# Colorado State University (CSU) Atlantic Hurricane Season Forecast

Colorado State University (CSU) has issued its August forecast for the 2020 Atlantic Hurricane Season. The forecast calls for **24 named storms**, **12 hurricanes**, **and 5 major hurricanes** (**Category 3+**) between the months of June and November. This total includes the unprecedented nine named storms (Arthur, Bertha, Cristobal, Dolly, Edouard, Fay, Gonzalo, Hanna, and Isaías) which have already occurred. The updated forecast highlights the potential of an extremely active season.

With the release of their forecast, CSU continues to predict well above-normal tropical cyclone activity in the Atlantic Basin during the rest of the 2020 season. The report cites several factors as to how and why this activity was forecast. The biggest reason surrounds the fact that sea surface temperatures across the tropical Atlantic's Main Development Region (MDR) are much warmer than normal and vertical wind shear in the MDR and Caribbean Sea has been much weaker than normal. In fact, the current sea surface temperature pattern in the Atlantic is warmer than what has typically resulted in "hyperactive" Atlantic hurricane seasons of the past 40 years, and is fourth behind 2010, 2005, and 2017. NOAA defines a "hyperactive" season as one which includes Accumulated Cyclone Energy (ACE) values that exceed 165 percent of the climatological (1981-2010) median. The warmer ocean and reduced wind shear usually coincides with lower than normal sea level pressure and increased instability. All of these factors promote cyclogenesis.

Additionally, as the tropical Pacific Ocean continues to be marked by cool-neutral ENSO conditions, with sea surface temperatures slightly below normal in most of the central and eastern tropical Pacific, it remains likely that cool-neutral or weak La Niña conditions will exist for the peak of the season. As a reminder, atmospheric and oceanic conditions in the Atlantic Ocean typically become more favorable for cyclogenesis during La Niña phases.

CSU further highlights that forecast skill in August is at its best when evaluated in hindcast mode. Seasonal forecast skill improves as the peak of hurricane season approaches. The 2020 August release features the highest number of forecast named storms in the 36 years that the university has been issuing seasonal forecasts. The previous high was 20 in August 2005.

As always, a reminder that it only takes one significant landfalling storm to make a hurricane season notable from a humanitarian and financial perspective.

The tables on the next page show the CSU forecast, including probabilities of landfall on the United States mainland. The full report is available at CSU's Tropical Meteorology webpage (<a href="http://tropical.atmos.colostate.edu/">http://tropical.atmos.colostate.edu/</a>).



## **CSU Atlantic Basin Hurricane Season Forecast (June 1 – November 30)**

Forecast Parameter	Average Year (1981-2010)	2020 (April 2020)	2020 (June 2020)	2020 (August 2020)
Named Storms	12.1	16	19	24
Named Storm Days	59.4	80	85	100
Hurricanes	6.4	8	9	12
Hurricane Days	24.2	35	40	45
Major Hurricanes	2.7	4	4	5
Major Hurricane Days	6.2	9	9	11
Accumulated Cyclone Energy (ACE)	106	150	160	200
Net Tropical Cyclone Activity	116%	160%	170%	215%

Source: Colorado State University

## **CSU Major Hurricane Landfall Probabilities (June 1 – November 30)**

Forecast Parameter	Average Year	2020 (April 2020)	2020 (June 2020)	2020 (August 2020)
Entire U.S. Coastline	52%	69%	70%	74%
U.S. East Coast (including FL Peninsula)	31%	45%	46%	49%
U.S. Gulf Coast (FL Panhandle to Brownsville, TX)	30%	44%	45%	48%

<sup>\*\*\*</sup>Expected 63% risk of major hurricane tracking into the Caribbean (average is 42%)

Source: Colorado State University

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