HURRICANE IAN

Current Watches and Warnings

A **Hurricane Warning** is in effect for Chokoloskee to Anclote River, including Tampa Bay, Dry Tortugas

A **Storm Surge Warning** is in effect for Suwannee River southward to Flamingo, Tampa Bay, Dry Tortugas, Flagler/Volusia Line to the mouth of the St. Mary's River, St. Johns River

A **Tropical Storm Warning** is in effect for the Cuban provinces of La Habana, Mayabeque, and Matanzas, Suwannee River to the Anclote River, All the Florida Keys, Flamingo to Altamaha Sound, Flamingo to Chokoloskee, Lake Okeechobee, Florida Bay

A **Storm Surge Watch** is in effect for the Florida Keys from the Card Sound Bridge westward to Key West, Florida Bay, Mouth of St. Mary's River to South Santee River, South of Marineland to the Volusia/Flagler County line

A **Tropical Storm Watch** is in effect for North of Altamaha Sound to South Santee River

Current Details from the National Hurricane Center

COORDINATES: 24.0° north, 83.2° west

LOCATION: 230 miles (375 kilometers) south of Sarasota, Florida

MOVEMENT: North at 10 mph (17 kph)

WINDS: 120 mph (195 kph) with gusts to 150 mph (240 kph)

RADIUS OF TROPICAL STORM-FORCE WINDS: 140 miles (225 kilometers)

RADIUS OF HURRICANE-FORCE WINDS: 40 miles (65 kilometers)

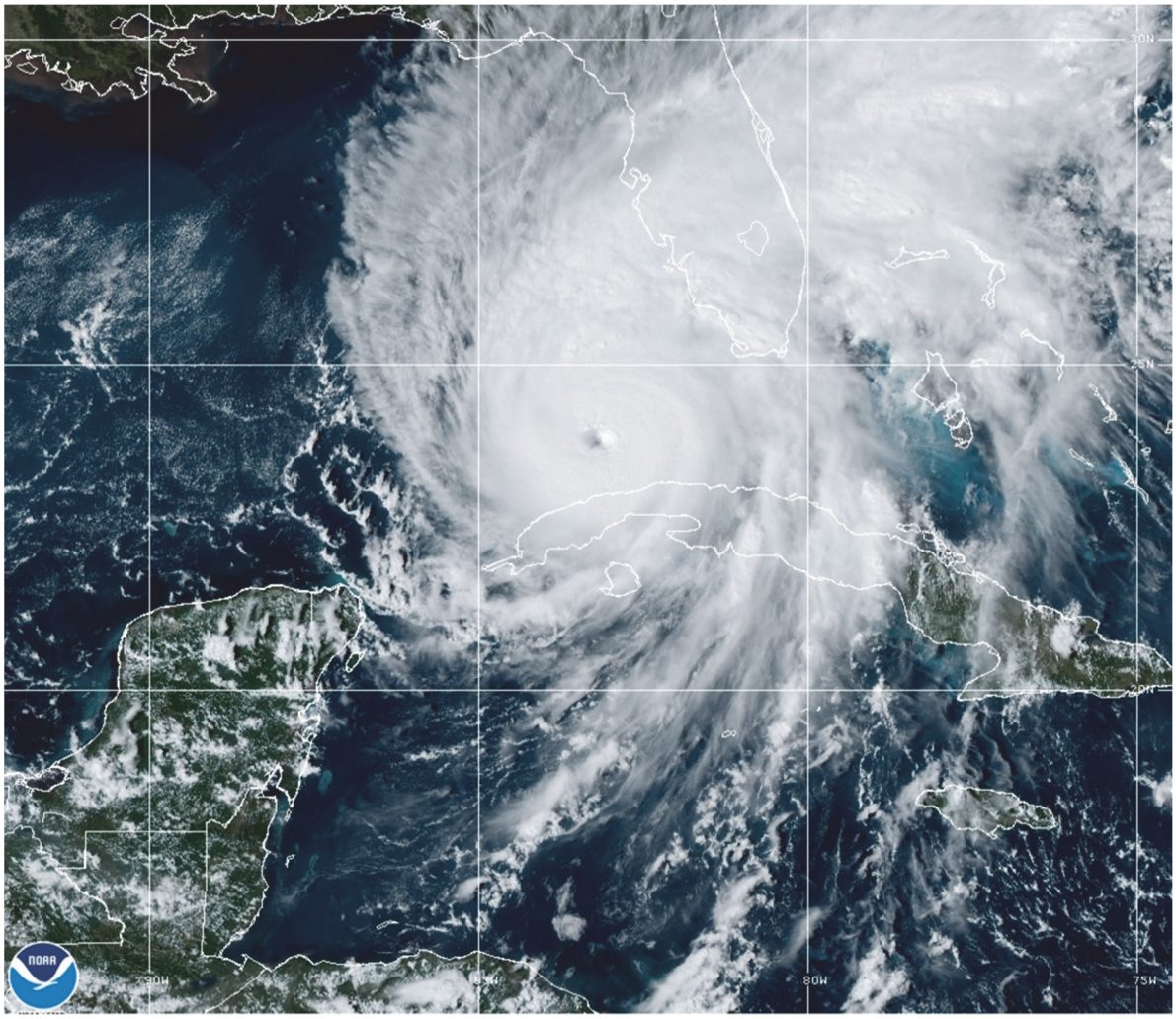
MINIMUM CENTRAL PRESSURE: 952 millibars

SAFFIR-SIMPSON SCALE RANKING: Category 3

FORECAST LANDFALL LOCATION: Central Florida Gulf Coast

FORECAST LANDFALL TIMEFRAME: September 28 (evening) – September 29 (morning) local time

Latest Satellite Imagery



Source: NOAA / NASA

Discussion

The pressure on the last Air Force Hurricane Hunter aircraft fix fell to about 952 mb, indicating that Ian is restrengthening over the southeastern Gulf of Mexico. The eye of Ian remains well-defined on visible imagery, although radar data from Key West suggest that an eyewall replacement could be in the initial stages. The initial wind speed is set to 120 mph (195 kph), matching a blend of earlier SFMR and flight-level wind data. The plane data also showed that the area of hurricane-force winds is growing on the east side of the cyclone.

Ian is moving east-of-due-north, or 10 mph (17 kph), with occasional wobbles to the north-northeast. A track toward the north-northeast is expected for the next couple of days while it moves between a ridge over the Bahamas and a trough over the western Gulf of Mexico. There has been some model convergence this afternoon showing Ian remaining stronger and vertically deeper through landfall. This solution results in a faster track, again adjusted to the southeast, and the new forecast is moved in that direction. This new NHC track is close to the corrected model consensus and between the quicker ECMWF (European) and slower GFS (United States) models. It should be emphasized that this track remains uncertain, with a typical spread in the steering features leading to big speed and track differences down the line, not to mention the oblique angle of approach to Florida. In a few days, more of the guidance is showing Ian interacting with a shortwave trough over the southeastern United States, causing the system to move back over the northwestern Atlantic in the longer range, before turning northwestward back over land. The day 3-5 track forecast is also shifted eastward, although significant re-strengthening is not expected at long range.

The outflow pattern of the hurricane is beginning to be impinged upon in the southwestern quadrant, a sign that upper-level southwesterly flow is starting to affect the outer circulation. While the shear should increase up through landfall, it is just too close-to-call whether it starts to weaken Ian or not, or whether the larger system is able to resist the shear. Additionally, an eyewall replacement cycle could be in its initial phases, although predicting these structural changes is extremely difficult. The new forecast is near the last one, a little higher than the consensus. I should note that whether Ian comes ashore as category 4 hurricane or a large category 3 after an eyewall cycle, avoiding a large and destructive hurricane for Florida seems very unlikely, and residents should heed the advice of local emergency management officials.

The new forecast necessitates a Hurricane Warning for portions of extreme southwestern Florida, and a Tropical Storm Warning for the rest of southeastern Florida that wasn't previously under a warning. Users are reminded to not focus on the exact track as some additional adjustments to the track are possible. Significant wind, storm surge, and rainfall hazards will extend far from the center.

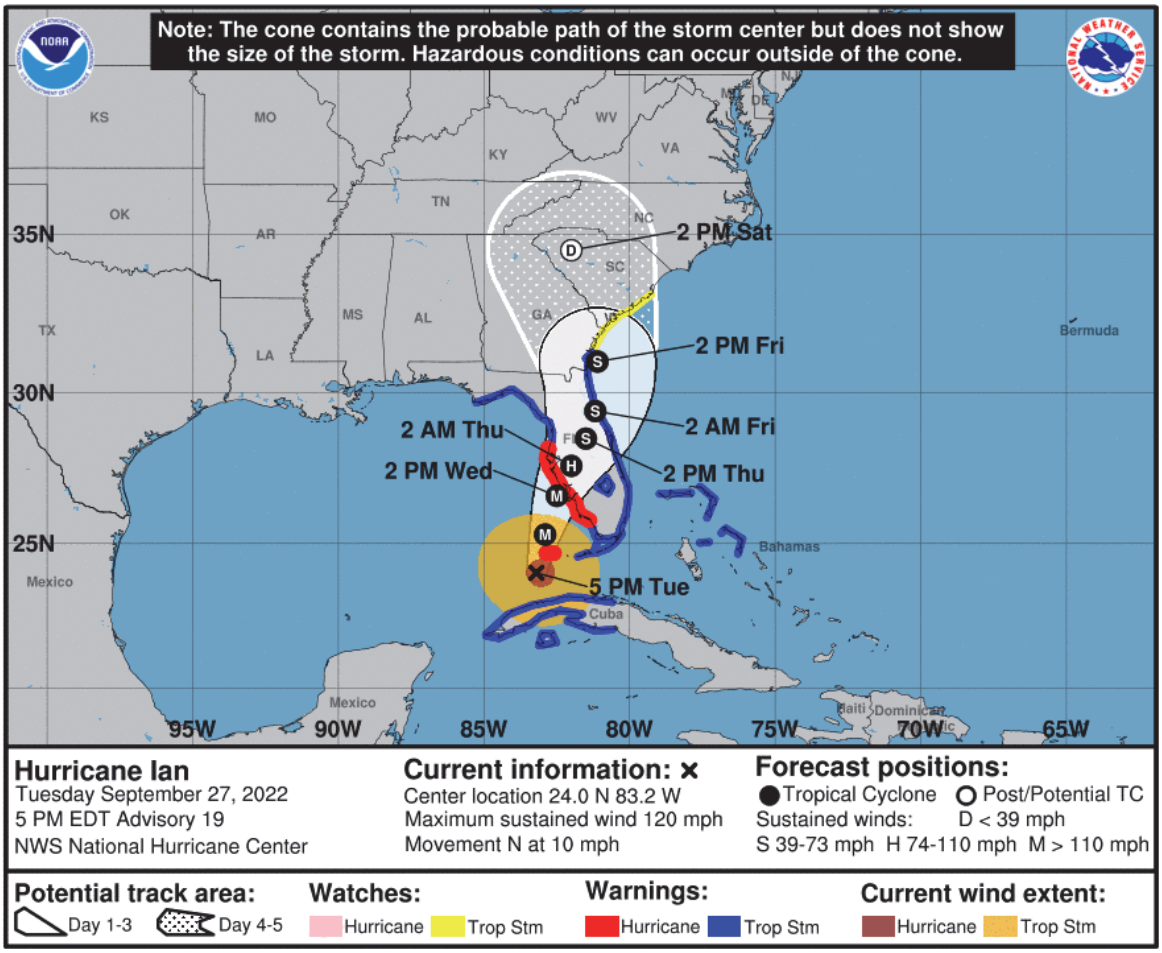
Key Messages from the National Hurricane Center

1. Life-threatening storm surge is increasingly likely along the Florida west coast where a storm surge warning is in effect, with the highest risk from Naples to the Sarasota region. Residents in these areas should listen to advice given by local officials and follow any evacuation orders for your area.

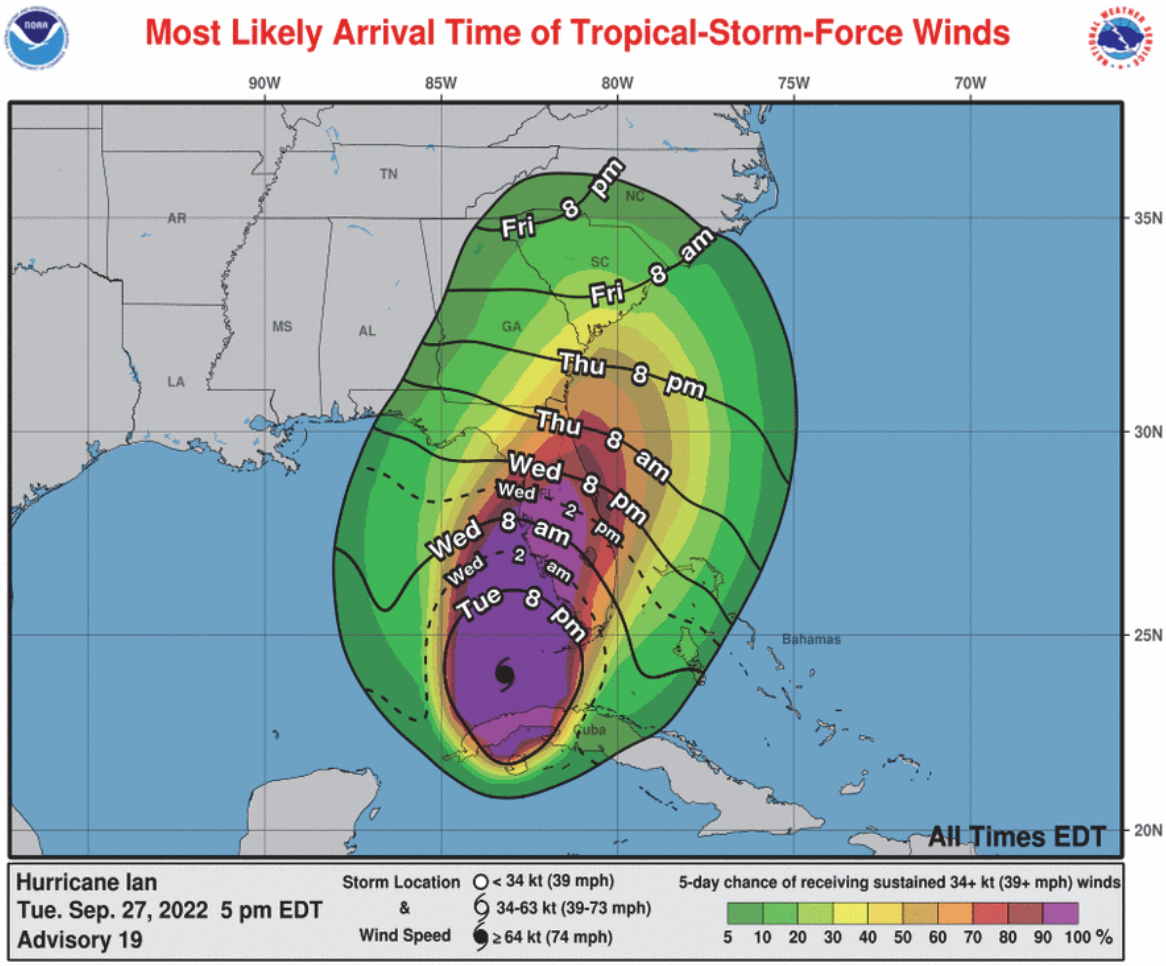
2. Hurricane-force winds are expected in the hurricane warning area in southwest and west-central Florida beginning Wednesday morning with tropical storm conditions expected overnight. Devastating wind damage is expected near the core of Ian. Residents should rush all preparations to completion.

3. Heavy rainfall will affect most of the Florida Peninsula for the next several days, spreading to the rest of the Southeast U.S. by Thursday and Friday, likely causing flash, urban, and small stream flooding. Considerable flooding is expected with widespread, prolonged moderate to major river flooding expected across central Florida.

National Hurricane Center Forecast

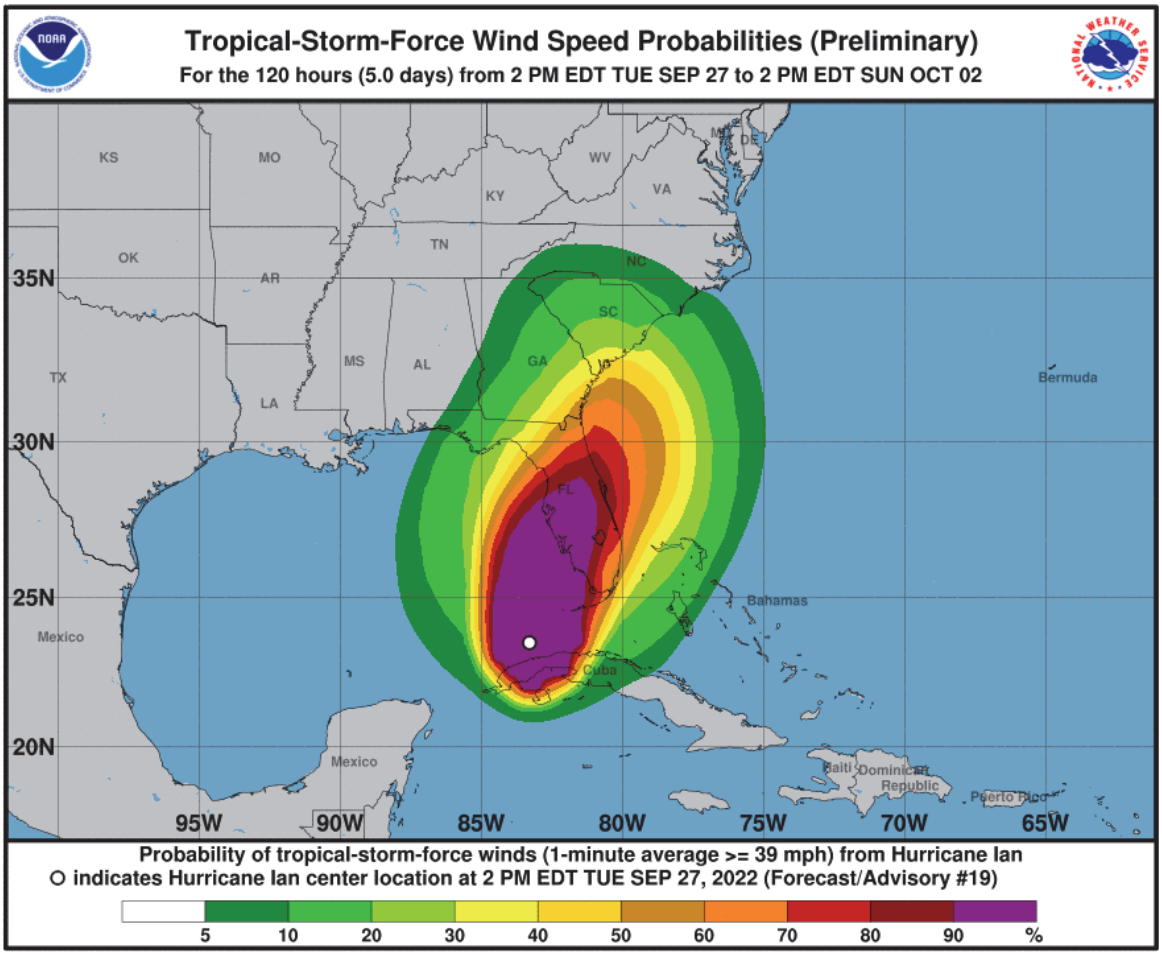


Most Likely Arrival Time of Tropical Storm-Force Winds

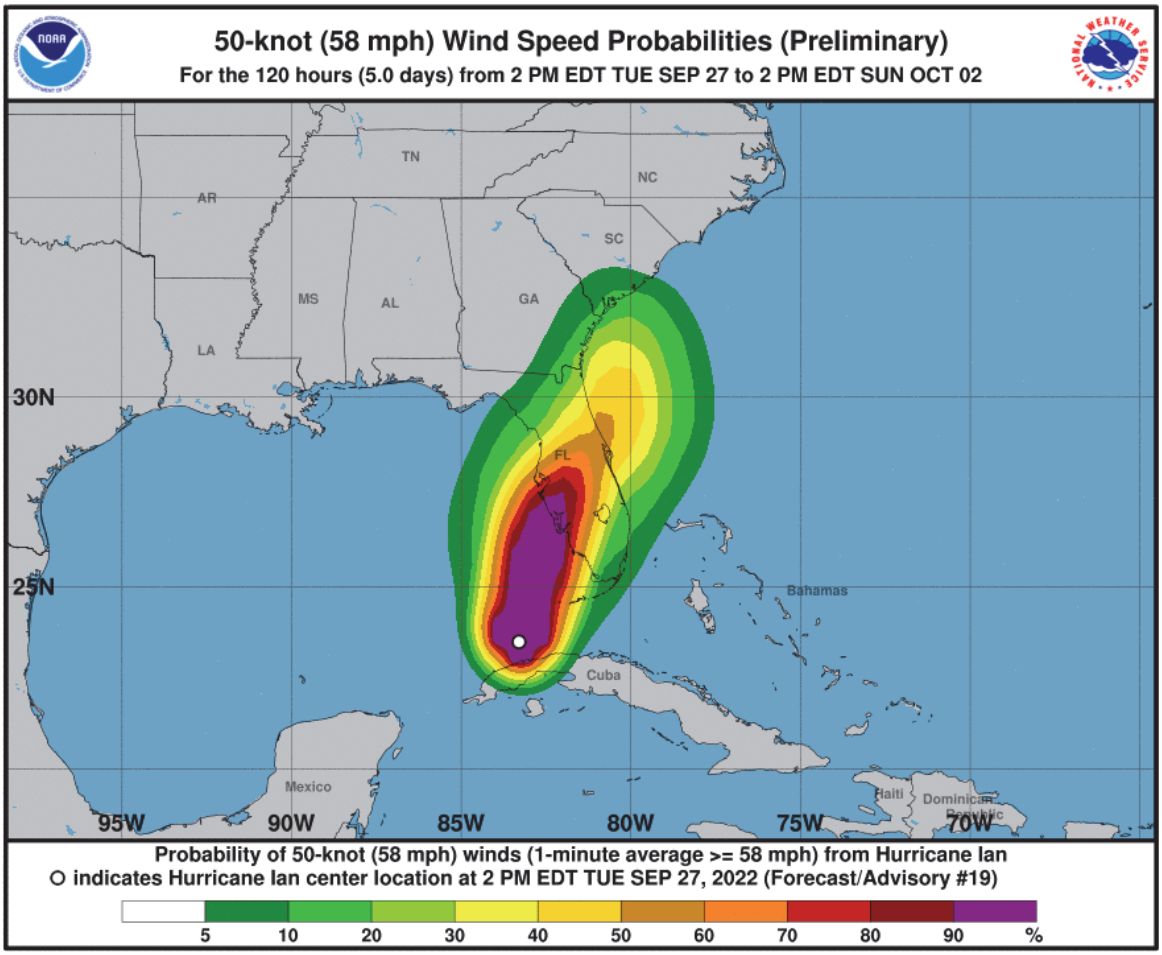


National Hurricane Center: Wind Speed Probabilities

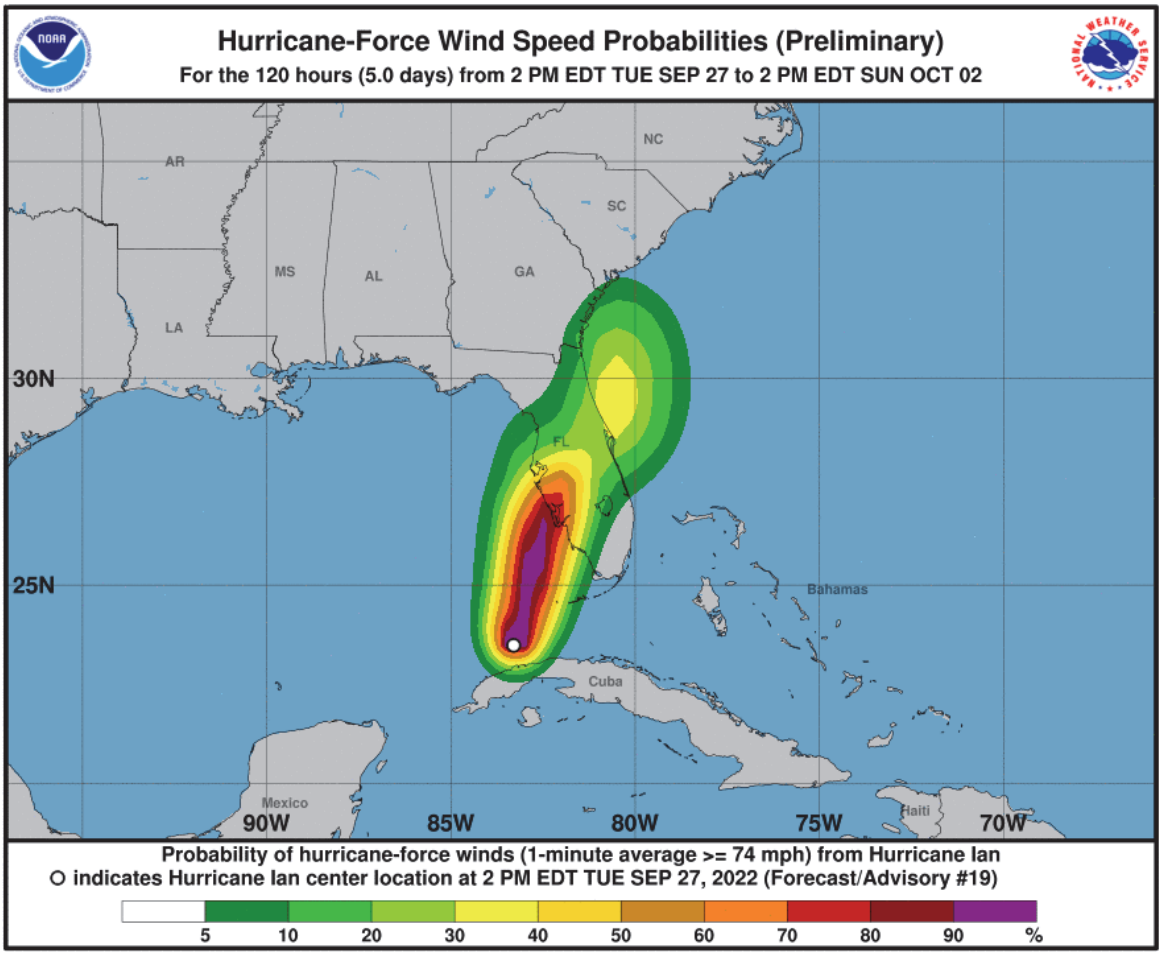
Tropical Storm-Force Wind Probabilities (≥40 mph (65 kph))



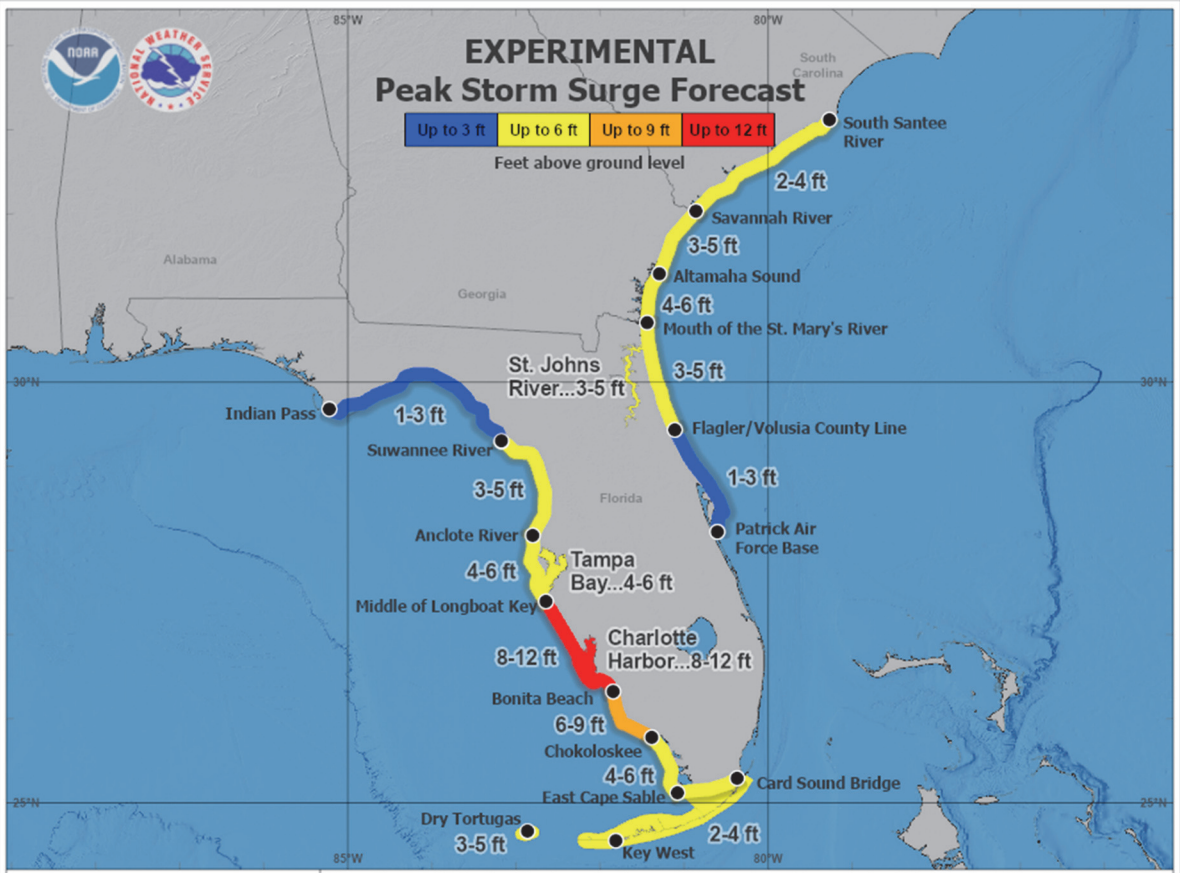
Wind Probabilities (≥60 mph (95 kph))



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

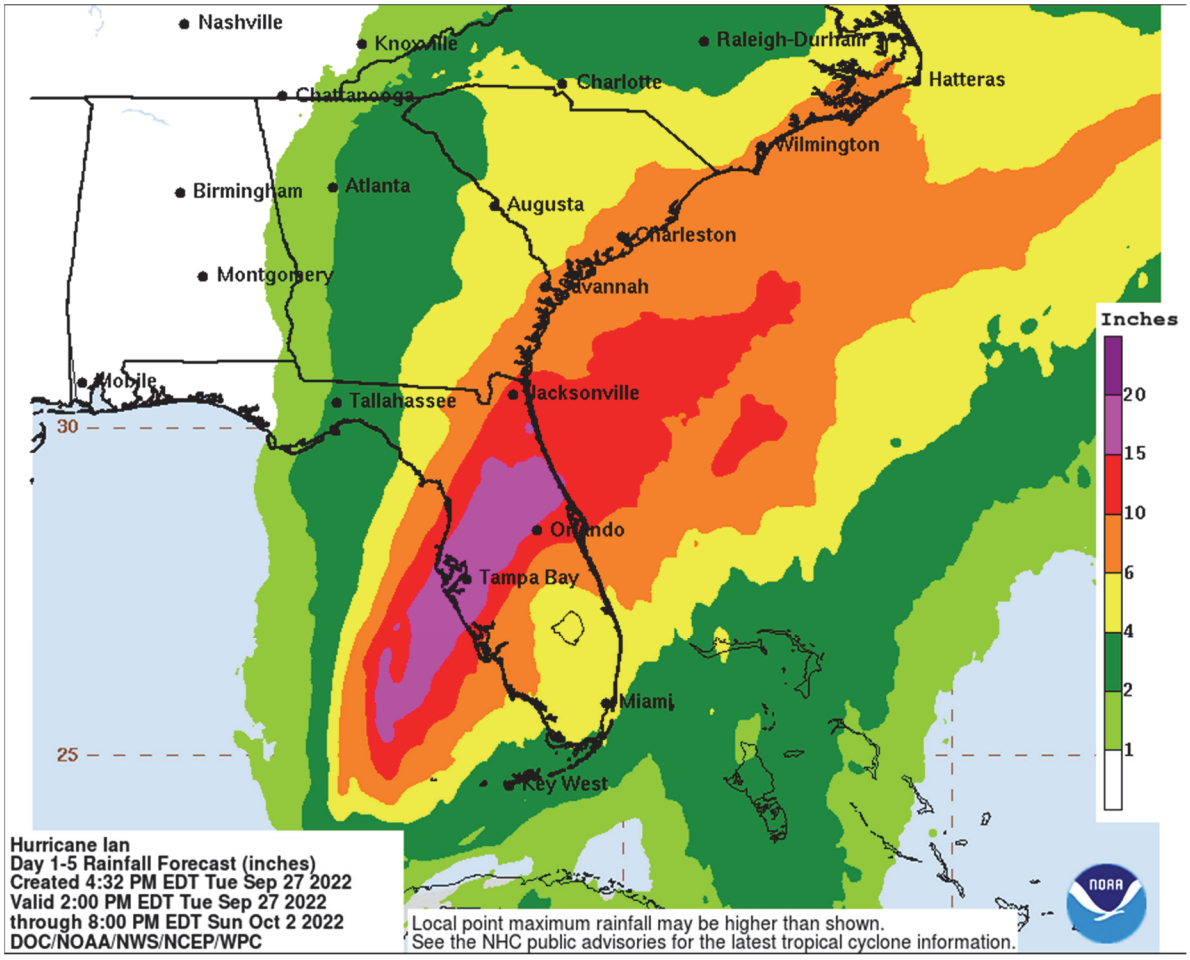


National Hurricane Center: Storm Surge Inundation Graphic

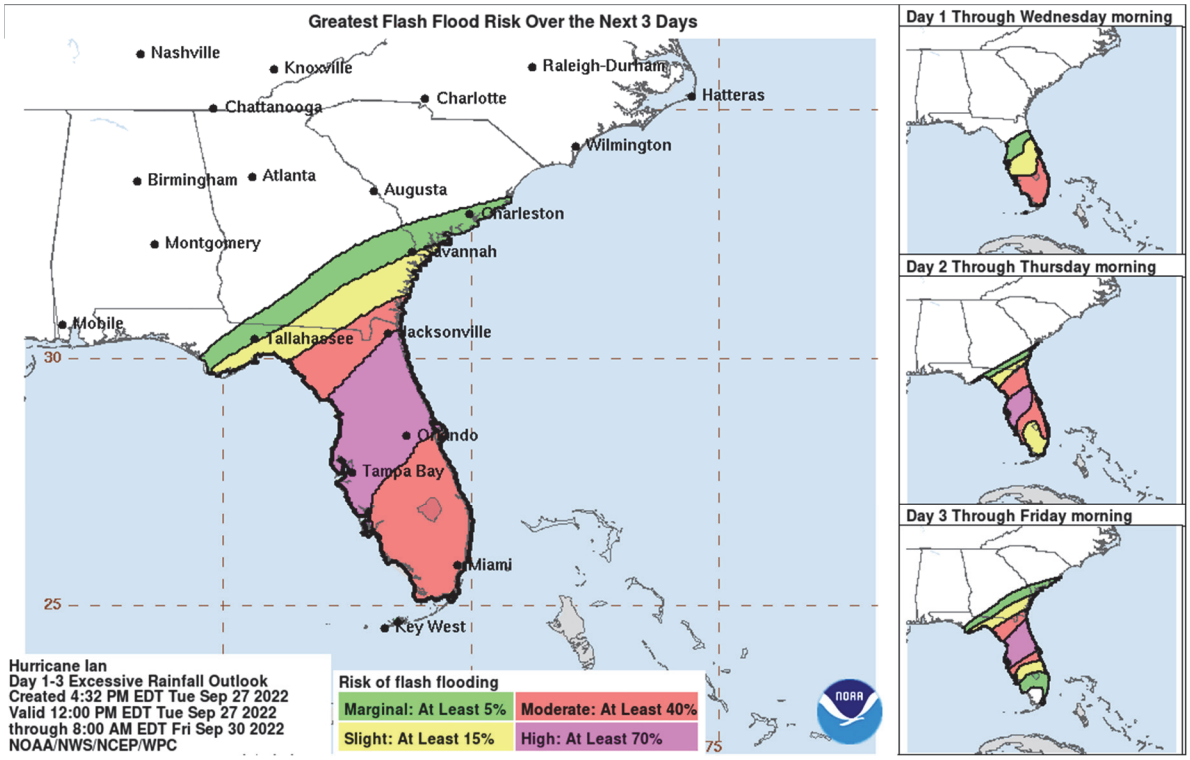


Hurricane Ian **Tuesday September 27, 2022** **05 PM EDT Advisory 19** **NWS National Hurricane Center**	**User Notes:** Water levels along the immediate coast could reach the following heights above ground level within the indicated areas. Elevated water levels will likely be accompanied by large and destructive waves. Colors are determined by the highest values in the associated forecast peak surge range. Values shown on this graphic are inclusive of tide.

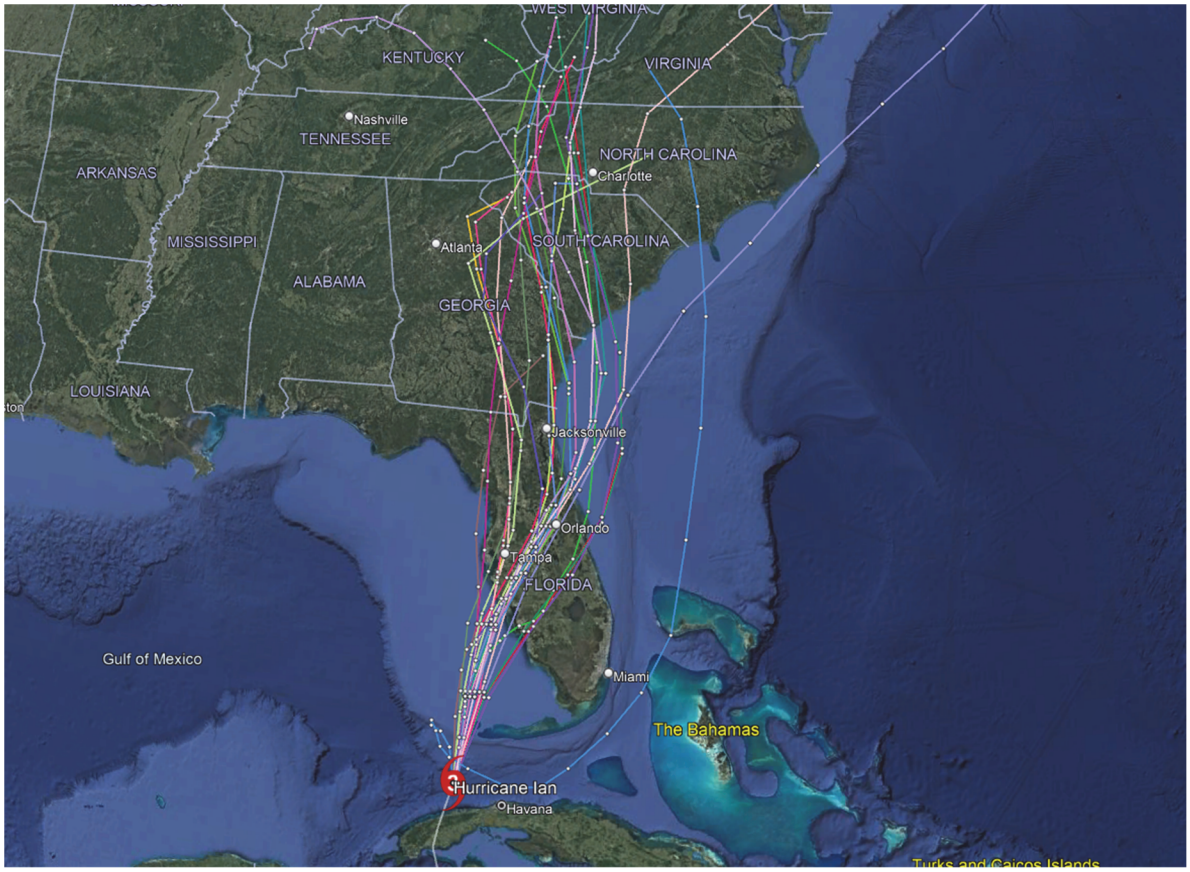
Weather Prediction Center: Rainfall Potential



Weather Prediction Center: Flash Flood Potential



Current 'Spaghetti' Model Output Data



Source: NOAA

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: Wednesday, September 28 after 15:00 UTC

AON

Appendix: Tropical Cyclone Intensity Classifications for Global Basins

<table>
<tr><th colspan="3">WIND SPEED</th><th colspan="7">BASINS AND MONITORING BUREAU</th></tr>
<tr><th rowspan="2">KT</th><th rowspan="2">MPH</th><th rowspan="2">KPH</th><th>NE Pacific, Atlantic</th><th>NW Pacific</th><th>NW Pacific</th><th>SW Pacific</th><th>Australia</th><th>SW Indian</th><th>North Indian</th></tr>
<tr><th>National Hurricane Center (NHC)</th><th>Joint Typhoon Warning Center (JTWC)</th><th>Japan Meteorological Agency (JMA)</th><th>Fiji Meteorological Service (FMS)</th><th>Bureau of Meteorology (BOM)</th><th>Meteo-France (MF)</th><th>India Meteorological Department (IMD)</th></tr>
<tr><td>30</td><td>35</td><td>55</td><td>Tropical Depression</td><td>Tropical Depression</td><td>Tropical Depression</td><td>Tropical Depression</td><td>Tropical Low</td><td>Tropical Depression</td><td>Deep Depression</td></tr>
<tr><td>35</td><td>40</td><td>65</td><td rowspan="5">Tropical Storm</td><td rowspan="5">Tropical Storm</td><td rowspan="3">Tropical Storm</td><td rowspan="3">Cat. 1 Tropical Cyclone</td><td rowspan="3">Cat. 1 Tropical Cyclone</td><td rowspan="3">Moderate Tropical Storm</td><td rowspan="3">Cyclonic Storm</td></tr>
<tr><td>40</td><td>45</td><td>75</td></tr>
<tr><td>45</td><td>50</td><td>85</td></tr>
<tr><td>50</td><td>60</td><td>95</td><td rowspan="3">Severe Tropical Storm</td><td rowspan="3">Cat. 2 Tropical Cyclone</td><td rowspan="3">Cat. 2 Tropical Cyclone</td><td rowspan="3">Severe Tropical Storm</td><td rowspan="3">Severe Cyclonic Storm</td></tr>
<tr><td>55</td><td>65</td><td>100</td></tr>
<tr><td>60</td><td>70</td><td>110</td></tr>
<tr><td>65</td><td>75</td><td>120</td><td rowspan="4">Cat. 1 Hurricane</td><td rowspan="9">Typhoon</td><td rowspan="14">Typhoon</td><td rowspan="4">Cat. 3 Severe Tropical Cyclone</td><td rowspan="4">Cat. 3 Severe Tropical Cyclone</td><td rowspan="4">Tropical Cyclone</td><td rowspan="9">Very Severe Cyclonic Storm</td></tr>
<tr><td>70</td><td>80</td><td>130</td></tr>
<tr><td>75</td><td>85</td><td>140</td></tr>
<tr><td>80</td><td>90</td><td>150</td></tr>
<tr><td>85</td><td>100</td><td>160</td><td rowspan="3">Cat. 2 Hurricane</td></tr>
<tr><td>90</td><td>105</td><td>170</td><td rowspan="3">Cat. 4 Severe Tropical Cyclone</td><td rowspan="3">Cat. 4 Severe Tropical Cyclone</td><td rowspan="6">Intense Tropical Cyclone</td></tr>
<tr><td>95</td><td>110</td><td>175</td></tr>
<tr><td>100</td><td>115</td><td>185</td><td rowspan="4">Cat. 3 Major Hurricane</td></tr>
<tr><td>105</td><td>120</td><td>195</td></tr>
<tr><td>110</td><td>125</td><td>205</td><td rowspan="6">Cat. 5 Severe Tropical Cyclone</td><td rowspan="6">Cat. 5 Severe Tropical Cyclone</td></tr>
<tr><td>115</td><td>130</td><td>210</td></tr>
<tr><td>120</td><td>140</td><td>220</td><td rowspan="4">Cat. 4 Major Hurricane</td><td rowspan="6">Very Intense Tropical Cyclone</td><td rowspan="6">Super Cyclonic Storm</td></tr>
<tr><td>125</td><td>145</td><td>230</td></tr>
<tr><td>130</td><td>150</td><td>240</td><td rowspan="5">Super Typhoon</td></tr>
<tr><td>135</td><td>155</td><td>250</td></tr>
<tr><td>140</td><td>160</td><td>260</td><td rowspan="2">Cat. 5 Major Hurricane</td></tr>
<tr><td>>140</td><td>>160</td><td>>260</td></tr>
</table>

About Aon

Aon plc (NYSE:AON) is a leading global professional services firm providing a broad range of risk, retirement and health solutions. Our 50,000 colleagues in 120 countries empower results for clients by using proprietary data and analytics to deliver insights that reduce volatility and improve performance.

The information contained herein and the statements expressed are of a general nature and are not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information and use sources we consider reliable, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

While Impact Forecasting® has tried to provide accurate and timely information, inadvertent technical inaccuracies and typographical errors may exist, and Impact Forecasting® does not warrant that the information is accurate, complete or current. The data presented at this site is intended to convey only general information on current natural perils and must not be used to make life-or-death decisions or decisions relating to the protection of property, as the data may not be accurate. Please listen to official information sources for current storm information. This data has no official status and should not be used for emergency response decision-making under any circumstances.

Cat Alerts use publicly available data from the internet and other sources. Impact Forecasting® summarizes this publicly available information for the convenience of those individuals who have contacted Impact Forecasting® and expressed an interest in natural catastrophes of various types. To find out more about Impact Forecasting or to sign up for the Cat Reports, visit Impact Forecasting's webpage at impactforecasting.com.