

Current Watches and Warnings

A **Hurricane Warning** is in effect for the Florida Keys from Ocean Reef to the Dry Tortugas, including Florida Bay

A **Storm Surge Warning** is in effect for the Florida Keys from Ocean Reef to the Dry Tortugas, including Florida Bay

A **Storm Surge Watch** is in effect for the Florida coast from Golden Beach to Bonita Beach, including Biscayne Bay

A **Hurricane Watch** is in effect for the Florida coast from Deerfield Beach to Bonita Beach

Current Details from the National Hurricane Center (NHC)

COORDINATES: 22.5° north, 79.2° west

LOCATION: 235 miles (380 kilometers) south-southeast of Miami, Florida

MOVEMENT: north at 14 mph (22 kph)

WINDS: 65 mph (100 kph) with gusts to 75 mph (120 kph)

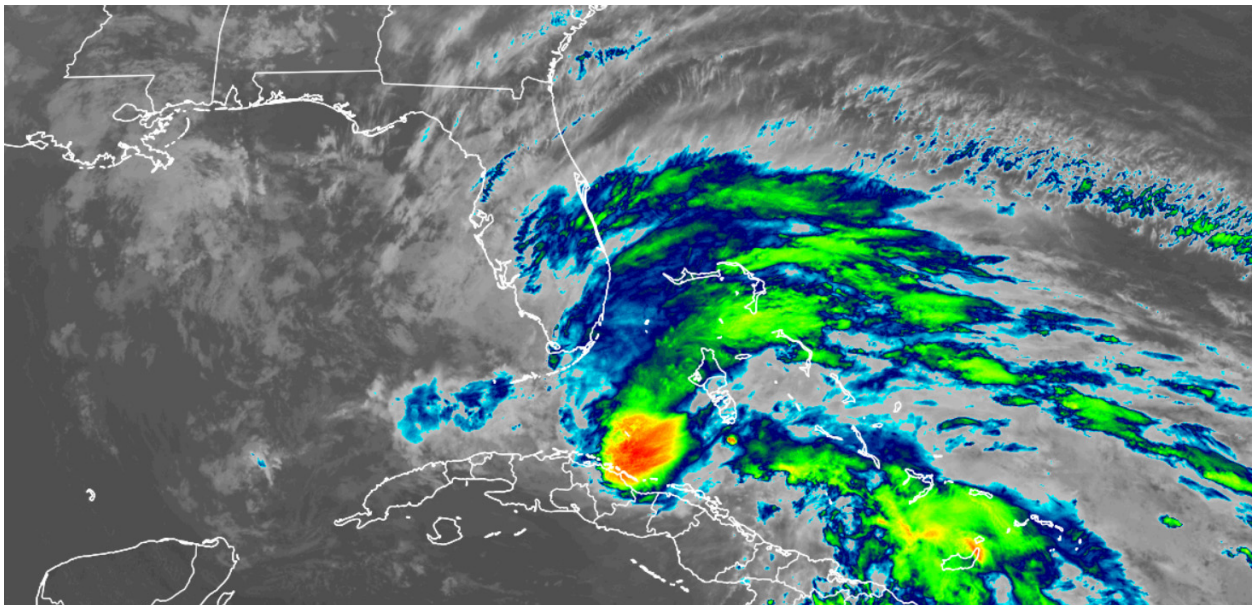
RADIUS OF TROPICAL STORM-FORCE WINDS: 125 miles (205 kilometers)

MINIMUM CENTRAL PRESSURE: 993 millibars

SAFFIR-SIMPSON SCALE RANKING*: Tropical Storm

24-HOUR LANDFALL POTENTIAL: HIGH (United States; Florida Keys)

Latest Satellite Picture



Source: NOAA / NASA / Colorado State University (RAAMB)

Discussion

Tropical Storm Eta, located approximately 235 miles (380 kilometers) south-southeast of Miami, Florida, is currently tracking north at 14 mph (22 kph). Eta remains a storm that continues to be affected by vertical wind shear, though the low-level center has become embedded a little farther into the convective cloud mass. Cuban radar data from Camaguey indicate that Eta's center has moved back over water and is now located just offshore the east-central coast of Cuba. Radar imagery also indicates that an impressive band of deep convection now wraps more than half-way around the center, especially in the western semicircle. Cirrus outflow has expanded in the southern semicircle, and indication that the shear may be somewhat decreasing. However, water vapor satellite imagery still shows a fair amount of dry mid-/upper-level air impinging on the cyclone from the southwest. The NHC has set an initial intensity of 65 mph (100 kph) based on the latest aircraft reconnaissance data.

The initial motion estimate is now towards the north as Eta interacts with a trough that extends east-southeastward across the Gulf of Mexico and into the northwestern Caribbean Sea. The eastern end of the trough is forecast to develop into a cutoff low later today, which will act to turn Eta northwestward by this afternoon, and westward later tonight. The complex interaction between these two features is forecast to continue through 72 hours, resulting in the development of weak steering currents and Eta slowing down and possibly stalling near or just west of the Florida Keys by Day 3 (Tuesday). After that time, there is a wide shift in the forecast model output that. One suite of solutions (including the UKMET) take Eta towards the Yucatan, another (including the ECMWF (European)) slowly northward, and finally northeastward into the eastern Gulf of Mexico (including the GFS (U.S.)). The new NHC track forecast lies to the north of the overall consensus.

Now that Eta's center is back over water, gradual re-strengthening is expected to begin later this afternoon. The models are forecasting vertical wind shear to steadily decrease across the center for the next 48 hours as Eta moves north of the cutoff low and into a small region between the low and an upper-level trough moving eastward across northern Florida. The intensity forecast models do show favorable conditions with this reduced wind shear and warm sea surface temperatures. However, some dry mid-level air may entrain into the inner core and prohibit deep convection. Needless to say, there remains a lot of uncertainty at this time. The NHC has generally stayed conservative with this update though it does bring Eta to a Category 1 hurricane at its peak.

Key Messages from the National Hurricane Center

1. Heavy rainfall from Eta will continue across portions of Cuba, Jamaica, the Bahamas, and southern Florida and spread north into central Florida. This rain may result in significant, life-threatening flash flooding and river flooding in Cuba. Flash and urban flooding will also be possible for Jamaica, the Bahamas and southern Florida, along with potential minor river flooding in central Florida.
2. Tropical storm conditions are expected to continue today in portions of Cuba and the northwestern Bahamas, where Tropical Storm Warnings are in effect.
3. Hurricane conditions are expected in portions of the Florida Keys by early Monday where a Hurricane Warning is now in effect. Damaging tropical-storm-force winds are expected to begin in the Florida Keys by this afternoon. Tropical Storm conditions are also expected and hurricane conditions are possible for portions of the southern Florida peninsula where a Tropical Storm Warning and Hurricane Watch are in effect. Elsewhere across portions of the east and west coasts of the Florida peninsula, the risk of tropical-storm-force winds will extend well away from Eta's center, and Tropical Storm Watches and Warnings are in effect.
4. A dangerous storm surge is expected in portions of the Florida Keys where a Storm Surge Warning is in effect. A Storm Surge Watch is also in effect for portions of the southern coast of the Florida peninsula. Residents in the Storm Surge Warning and Watch areas should follow any advice given by local officials.

Additional Information

RAINFALL: Eta is expected to produce the following rainfall amounts through Friday morning:

Jamaica: An additional 1 to 3 inches (25 to 75 mm), isolated maximum storm totals of 15 inches (380 mm)

Portions of Cuba: an additional 2 to 5 inches (50 to 125 mm), isolated maximum storm totals of 25 inches (635 mm).

The Bahamas: an additional 4 to 8 inches (100 to 200 mm), isolated maximum storm totals of 15 inches (380 mm)

Portions of the central and southern Florida peninsula, including the Keys: 6 to 12 inches (150 to 300 mm), isolated maximum totals of 18 inches (450 mm)

Significant, life-threatening flash and river flooding will be possible in Cuba, along with mudslides in areas of higher terrain. Significant flash and urban flooding will also be possible for Jamaica, the Bahamas, and Southern Florida. Minor river flooding is also possible for Central Florida.

STORM SURGE: A dangerous storm surge will raise water levels by as much as 2 to 4 feet above normal tide levels along the coast of Cuba near and to the east of where the center makes landfall. Near the coast, the surge will be accompanied by large and destructive waves.

The combination of a dangerous storm surge and the tide will cause normally dry areas near the coast to be flooded by rising waters moving inland from the shoreline. The water could reach the following heights above ground somewhere in the indicated areas if the peak surge occurs at the time of high tide:

Bonita Beach, FL to Golden Beach, FL including Biscayne Bay: 2-4 feet

Florida Keys from Ocean Reef to the Dry Tortugas including Florida Bay: 2-4 feet

Golden Beach, FL to Altamaha Sound, GA: 1-2 feet

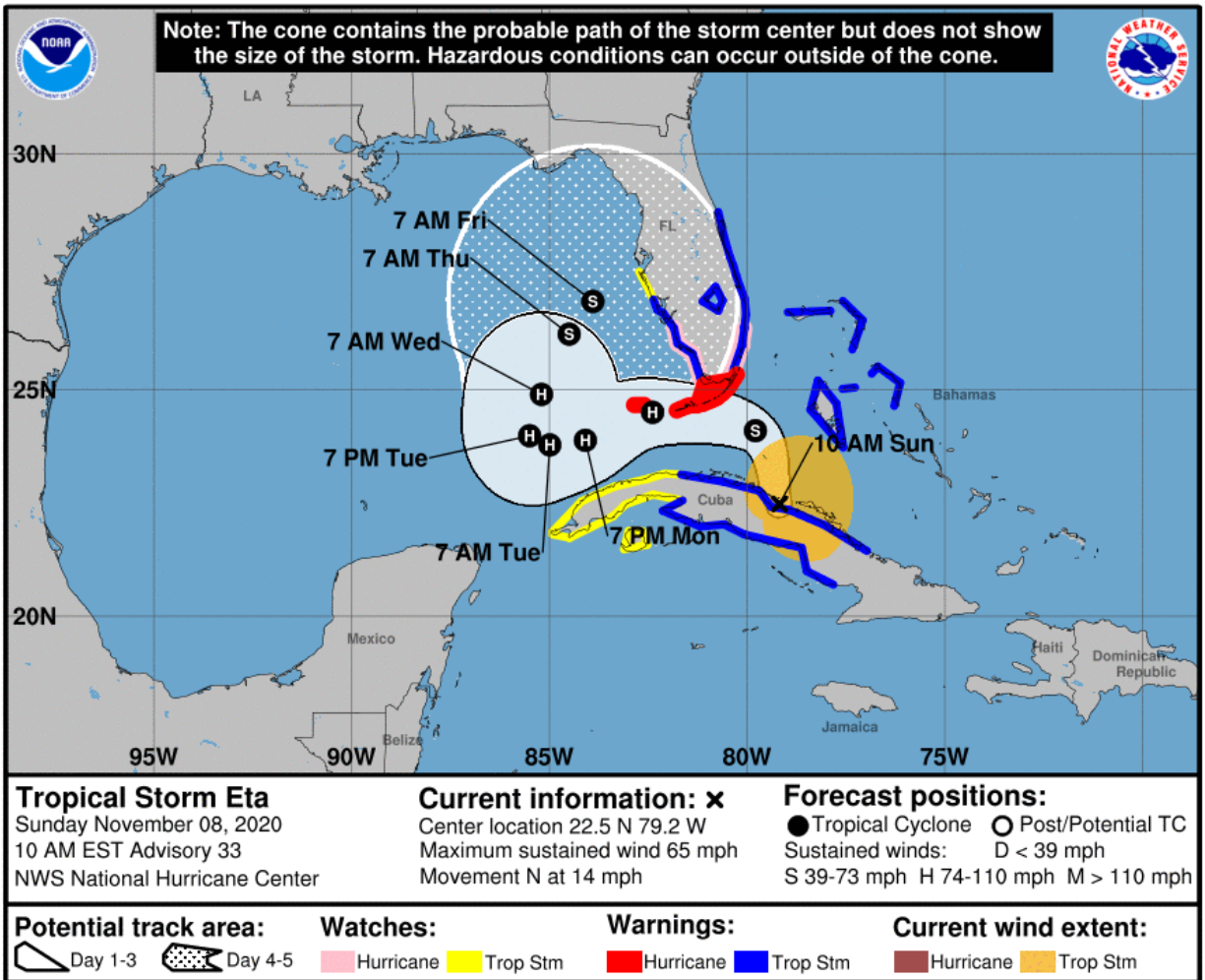
The deepest water will occur along the immediate coast in areas of onshore winds, where the surge will be accompanied by large and dangerous waves. Surge-related flooding depends on the relative timing of the surge and the tidal cycle, and can vary greatly over short distances.

WIND: Hurricane conditions are expected in the Florida Keys by early Monday morning. Tropical storm conditions are expected to continue in the warning areas in Cuba during the next several hours and in the northwestern Bahamas through tonight. Tropical storm conditions are expected to begin in south Florida and the Florida Keys this afternoon or evening, and hurricane conditions are possible in the Hurricane Watch area in Florida tonight and early Monday. Tropical storm conditions are possible in the Tropical Storm Watch area in Florida by early Monday.

TORNADOES: A tornado or two may occur this evening through Monday over south Florida and the Keys.

SURF: Swells generated by Eta are expected to affect the north coast of Cuba, the northwestern Bahamas, southern Florida and the Florida Keys during the next couple of days. Swells will gradually subside along the south coast of Cuba, the Cayman Islands and Jamaica later today. These swells are likely to cause life-threatening surf and rip current conditions.

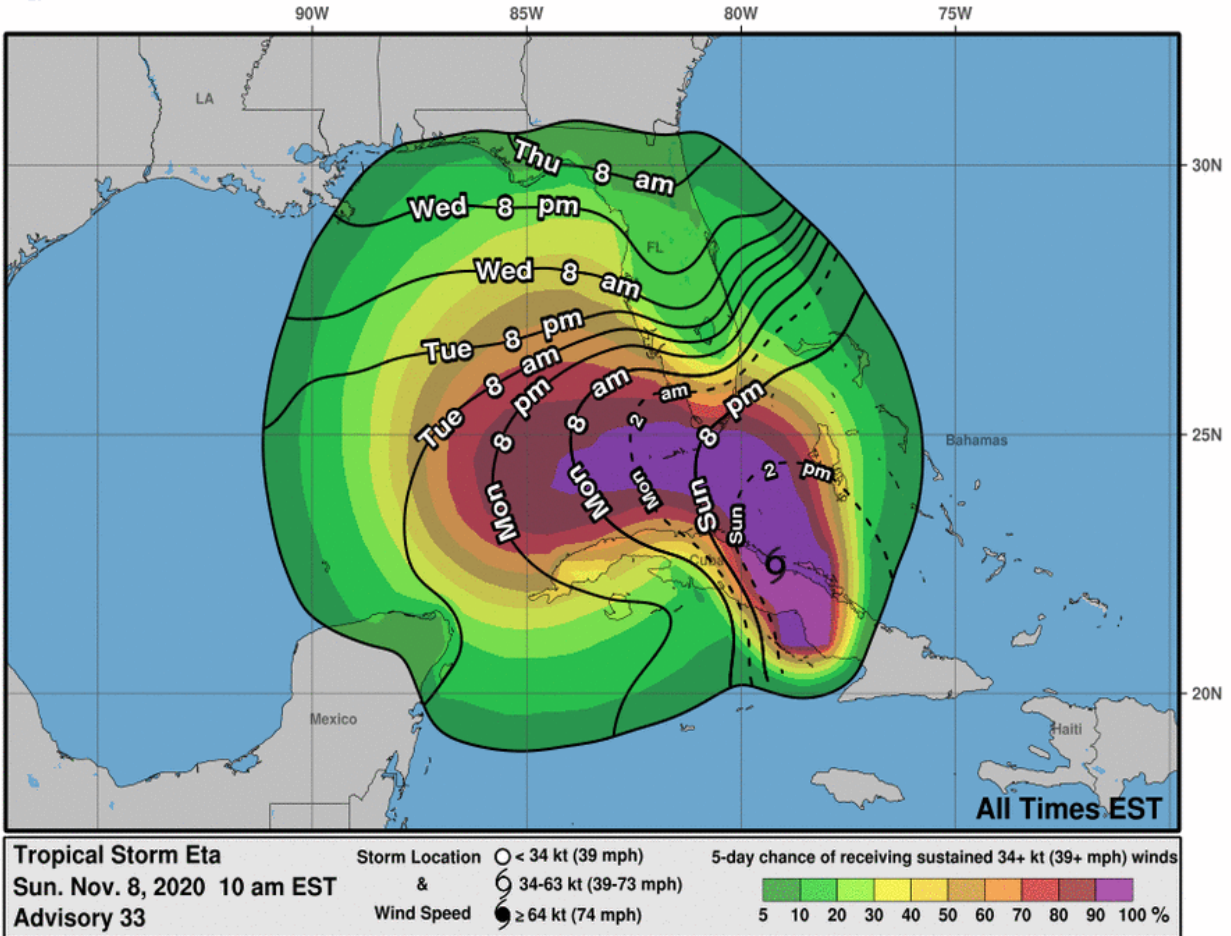
National Hurricane Center (NHC) Forecast



Most Likely Arrival Time of Tropical Storm-Force Winds

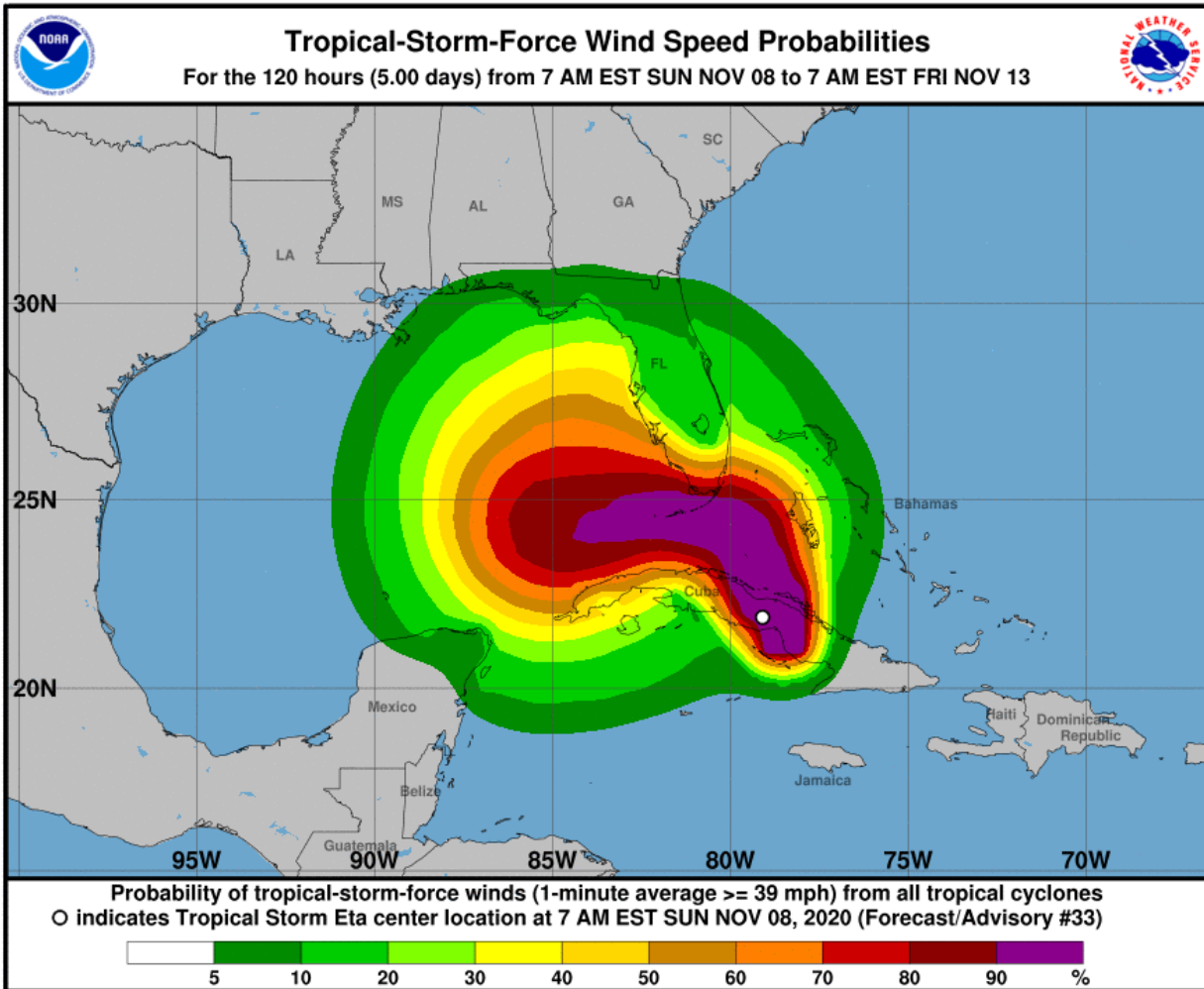


Most Likely Arrival Time of Tropical-Storm-Force Winds

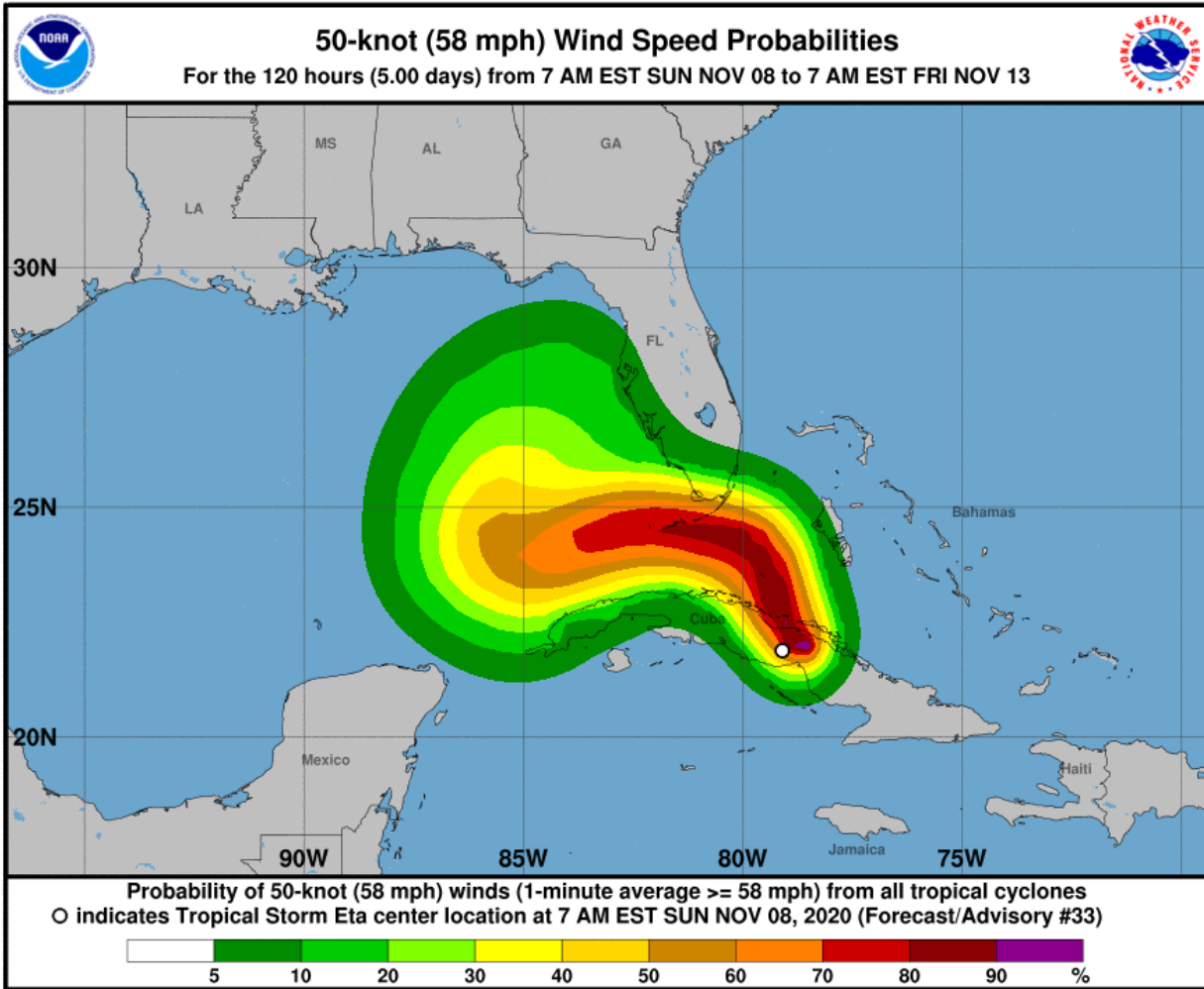


National Hurricane Center: Wind Speed Probabilities

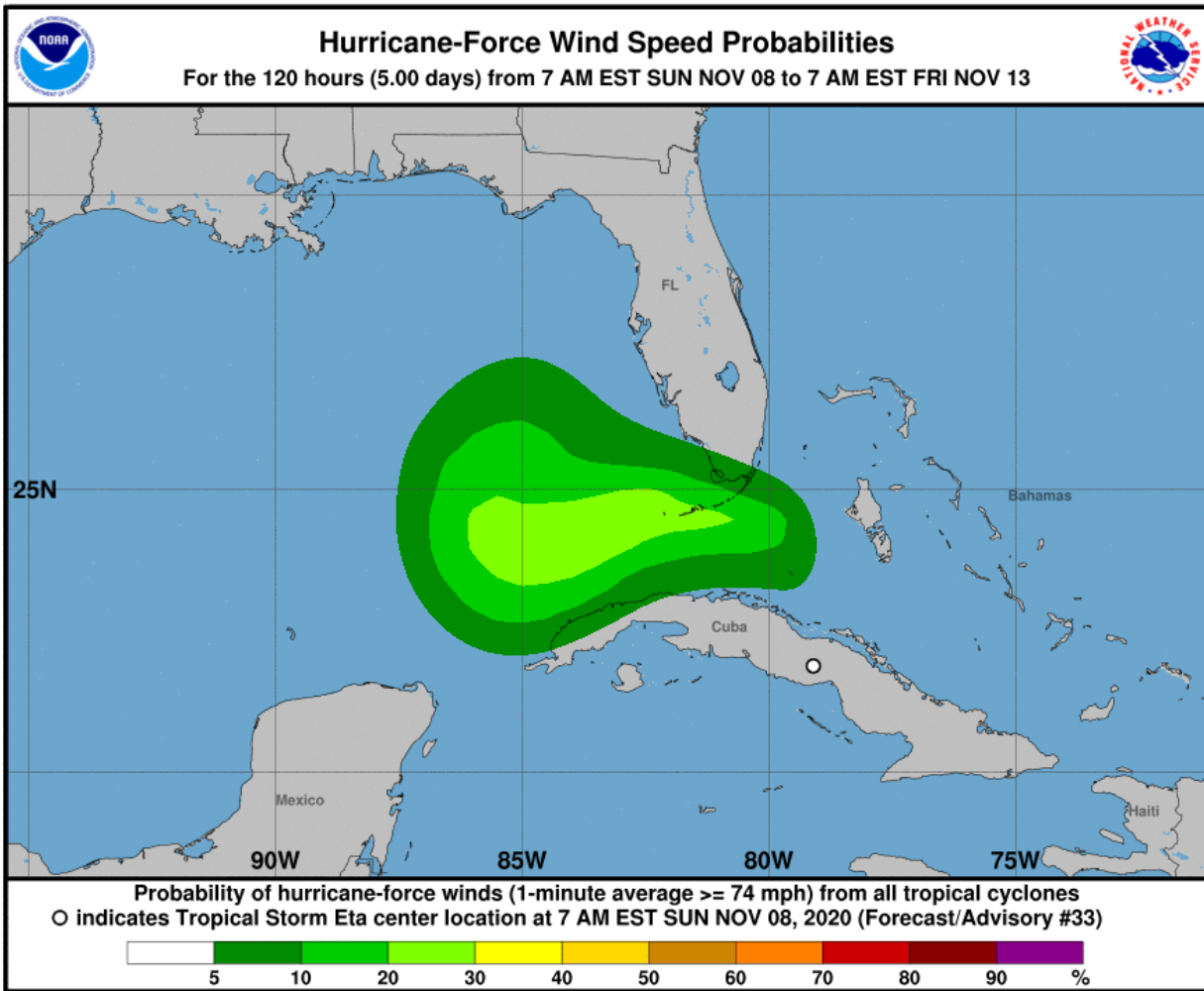
Tropical Storm-Force Wind Probabilities (≥ 40 mph (65 kph))



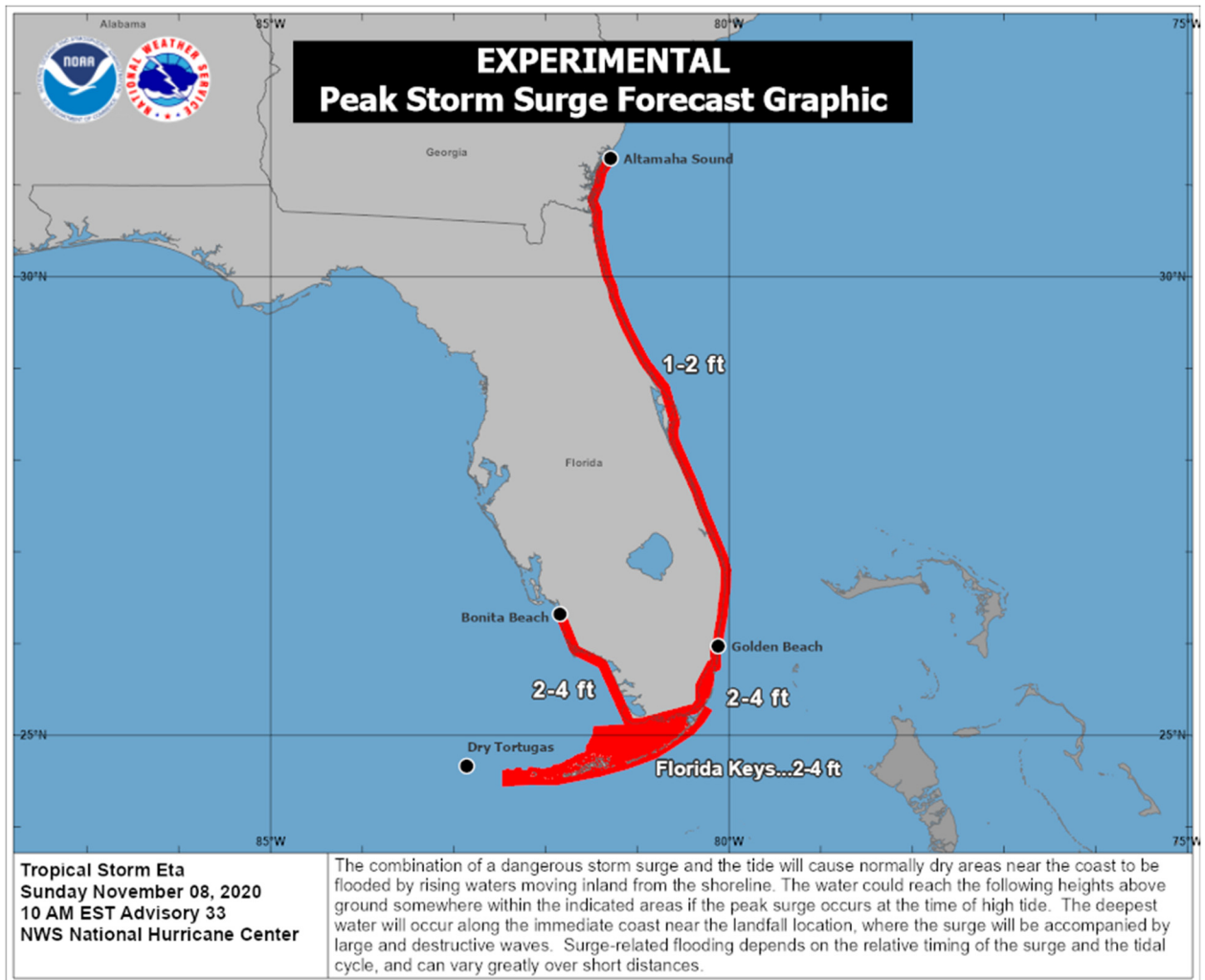
Wind Probabilities (≥ 60 mph (95 kph))



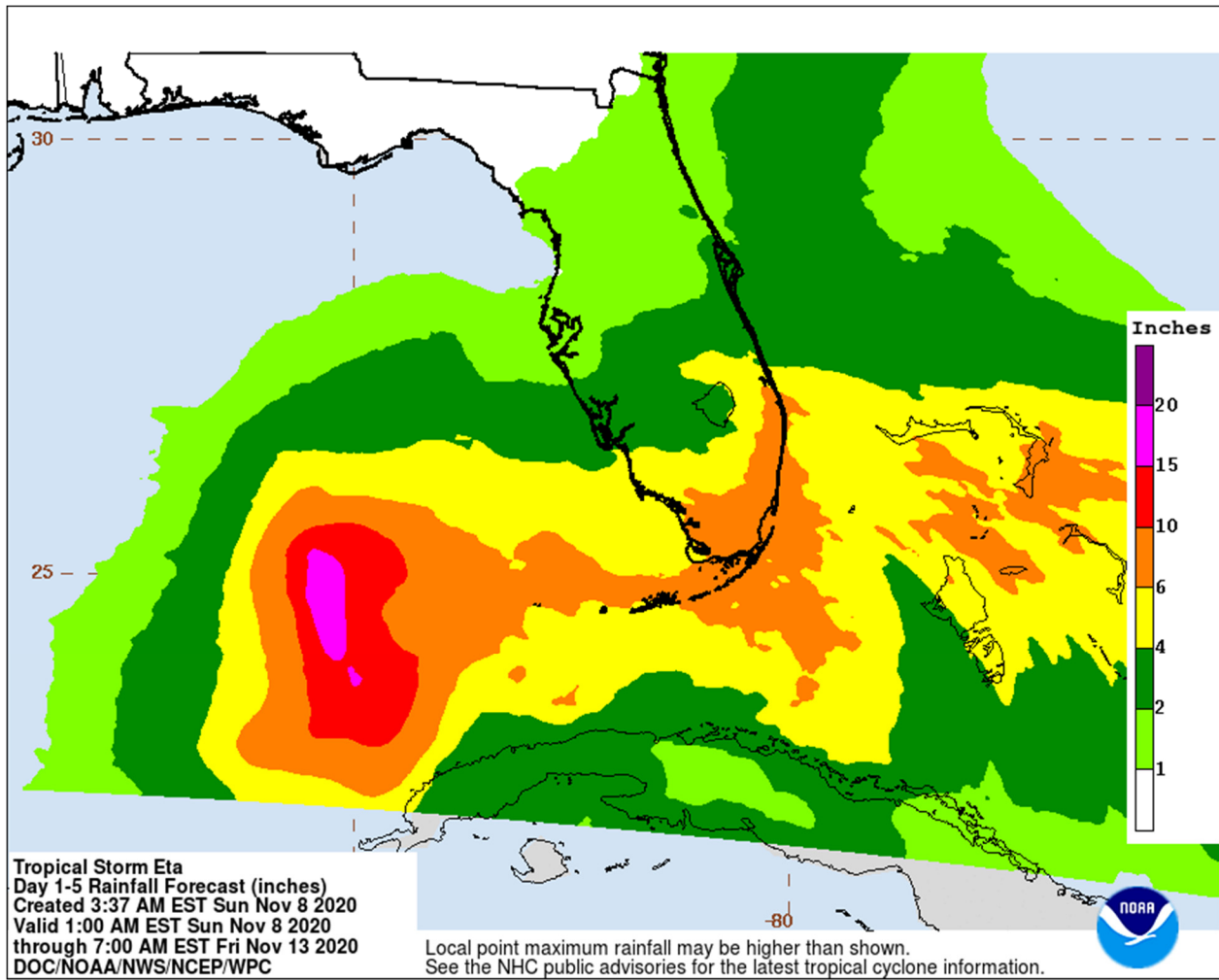
Hurricane-Force Wind Probabilities (≥ 75 mph (120 kph))



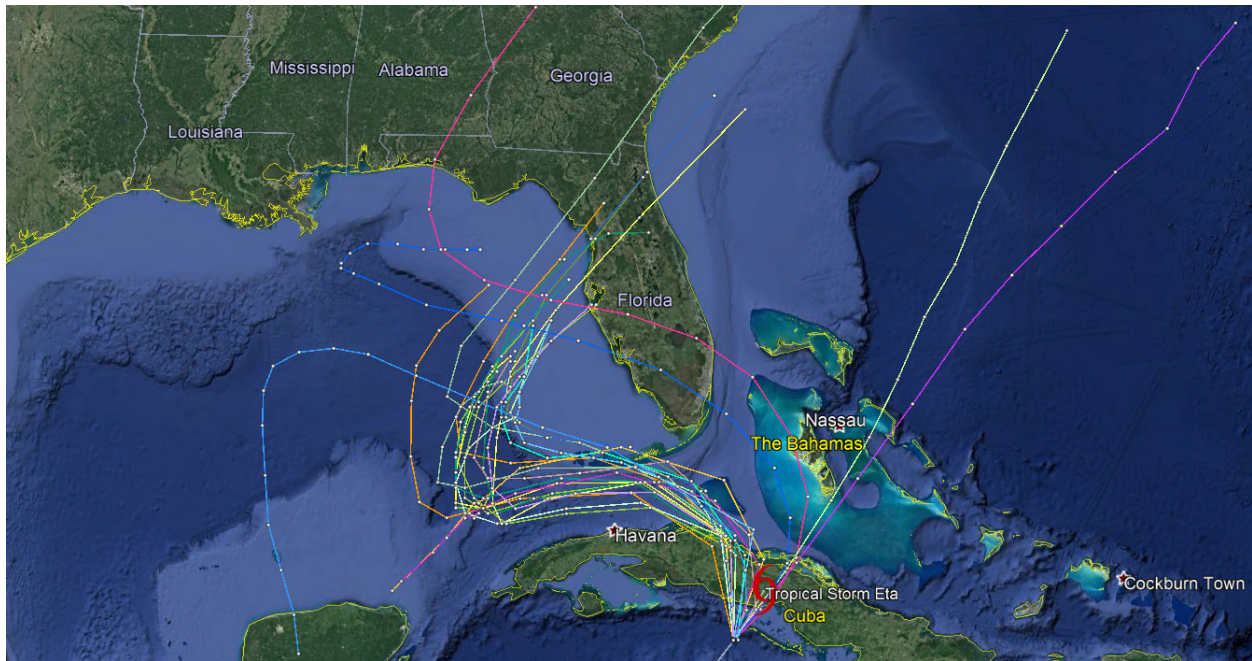
NHC: Storm Surge Inundation Graphic



Weather Prediction Center: Rainfall Potential



Current 'Spaghetti' Model Output Data



Source: NHC

Additional Information and Update Schedule

Wind intensity forecasts and forecast track information can be found via the National Hurricane Center at www.nhc.noaa.gov

NEXT CAT ALERT: Monday morning after 9:00 AM Central Time (15:00 UTC).

*Tropical Cyclone Intensity Classifications for Global Basins

WIND SPEED			BASINS AND MONITORING BUREAU						
KTS ¹	MPH ¹	KPH ¹	NE Pacific, Atlantic	NW Pacific	NW Pacific	SW Pacific	Australia	SW Indian	North Indian
			National Hurricane Center (NHC)	Joint Typhoon Warning Center (JTWC)	Japan Meteorological Agency (JMA)	Fiji Meteorological Service (FMS)	Bureau Of Meteorology (BOM)	Meteo-France (MF)	India Meteorological Department (IMD)
30	35	55	Tropical Depression	Tropical Depression	Tropical Depression	Tropical Depression	Tropical Low	Tropical Depression	Deep Depression
35	40	65	Tropical Storm	Tropical Storm	Tropical Storm	Cat. 1 Tropical Cyclone	Cat. 1 Tropical Cyclone	Moderate Tropical Storm	Cyclonic Storm
40	45	75							
45	50	85							
50	60	95							
55	65	100							
60	70	110	Cat. 1 Hurricane	Typhoon	Typhoon	Cat. 3 Severe Tropical Cyclone	Cat. 3 Severe Tropical Cyclone	Tropical Cyclone	Very Severe Cyclonic Storm
65	75	120							
70	80	130							
75	85	140							
80	90	150							
85	100	160	Cat. 2 Hurricane	Typhoon	Typhoon	Cat. 4 Severe Tropical Cyclone	Cat. 4 Severe Tropical Cyclone	Intense Tropical Cyclone	Very Severe Cyclonic Storm
90	105	170							
95	110	175	Cat. 3 Major Hurricane	Typhoon	Typhoon	Cat. 4 Severe Tropical Cyclone	Cat. 4 Severe Tropical Cyclone	Intense Tropical Cyclone	Very Severe Cyclonic Storm
100	115	185							
105	120	195							
110	125	205	Cat. 4 Major Hurricane	Super Typhoon	Super Typhoon	Cat. 5 Severe Tropical Cyclone	Cat. 5 Severe Tropical Cyclone	Very Intense Tropical Cyclone	Super Cyclonic Storm
115	130	210							
120	140	220							
125	145	230							
130	150	240	Cat. 5 Major Hurricane	Super Typhoon	Super Typhoon	Cat. 5 Severe Tropical Cyclone	Cat. 5 Severe Tropical Cyclone	Very Intense Tropical Cyclone	Super Cyclonic Storm
135	155	250							
140	160	260							
>140	>160	>260	Cat. 5 Major Hurricane	Super Typhoon	Super Typhoon	Cat. 5 Severe Tropical Cyclone	Cat. 5 Severe Tropical Cyclone	Very Intense Tropical Cyclone	Super Cyclonic Storm

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