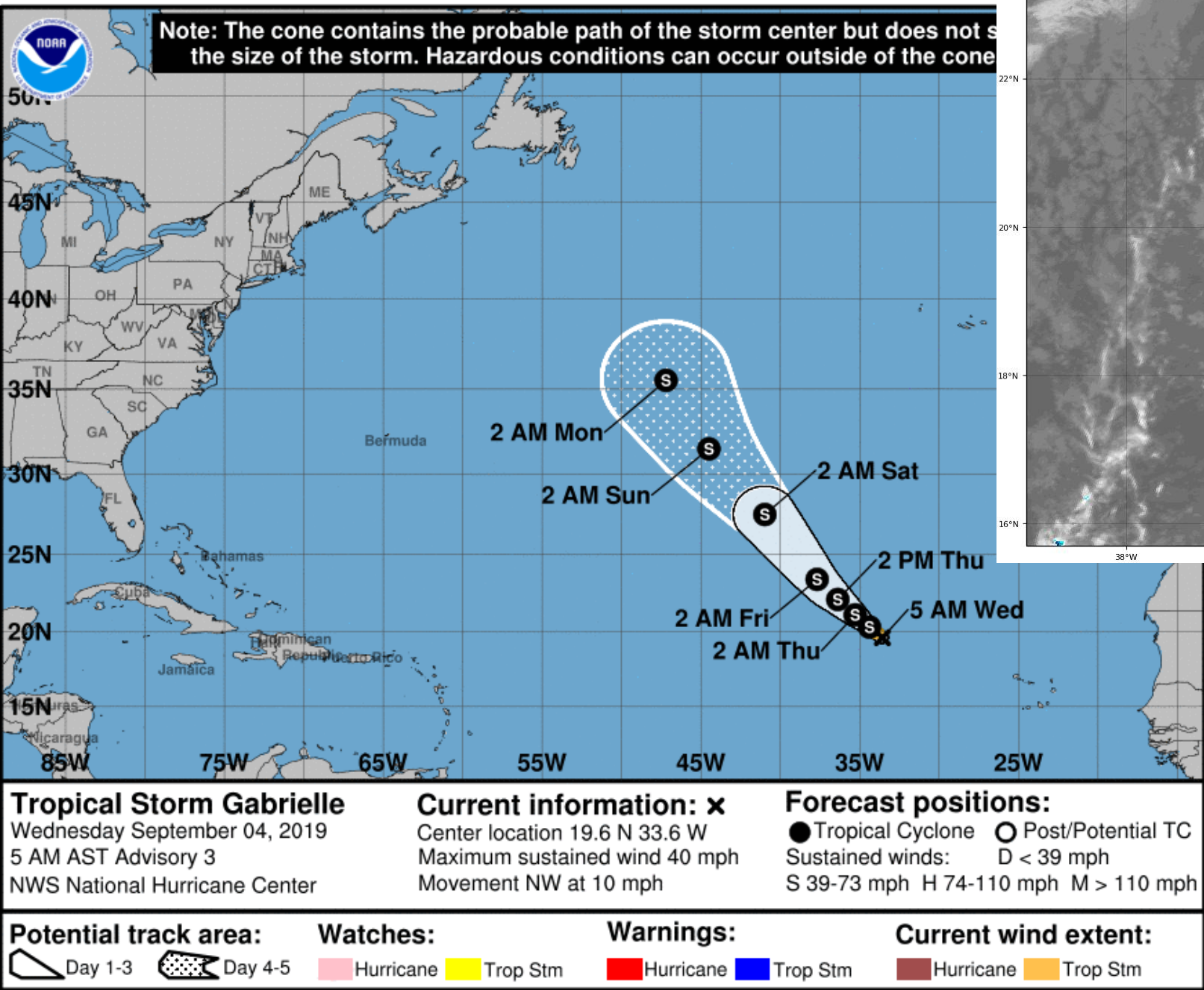


Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.



- Tropical Storm Fernand developed yesterday and will make landfall in Mexico later today

Tropical Storm Fernand Wednesday September 04, 2019 4 AM CDT Advisory 5 NWS National Hurricane Center	Current information: X Center location 23.1 N 96.8 W Maximum sustained wind 50 mph Movement W at 6 mph	Forecast positions: ● Tropical Cyclone ○ Post/Potential TC Sustained winds: D < 39 mph S 39-73 mph H 74-110 mph M > 110 mph	
Potential track area: Day 1-3 (solid line) Day 4-5 (dotted line)	Watches: Hurricane (pink) Trop Stm (yellow)	Warnings: Hurricane (red) Trop Stm (blue)	Current wind extent: Hurricane (brown) Trop Stm (orange)

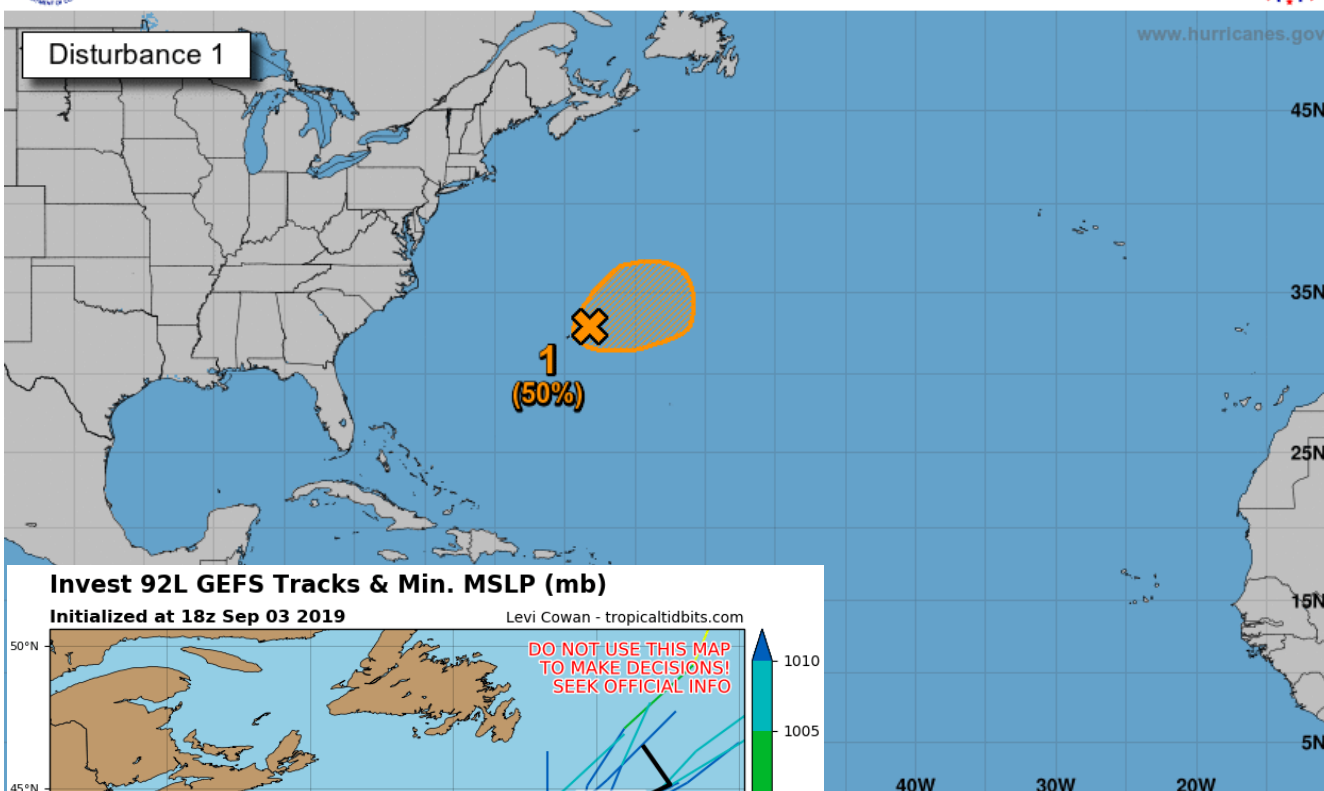


- Tropical Storm Gabrielle developed overnight and will move into the North Atlantic, away from land.



Five-Day Graphical Tropical Weather Outlook

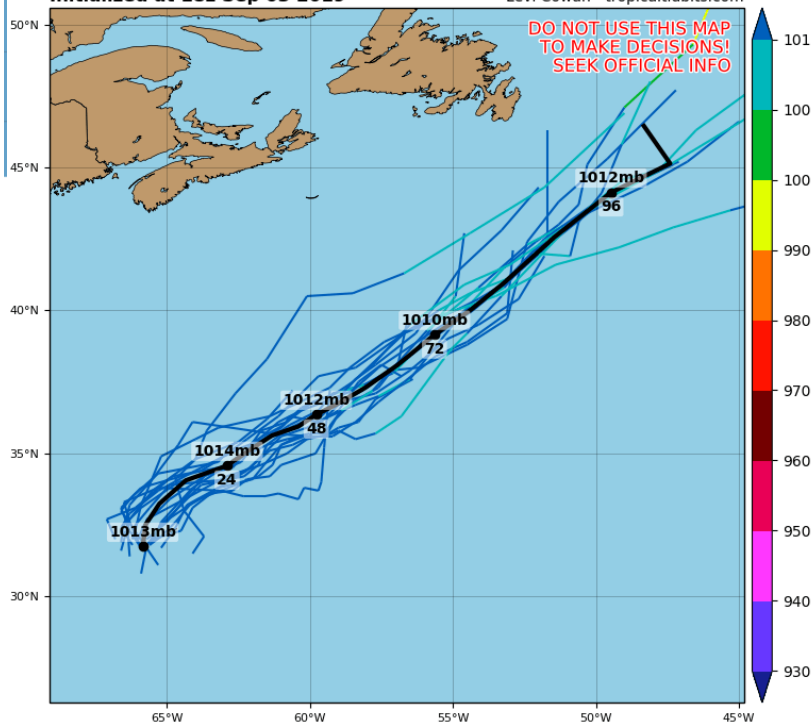
National Hurricane Center Miami, Florida



Invest 92L GEFS Tracks & Min. MSLP (mb)

Initialized at 18z Sep 03 2019

Levi Cowan - tropicaltidbits.com



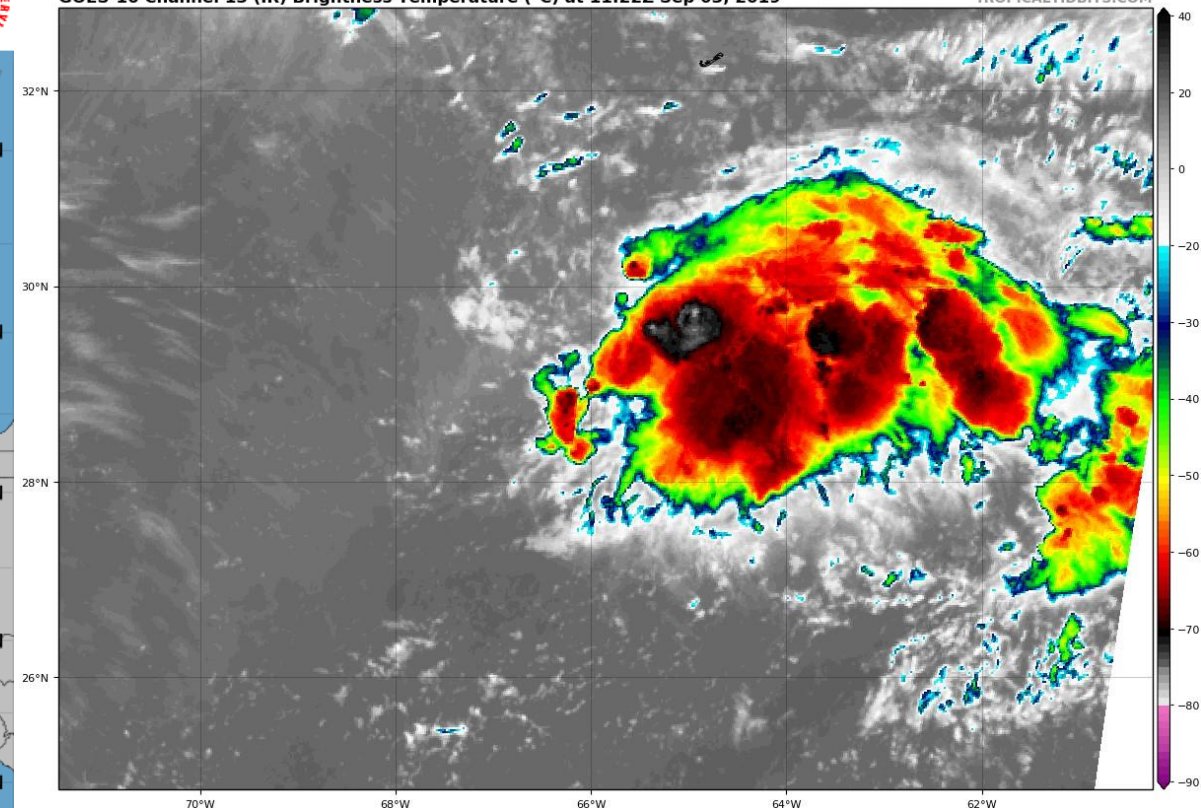
✕ < 40% ✕ 40-60% ✕ > 60%

🌀 Storm 🌀 Hurricane

nants

GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 11:22Z Sep 03, 2019

TROPICALTIDBITS.COM



Invest 92L is still rather disorganized. There is still a small window of opportunity for development within the next 48 hours before conditions become unfavorable and a frontal system moves it quickly northeast to the cold waters of the North Atlantic.

* **Formation chance through 48 hours...medium...50 percent.**

* **Formation chance through 5 days...medium...50 percent.**

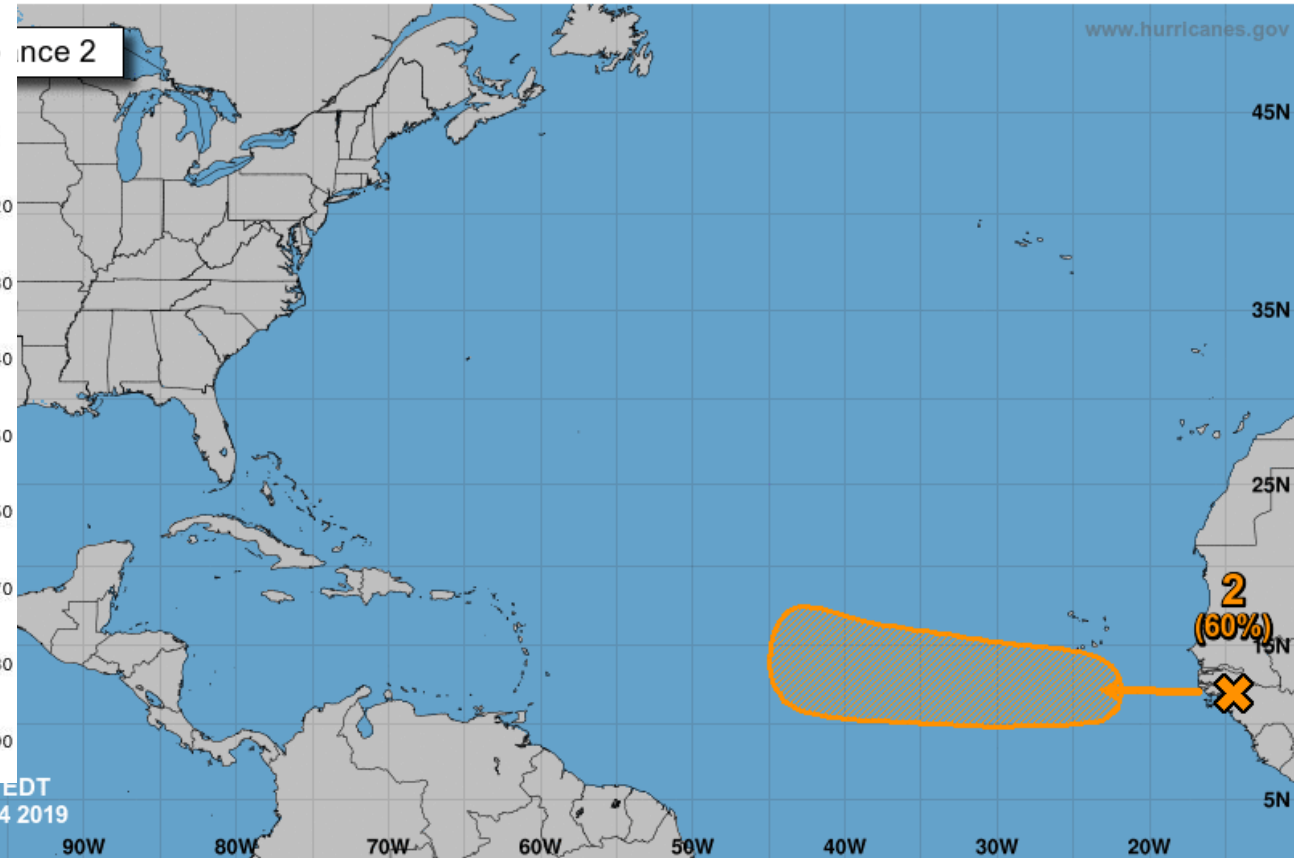
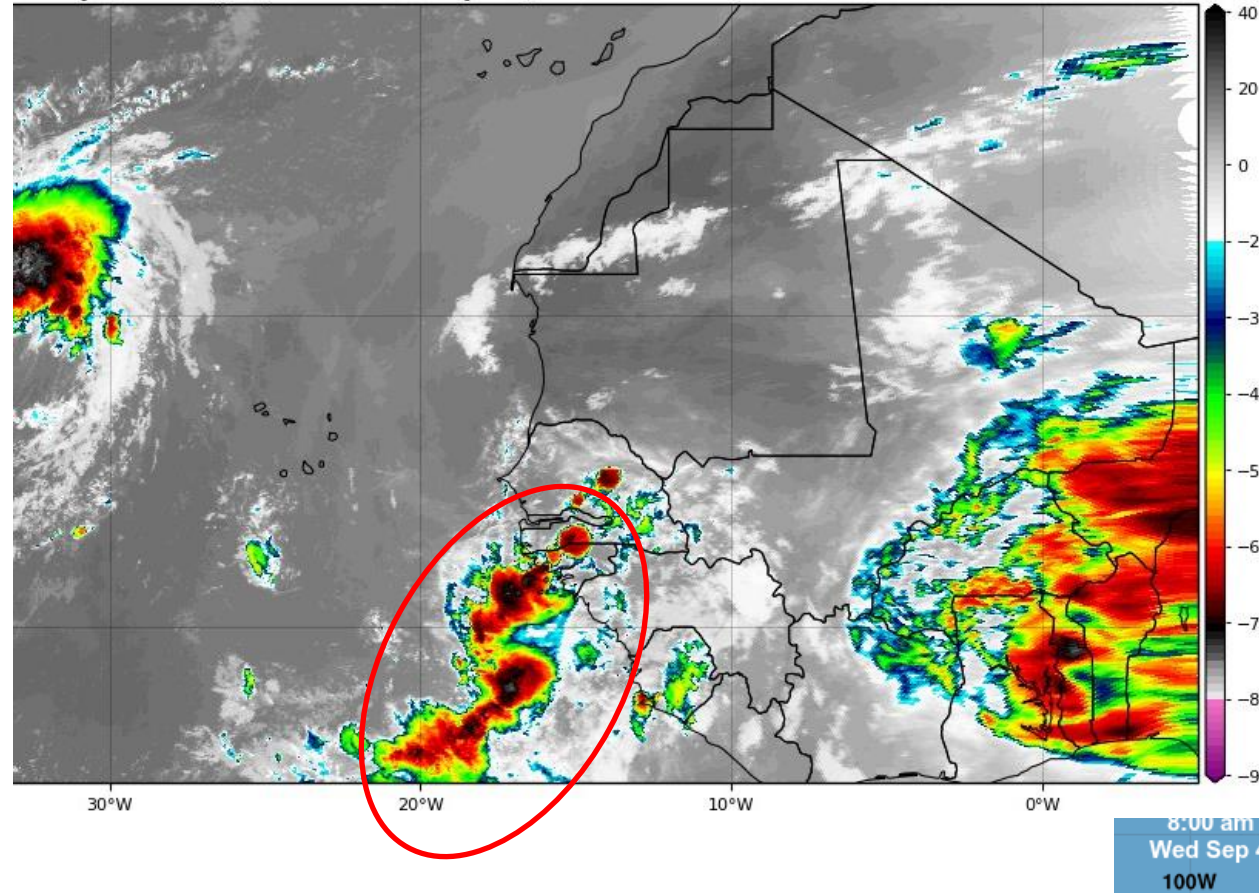
Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida

www.hurricanes.gov

Temperature (°C) at 10:15Z Sep 04, 2019

TROPICALTIDBITS.COM



Current Disturbances and Five-Day Cyclone Formation Chance:
 Tropical or Sub-Tropical Cyclone:
 ● Depression ● Storm ● Hurricane
 ● Post-Tropical Cyclone or Remnants

✕ < 40% ✕ 40-60% ✕ > 60%

West African Wave: A tropical wave is forecast to emerge over the far eastern tropical Atlantic between Africa and the Cabo Verde Islands in a few days. Models indicate a good potential for development late this week or this weekend. A general westward movement across the eastern and central Atlantic is expected for next week.

* Formation chance through 48 hours...low...near 0 percent.

* **Formation chance through 5 days...medium...60 percent.**

Summary

Hurricane Dorian

- At 8 AM ET Wednesday, the center of Hurricane Dorian was located about 95 miles east of Daytona Beach and continues to parallel the Florida coast. Dorian is moving to the north-northwest at 8mph.
- Hurricane hunters have found that maximum sustained winds are near 105 mph, which is a Category 2 Hurricane. Dorian is forecast to maintain intensity through today.
- Dorian will begin a north and northeast turn tonight and then accelerating towards the Carolinas on Thursday.
- Dorian's wind field is expanding and tropical storm conditions are expected to continue through Wednesday night, with hurricane force gusts possible along the immediate coast of Northeast Florida.
- **Tropical Storm Fernand**: Fernand has maximum sustained winds of 50 mph and is moving to the west at 6 mph. Fernand will make landfall in northeastern Mexico this afternoon.
- **Tropical Storm Gabrielle**: Gabrielle (formerly Tropical Depression Eight) is located several hundred miles northwest of the Cabo Verde Islands with maximum sustained winds of 40 mph. Gabrielle will begin to accelerate to the northwest into the North Atlantic, well away from land.
- **Invest 92L**: An area of low pressure near Bermuda remains disorganized, but still has a small window for possible development as it moves to the northeast into the North Atlantic. It has a 50% (medium) chance of development over the next 48 hours.
- **African Wave**: A tropical wave over western Africa will emerge into the Atlantic later this week. Once it does so, the National Hurricane Center gives it a 60% (medium) chance of development.

Florida Outlook:

- A **Hurricane Warning** is in effect for St. Johns, Flagler, and coastal Volusia County.
- A **Storm Surge Warning** is in effect for Nassau, Duval, St. Johns, Flagler, Volusia, and Brevard County.
- A **Tropical Storm Warning** is in effect for Nassau, Duval, Clay, Putnam, eastern Marion, Lake, inland Volusia, Seminole, and Orange County.
- A **Hurricane Watch** is in effect for coastal Nassau and coastal Duval.
- A **Coastal Flood Warning** is in effect for inland Duval, Clay, Putnam, inland St. Johns, inland Flagler.
- A **Flash Flood Watch** is in effect for Nassau, Duval, St. Johns, and Flagler County until late tonight.
- Damaging winds, storm surge, flash flooding, and isolated tornadoes are all possible with Dorian today and tonight in Northeast Florida.
- Sustained tropical storm force winds are already occurring across coastal East Central Florida, and these will continue to into the overnight hours.
- By Thursday morning, all tropical storm conditions are forecast to have moved out of Florida.
- Storm Surge: Volusia/Brevard County Line FL to Savannah River...3 to 5 ft, Sebastian Inlet FL to Volusia/Brevard County Line FL...2 to 4 ft
- In addition, large battering waves in excess of 10-15' are causing erosion and coastal flooding during high tide.
- Rainfall amounts of 2-6" are expected along the coast of Northeast Florida. This may cause minor flooding issues along with post-landfall river/creek flooding.
- Minor river flooding is ongoing or forecast along parts of the Santa Fe River, Cypress Creek, and the St. Johns River. However, moderate flooding is ongoing at the St. Johns River at Astor.

- Fernand, Gabrielle, and the 2 systems being monitored for development pose no threat to Florida.
- The next names on the 2019 Atlantic storm name list are Humberto and Imelda.

The next tropics packet will be issued Wednesday evening. For the latest information on the tropics, please visit the National Hurricane Center website at www.hurricanes.gov. For the latest flood updates, see the latest products from your local National Weather Service, the [Southeast River Forecast Center](#), and the [Weather Prediction Center](#).



TROPICAL UPDATE



Created by:

Michael Spagnolo, Deputy State Meteorologist

Michael.Spagnolo@em.myflorida.com

State Meteorological Support Unit

Florida Division of Emergency Management

Users wishing to subscribe (approval pending) to this distribution list, register at:

https://public.govdelivery.com/accounts/FLDEM/subscriber/new?topic_id=SERT_Met_Tropics.

Other reports available for subscription are available at:

<https://public.govdelivery.com/accounts/FLDEM/subscriber/new?preferences=true>