# Colorado State University (CSU) Atlantic Hurricane Season Forecast

Colorado State University (CSU) has issued its June forecast for the 2021 Atlantic Hurricane Season. The forecast, which is largely unchanged from the April forecast, calls for **18 named storms, 8 hurricanes**, **and 4 major hurricanes (Category 3+)**. This includes Tropical Storm Ana, which formed prior to June 1.

With the release of their forecast, CSU is predicting slightly above-normal tropical cyclone activity in the Atlantic Basin during the rest of the 2021 season. The report cites several factors as to how and why this activity was forecast. The biggest reason surrounds the fact that the tropical Pacific Ocean remains characterized by ENSO-neutral conditions, which ended the La Niña phase seen prominently in 2020 and early 2021. The group cities an expectation that ENSO-neutral conditions are likely to persist during the peak hurricane season months (August, September, October). It is unlikely that El Niño conditions will occur this year. El Niño typically correlates with reduced tropical activity in the Atlantic Ocean; while La Niña conditions often lead to enhanced cyclogenesis. The most recent statistical and dynamical ENSO model output from NOAA currently highlights a 50 percent likelihood of ENSO-neutral conditions and a 42 percent likelihood of a La Niña event during the peak development month timeframe (August-October). There is just an 8 percent chance of El Niño.

A second factor revolves around current sea surface temperatures across the Atlantic Ocean. Water temperatures in the tropical Atlantic Ocean remain near-normal, though most of the subtropical North Atlantic is warmer than normal. A warmer subtropical North Atlantic in the late spring typically correlates with a weaker subtropical ridge of high pressure than often results in warmer-than-normal tropical Atlantic Ocean waters by the peak of the hurricane season. CSU notes that the current Atlantic sea surface temperature anomaly pattern is well correlated with what is typically seen in active Atlantic hurricane seasons.

CSU further highlights that forecast skill in June has moderate success when evaluated in hindcast mode. Forecast skill improves as the peak of hurricane season approaches.

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. Visit the Appendix below to view historical seasonal forecast performance versus the actual observed Atlantic activity. The full report is available at CSU's Tropical Meteorology webpage (<u>http://tropical.atmos.colostate.edu/</u>). The next forecast update is expected on August 5.



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

Forecast Parameter	Average Year (1991-2020)	2021 (April 2021)	2021 (June 2021)
Named Storms	14	17	18
Named Storm Days	69	80	80
Hurricanes	7	8	8
Hurricane Days	27	35	35
Major Hurricanes	3	4	4
Major Hurricane Days	7	9	9
Accumulated Cyclone Energy (ACE)	123	150	150
Net Tropical Cyclone Activity	135%	160%	160%

Source: Colorado State University

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

Forecast Parameter	Average Year	2021 (April 2021)	2021 (June 2021)
Entire U.S. Coastline	52%	69%	69%
U.S. East Coast (including FL Peninsula)	31%	45%	45%
U.S. Gulf Coast (FL Panhandle to Brownsville, TX)	30%	44%	44%

\*\*\*Expected 58% risk of major hurricane tracking into the Caribbean (average is 42%)

Source: Colorado State University

# Appendix

Season	April NS	June NS	August NS	Actual NS	April HU	June HU	August HU	Actual HU	April MHU	June MHU	August MHU	Actual MHU
2000	11	12	11	15	7	8	7	8	3	4	3	3
2001	10	12	13	15	6	7	7	9	2	3	3	4
2002	12	11	10	12	7	6	4	4	3	2	1	2
2003	12	14	18	16	8	8	10	7	3	3	3	3
2004	14	14	13	15	8	8	7	9	3	3	3	6
2005	13	15	20	28	7	8	11	15	3	4	6	7
2006	17	17	16	10	9	9	7	5	5	5	3	2
2007	17	17	16	15	9	9	8	6	5	5	4	2
2008	15	15	17	16	8	8	9	8	4	4	5	5
2009	12	11	10	9	6	5	4	3	2	2	2	2
2010	15	18	18	19	8	10	10	12	4	5	5	5
2011	16	16	16	19	9	9	9	7	5	5	5	4
2012	10	13	14	19	4	5	6	10	2	2	2	2
2013	18	18	18	14	9	9	8	2	4	4	3	0
2014	9	10	10	8	3	4	4	6	1	1	1	2
2015	7	8	8	11	3	3	2	4	1	1	1	2
2016	13	14	15	15	6	6	6	7	2	2	2	4
2017	11	14	16	17	4	6	8	10	2	2	3	6
2018	14	14	12	15	7	6	5	8	3	2	1	2
2019	13	14	14	18	5	6	7	6	2	2	2	3
2020	16	19	24	30	8	9	12	14	4	4	5	7
2021	17	18			8	8			4	4		

Historical Colorado State University Forecast Validation Since 2000

NS: Named Storms HU: Hurricanes (Category 1+) MHU: Major Hurricanes (Category 3+)

## 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.

#### © Aon plc 2021. All rights reserved.

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.

#### Copyright © by Impact Forecasting®

No claim to original government works. The text and graphics of this publication are provided for informational purposes only. While Impact Forecasting<sup>®</sup> has tried to provide accurate and timely information, inadvertent technical inaccuracies and typographical errors may exist, and Impact Forecasting<sup>®</sup> 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<sup>®</sup> summarizes this publicly available information for the convenience of those individuals who have contacted Impact Forecasting<sup>®</sup> 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 <u>impactforecasting.com</u>.

Copyright © by Aon plc. All rights reserved. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise. Impact Forecasting<sup>®</sup> is a wholly owned subsidiary of Aon plc.