

## Current Watches and Warnings

A **Tropical Storm Warning** is in effect for the Cuban provinces of Camaguey, Granma, Guantanamo, Holguin, Las Tunas, Santiago de Cuba, Ciego de Avila, Sancti Spiritus, Villa Clara, Cienfuegos, Matanzas, Mayabeque, and Havana; Jamaica; Florida Keys from Craig Key westward to the Dry Tortugas

A **Hurricane Watch** is in effect for the Cuban provinces of Camaguey, Granma, Guantanamo, Holguin, Las Tunas, and Santiago de Cuba

A **Tropical Storm Watch** is in effect for Cayman Brac and Little Cayman; Cuban province of Artemisa; Florida Keys from east of Craig Key to Ocean Reef; Florida Bay; southwest coast of Florida from Flamingo to Bonita Beach

## Current Details from the National Hurricane Center (NHC)

**COORDINATES:** 18.7° north, 76.8° west

**LOCATION:** 50 miles (80 kilometers) north of Kingston, Jamaica

**MOVEMENT:** west-northwest at 13 mph (20 kph)

**WINDS:** 60 mph (95 kph) with gusts to 70 mph (110 kph)

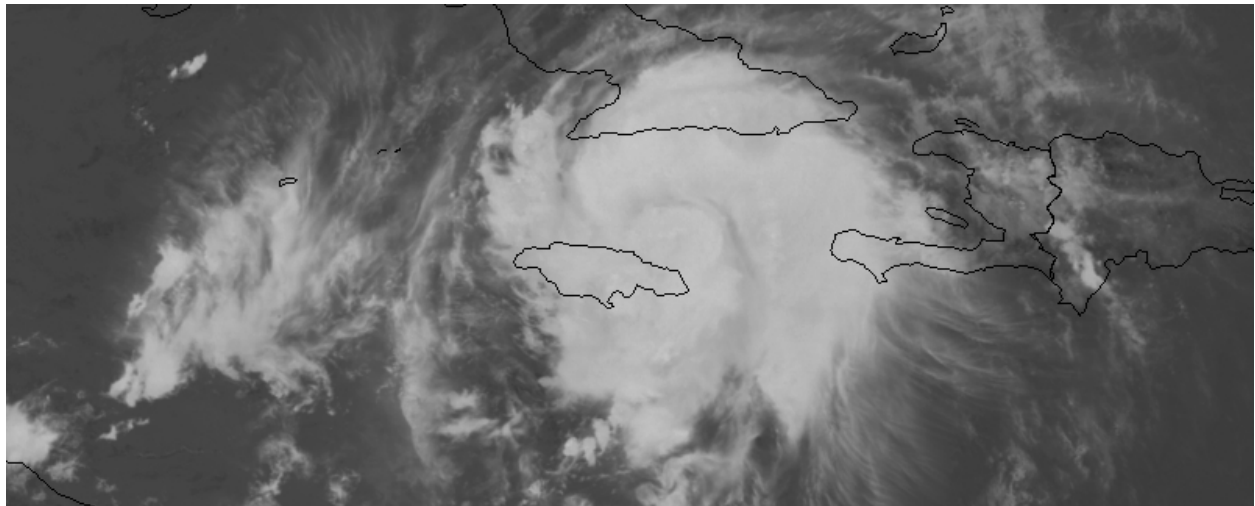
**RADIUS OF TROPICAL STORM-FORCE WINDS:** 115 miles (185 kilometers)

**MINIMUM CENTRAL PRESSURE:** 1009 millibars

**SAFFIR-SIMPSON SCALE RANKING:** Tropical Storm

**24-HOUR LANDFALL POTENTIAL:** HIGH (Cuba)

## Latest Satellite Picture



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

# Discussion

Tropical Storm Elsa, located approximately 50 miles (80 kilometers) north of Kingston, Jamaica, is currently tracking west-northwest at 13 mph (20 kph). A NOAA Hurricane Hunter aircraft has been investigating Elsa this morning and has continued to find a system that has an unusual core structure. The latest data shows surface-adjusted winds of roughly 60 mph (95 kph) – maintaining tropical storm status – and an estimated minimum central pressure of 1009 millibars. That pressure reading is rather high for a storm with 60 mph (95 kph) winds. Additional Doppler radar data from the aircraft show an eastward tilt of the center as the cloud structure increases with height in the atmosphere. Regardless, the storm has increasingly become more impressive on satellite imagery in recent hours, with well-defined convective banding across the northern and eastern portions of the circulation.

Elsa's forward speed has slowed a little more, and there has not been much change to the NHC track forecast or reasoning. During the next few days, the system should move around the western periphery of the steering ridge of high pressure. The NHC forecast track is similar to the previous official forecast, and close to the model consensus. It is worth noting that the latest GFS and HWRF model solutions are to the west of this forecast.

Elsa should remain in a low wind shear environment through Monday, and some strengthening is likely before the storm reaches Cuba, assuming the circulation becomes better aligned vertically. The storm should weaken as it passes over Cuba. After the cyclone emerges into the southeastern Gulf of Mexico, the NHC is only currently forecasting slight restrengthening is due to the expectation of moderate southwesterly wind shear. The official NHC intensity forecast is on the high end of the current model guidance.

## Key Messages from the National Hurricane Center

1. Widespread heavy rain will continue to affect portions of southern Haiti and Jamaica today where isolated to scattered flash flooding and mudslides will be possible. Heavy rain will then impact the Cayman Islands and Cuba today into Monday resulting in significant flooding and mudslides over Cuba. As Elsa approaches the Florida Keys and Florida Peninsula Monday through Wednesday, heavy rainfall may result in isolated flash, urban, and minor river flooding.
2. Tropical storm conditions and dangerous storm surge are expected with hurricane conditions possible in portions of eastern Cuba later today and tonight. Tropical storm conditions are expected in portions of central and western Cuba tonight and Monday.
3. Tropical storm conditions, storm surge, and rainfall impacts are expected beginning late Monday in the Florida Keys, and are possible along the coast of southwestern Florida beginning Monday night. Tropical Storm Warnings and Watches are in effect in those areas.
4. There is a risk of tropical storm conditions, storm surge, and rainfall impacts along the remainder of the Florida Peninsula Monday night through Wednesday and the coasts of Georgia and the Carolinas Wednesday and Thursday. However, uncertainty in the forecast remains larger than usual due to Elsa's potential interaction with Cuba.

### Additional Information

WIND: Tropical storm conditions are expected in portions of Jamaica today. Tropical storm conditions are expected and hurricane conditions are possible in portions of eastern and central Cuba later today and tonight. Tropical storm conditions are expected in the warning area in the Florida Keys by late Monday. Tropical storm conditions are possible in the watch areas in the Cayman Islands by tonight, and in the upper Florida Keys and the southwest coast of Florida by Monday night.

STORM SURGE: A storm surge will raise water levels above normal tide levels by as much as the following amounts in areas of onshore flow within the hurricane watch and warning areas:

Southern coast of Cuba: 3 to 5 feet

The combination of a 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 Flamingo, FL: 1 to 3 feet

Ocean Reef, FL to Dry Tortugas, including Florida Bay: 1 to 2 feet

Surge-related flooding depends on the relative timing of the surge and the tidal cycle and can vary greatly over short distances.

RAINFALL: Across portions of southern Haiti and Jamaica, storm total rainfall of 4 to 8 inches with isolated total amounts of 15 inches are expected through today. This rain may lead to scattered flash flooding and mudslides, some of which could be significant.

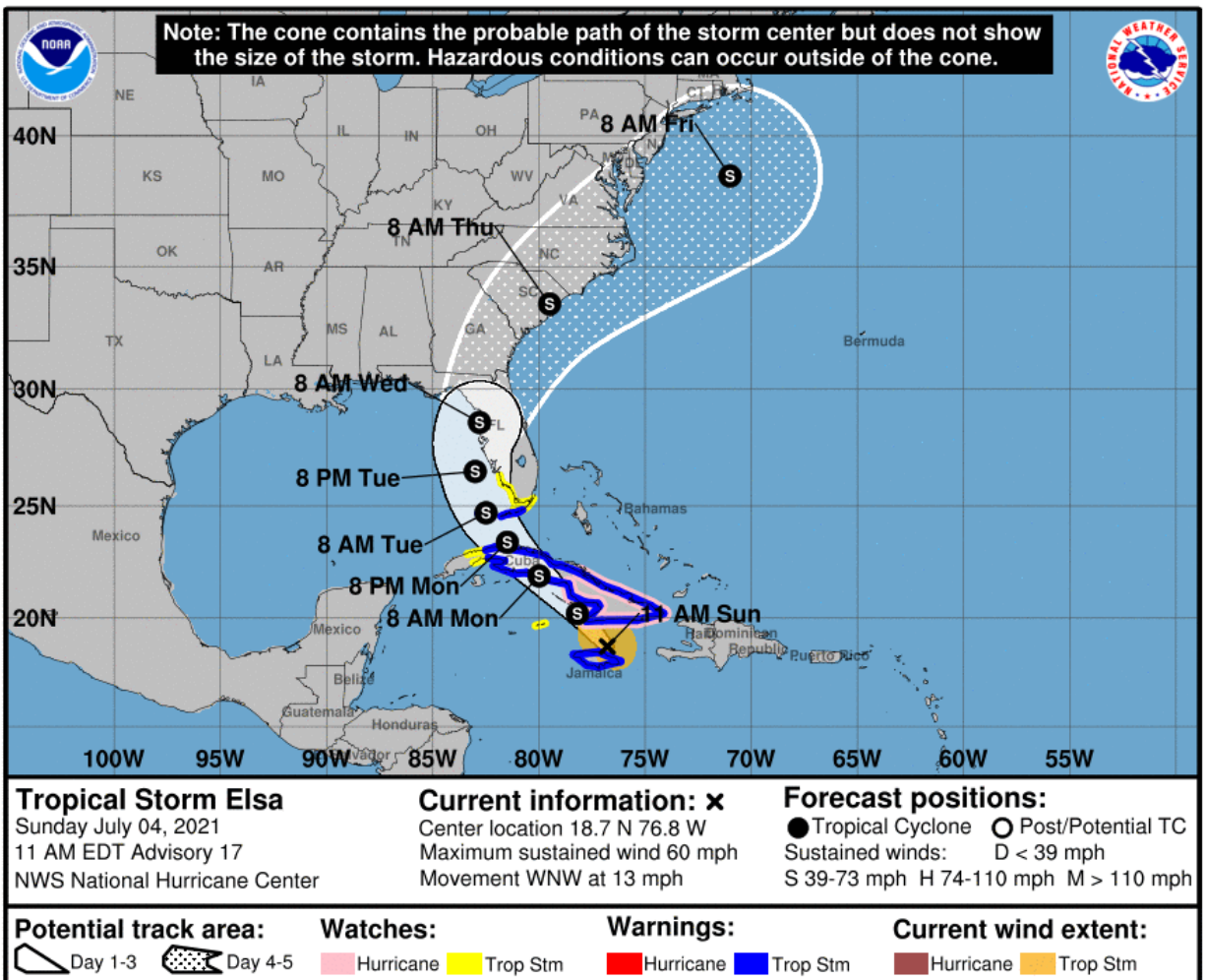
Across portions of Cuba today into Monday, rainfall of 5 to 10 inches with isolated maximum amounts of 15 inches is expected. This will result in significant flash flooding and mudslides.

Across the Cayman Islands today into Monday, rainfall of 3 to 5 inches is expected. This rain may lead to scattered flash flooding.

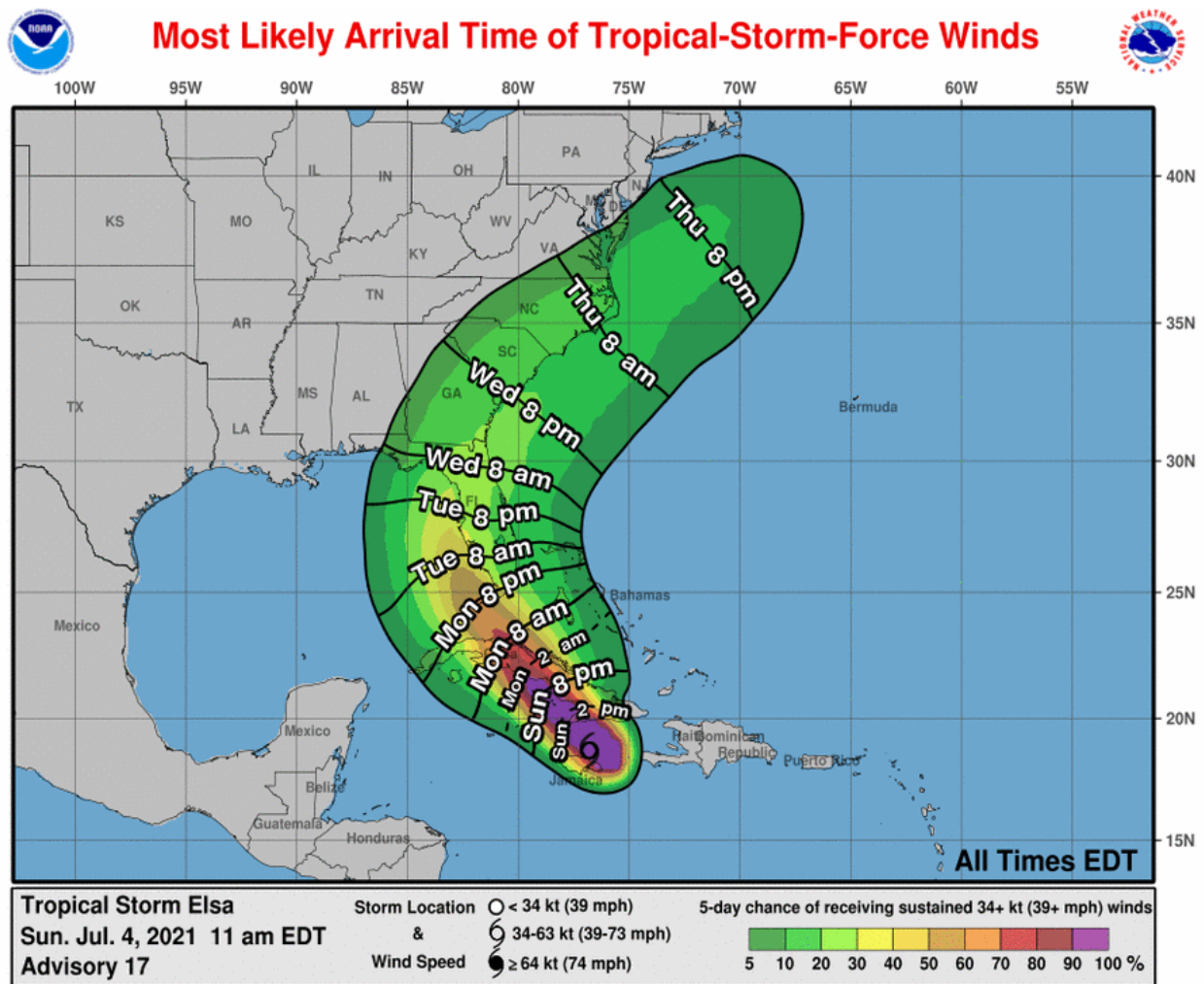
Rainfall from Elsa will impact portions of the Florida Keys and Florida Peninsula Monday through Wednesday. Amounts of 2 to 4 inches with localized maximum amounts up to 6 inches will be possible, which may result in isolated flash, urban, and minor river flooding.

SURF: Swells generated by Elsa will spread westward along the coast of Jamaica and the southern coast of Cuba during the next day or two. Swells will increase near the Florida Keys and south Florida early next week.

# National Hurricane Center (NHC) Forecast

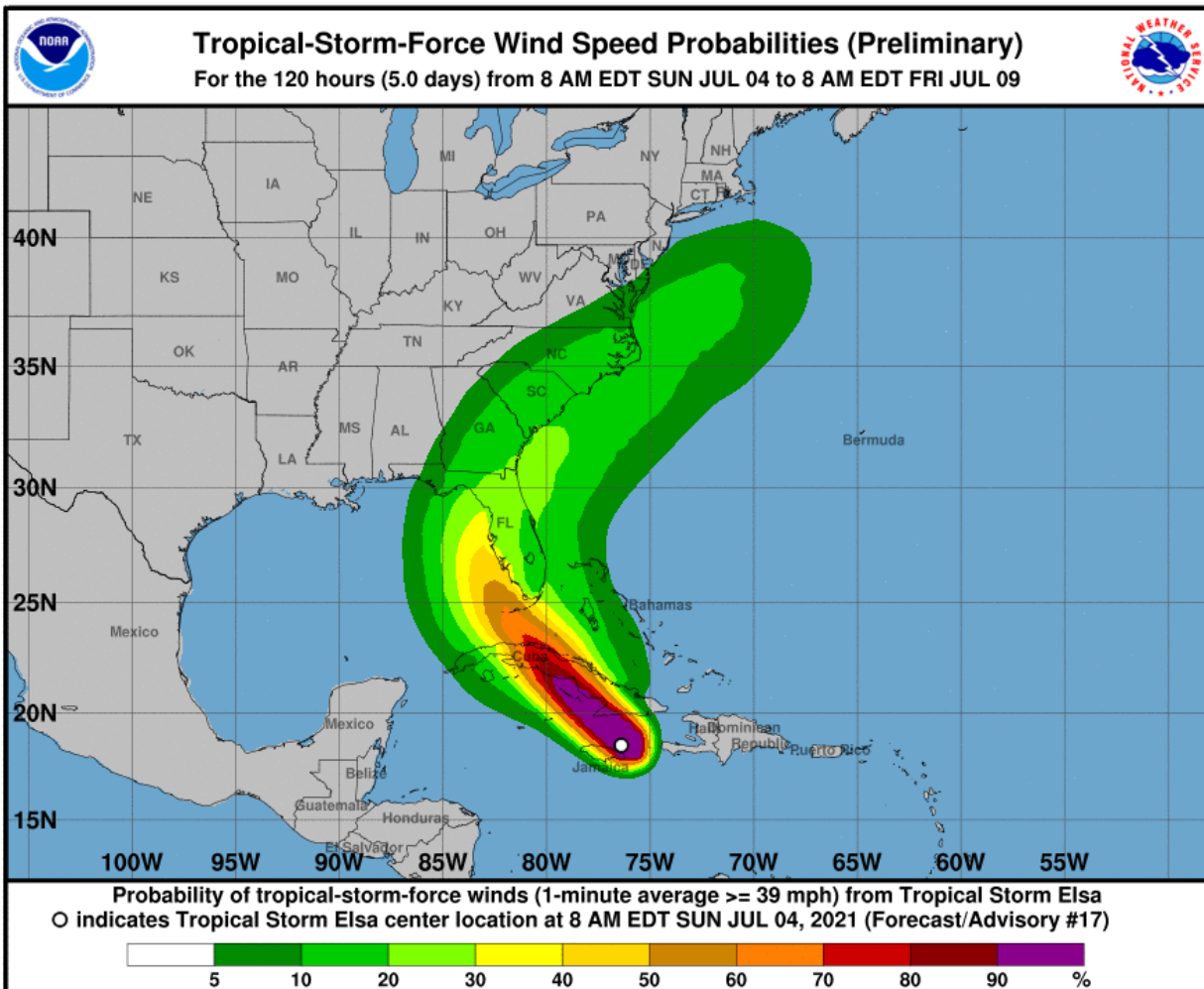


# Most Likely Arrival Time of Tropical Storm-Force Winds

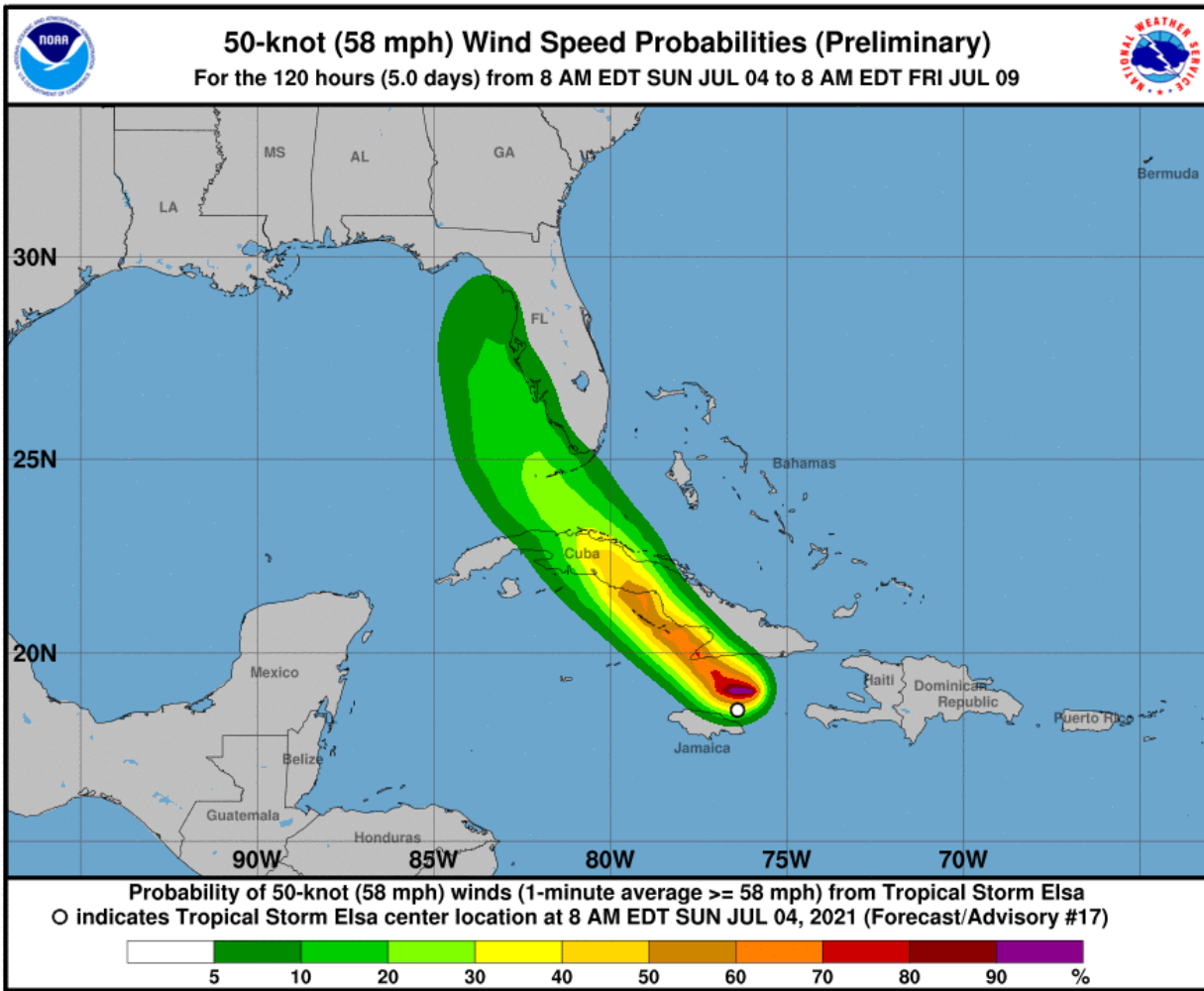


# National Hurricane Center: Wind Speed Probabilities

## Tropical Storm-Force Wind Probabilities ( $\geq 40$ mph (65 kph))

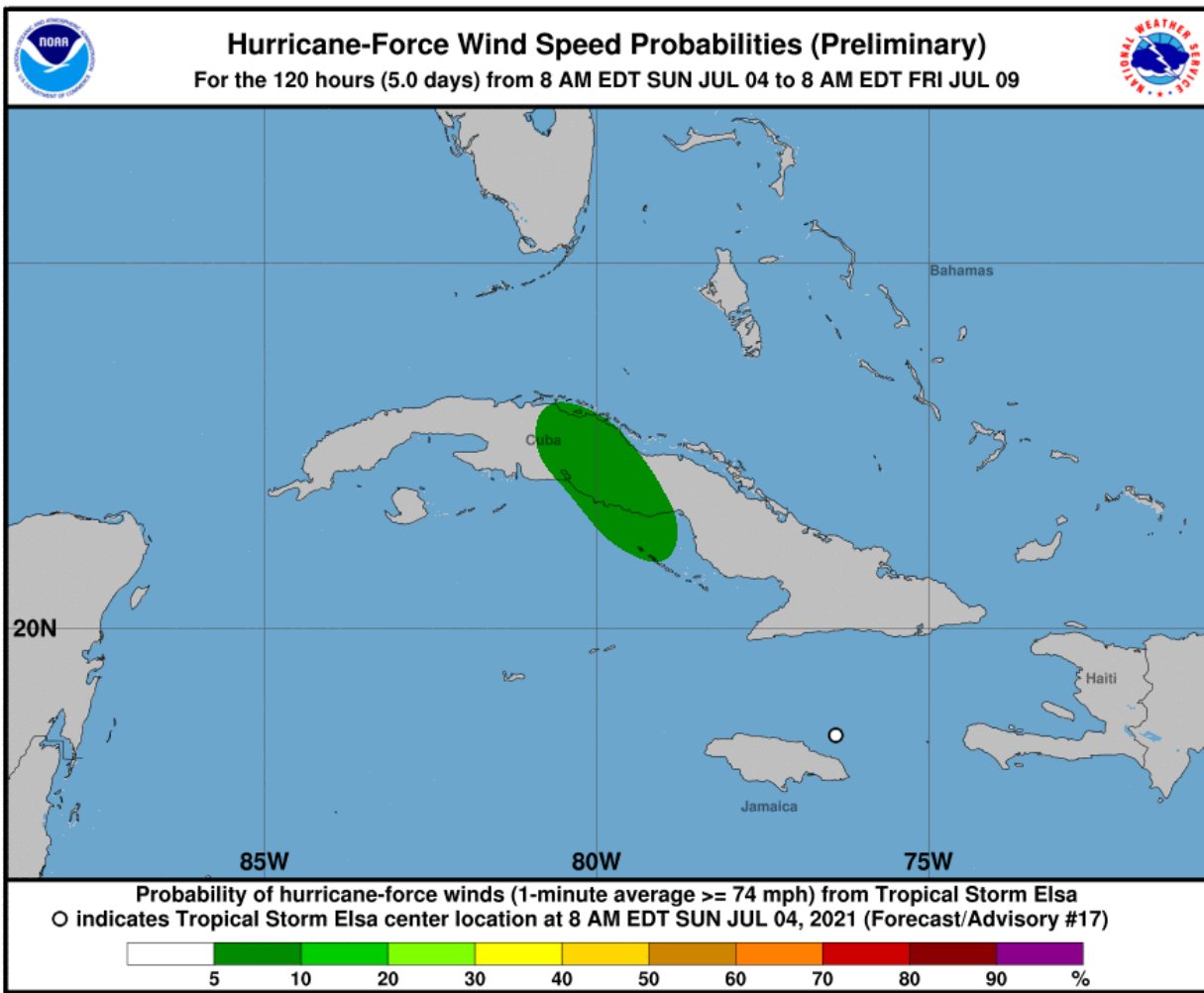


## Wind Probabilities ( $\geq 60$ mph (95 kph))



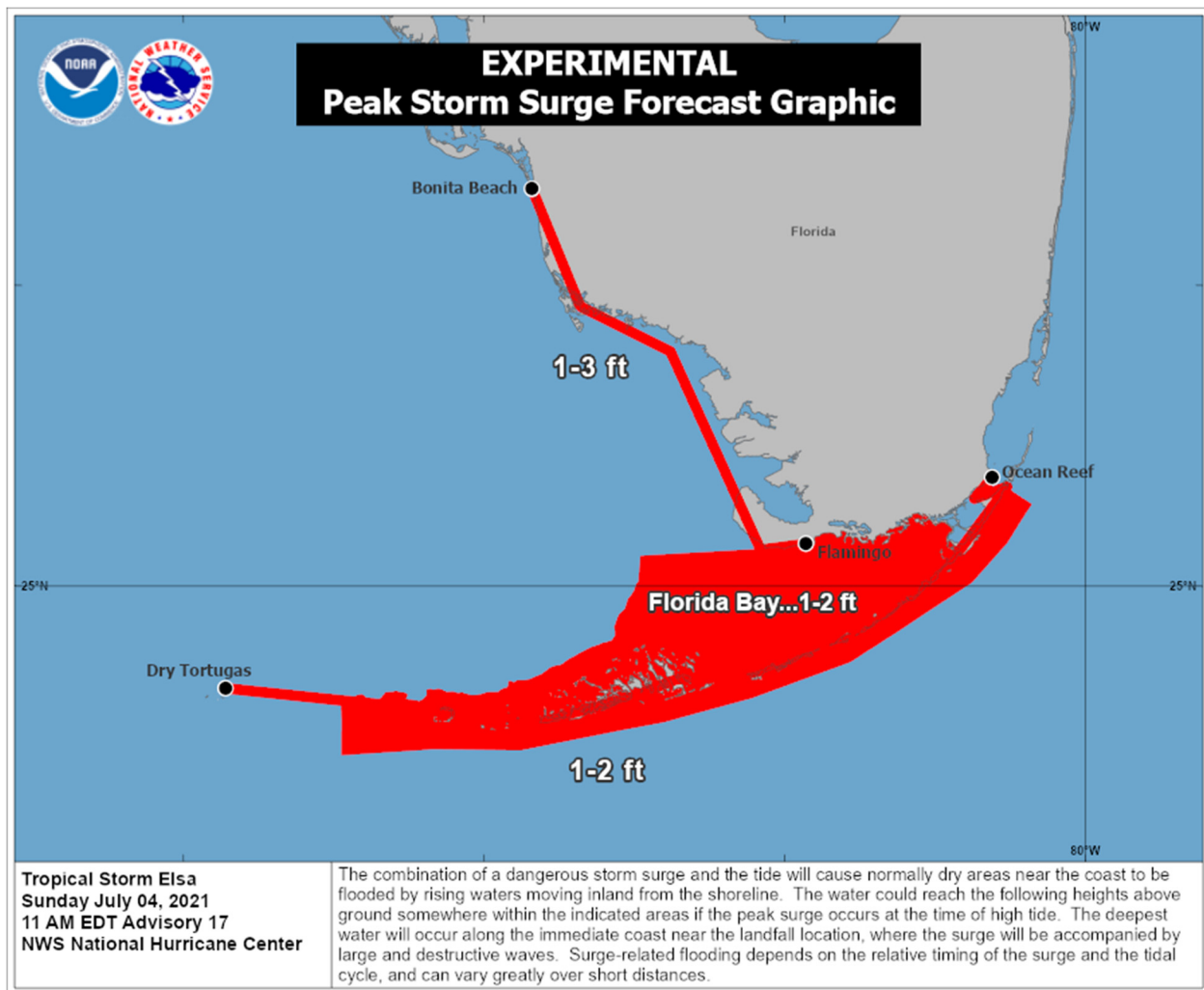


## Hurricane-Force Wind Probabilities ( $\geq 75$ mph (120 kph))

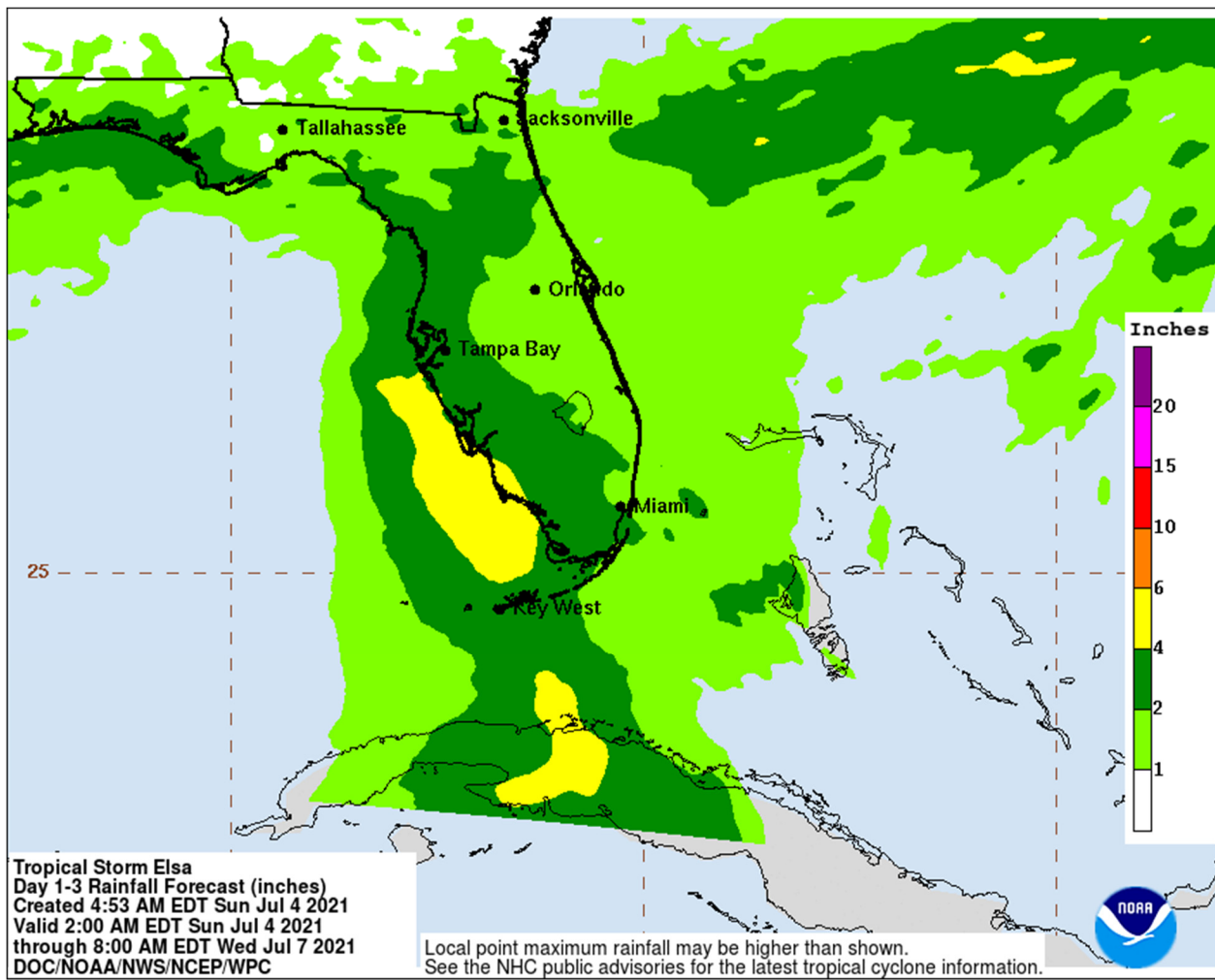




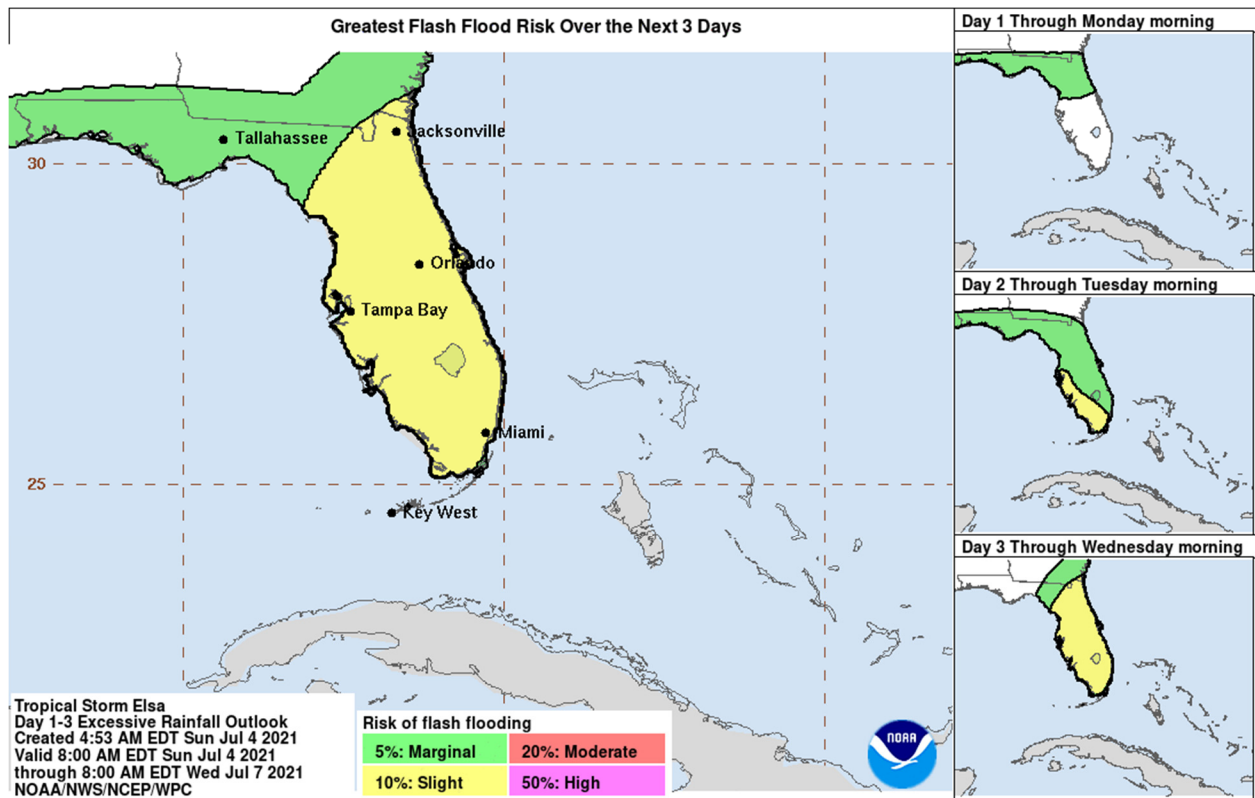
## NHC: Storm Surge Inundation Graphic



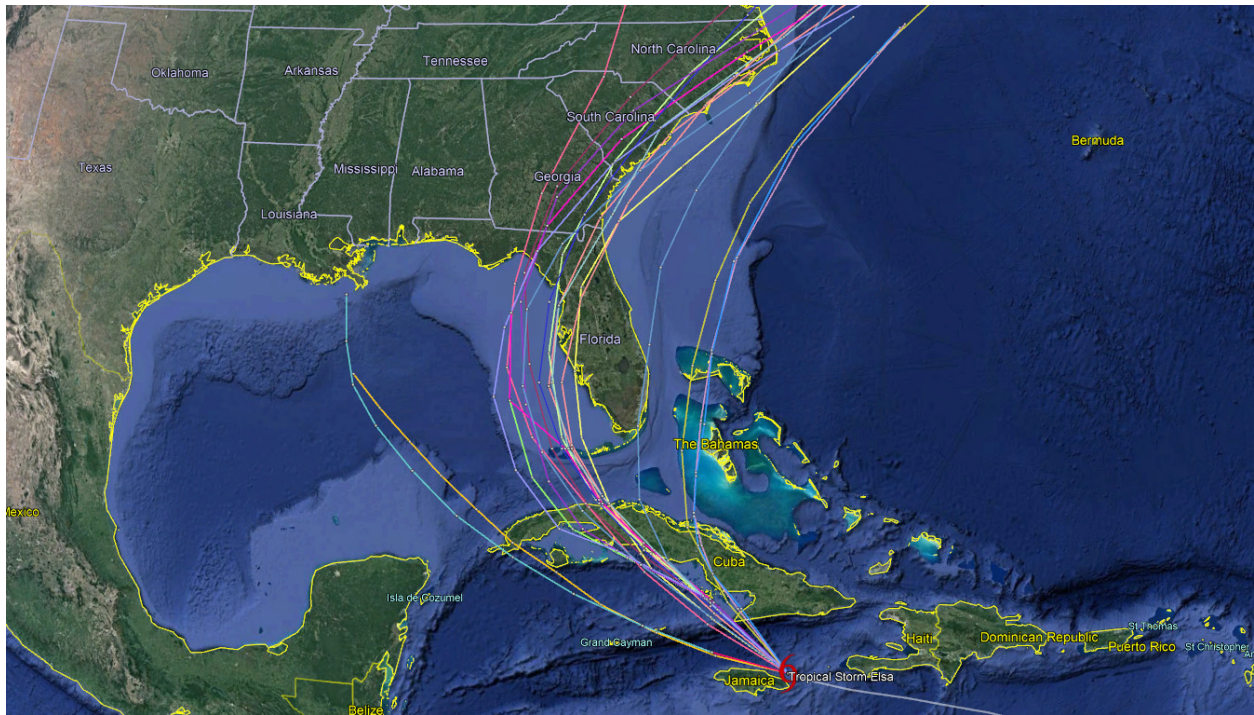
## Weather Prediction Center: Rainfall Potential



# Weather Prediction Center: Flash Flood 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](http://www.nhc.noaa.gov)

**NEXT CAT ALERT:** Monday morning after 10:00 AM Central Time (15:00 UTC).

# Tropical Cyclone Intensity Classifications for Global Basins

WIND SPEED			BASINS AND MONITORING BUREAU							
KT	MPH	KPH	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			Severe Tropical Storm	Cat. 2 Tropical Cyclone	Cat. 2 Tropical Cyclone	Severe Tropical Storm	Severe Cyclonic Storm	
50	60	95								
55	65	100								
60	70	110								
65	75	120	Cat. 1 Hurricane	Typhoon	Typhoon	Cat. 3 Severe Tropical Cyclone	Cat. 3 Severe Tropical Cyclone	Tropical Cyclone	Very Severe Cyclonic Storm	
70	80	130								
75	85	140								
80	90	150				Cat. 2 Hurricane	Cat. 4 Severe Tropical Cyclone	Cat. 4 Severe Tropical Cyclone		Intense Tropical Cyclone
85	100	160								
90	105	170								
95	110	175				Cat. 3 Major Hurricane	Cat. 5 Severe Tropical Cyclone	Cat. 5 Severe Tropical Cyclone	Very Intense Tropical Cyclone	Super Cyclonic Storm
100	115	185								
105	120	195								
110	125	205								
115	130	210	Cat. 4 Major Hurricane							
120	140	220								
125	145	230								
130	150	240								
135	155	250	Cat. 5 Major Hurricane							
140	160	260								
>140	>160	>260								

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