

NOAA NATIONAL HURRICANE CENTER

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Update on National Hurricane Center Products and Services for 2021

Changes include:

1) Issuance of Routine Atlantic Tropical Weather Outlooks on May 15

Although the Atlantic Hurricane season officially begins on June 1st, it is not uncommon for tropical cyclones to form on or prior to that date. To provide more consistent information on the potential for late May and early June systems, NHC will now begin the routine issuance of the Atlantic Tropical Weather Outlook at 8 a.m. EDT on May 15, which is when routine Tropical Weather Outlooks begin for the eastern Pacific basin. The Tropical Weather Outlook is issued every six hours from May 15 through November 30 at 2 a.m., 8 a.m., 2 p.m., and 8 p.m. EDT. With the change to standard time on November 7, the issuance times are 1 a.m., 7 a.m., 1 p.m., and 7 p.m. EST. The Tropical Weather Outlook describes significant areas of disturbed weather and their potential for tropical cyclone formation during the next five days. An accompanying graphic that highlights each disturbance and its potential formation area is available on the NHC website at www.hurricanes.gov.

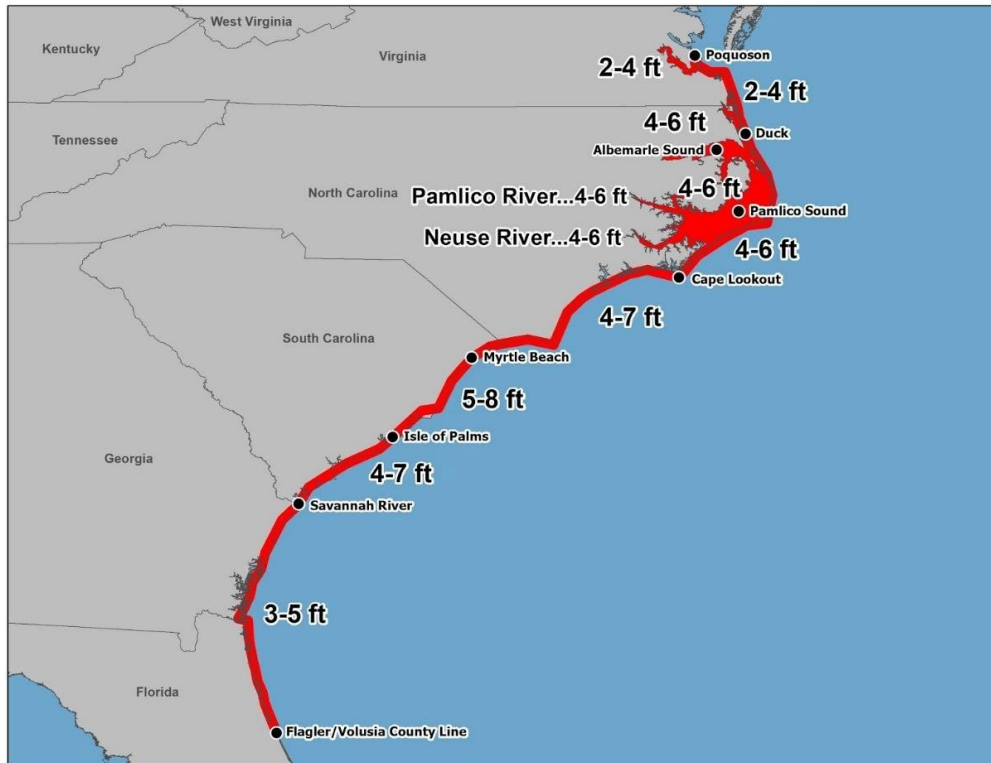
Special Tropical Weather Outlooks are issued to provide updates, as necessary, in between the regularly scheduled issuance of the Tropical Weather Outlook or when needed outside of the May 15 to November 30 issuance period. Special Tropical Weather Outlooks are issued under the same WMO and AWIPS headers as the regular Tropical Weather Outlooks.

2) Greek Alphabet replaced with alternate name list for tropical storms

On March 17, 2021, the World Meteorological Organization Hurricane Committee members agreed to create a supplemental list of names A-Z (excluding Q, U, X, Y, Z on the Atlantic list) that would be used in lieu of the Greek alphabet when the standard tropical storm name list is exhausted in a given season in either the Atlantic basin or eastern North Pacific basin. Names on this list could be retired and replaced, when required. The supplemental list is at www.nhc.noaa.gov/aboutnames_history.shtml

3) Graphical depiction of storm surge inundation values

NHC will continue to provide an experimental graphic in 2021 that will depict the expected storm surge inundation values for the United States Gulf and Atlantic coasts, Puerto Rico, and the U.S. Virgin Islands that are provided in the tropical cyclone public advisory (TCP). These values represent the peak height the water could reach above normally dry ground somewhere within the specified areas. This graphic will be made available on the NHC webpage.



4) Upgrade of the operational probabilistic storm surge (P-Surge) forecasting system

For the 2021 hurricane season, NHC and the Meteorological Development Lab (MDL) will upgrade the operational probabilistic storm surge (P-Surge) forecasting system from version 2.8 to 2.9. P-Surge is the primary modeling system and guidance information which informs all NWS coastal inundation forecasts, warnings, and risk communication during tropical cyclone landfall threats.

The upgrade includes improved tropical cyclone wind structure and storm size information that will give better predictability & accuracy, run-to-run consistency, and statistical reliability. Storm size and structure (or how far the winds extend from the center) are often some of the most important factors in storm surge flooding.

The improvements stand out best between 36-60 hours prior to landfall, giving better overall predictability in the critical 48-60-hour lead window essential for an effective evacuation decision making and execution. Because of the improvement, NHC will extend the lead times of the availability of P-Surge guidance and the associated potential storm surge flooding graphic from 48 hours to 60 hours in situations where there is high confidence. However, the existing timing of storm surge watches (48 hours) and warnings (36 hours) will remain unchanged as will the existing P-Surge data formats, dissemination systems, file naming conventions, and WMO headers.

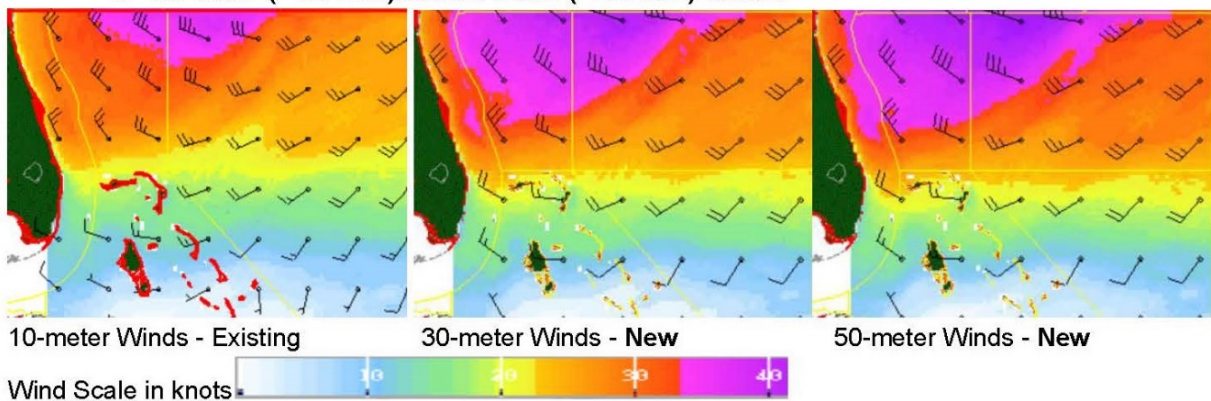
In addition, NHC will update the potential storm surge flood graphic to more effectively mask intertidal areas and wetlands, including marshes and bayous. This will allow users to better focus on where flooding could occur over normally dry land or within populated areas.

This P-Surge upgrade will provide accurate guidance to key partners for more precise placement of key instruments and sensors in advance of impending landfalling tropical cyclones in support of planned COASTAL Act implementation at NOAA.

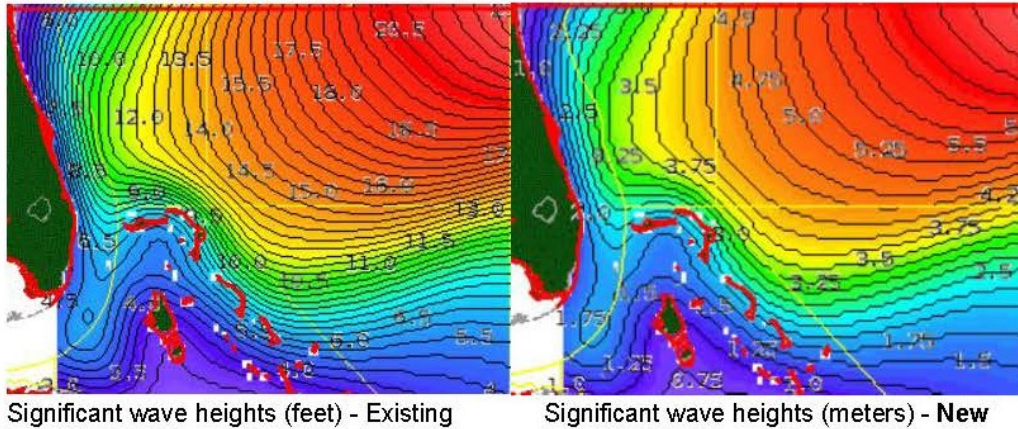
5) New experimental weather forecast elements added for “Blue Water” Mariners

To improve services for the “Blue Water” mariner well away from land, the Tropical Analysis and Forecast Branch (TAFB) of NHC is introducing new experimental weather forecast elements via our Marine Graphical Composite Forecast map. While this is internet-based and not necessarily available to everyone offshore, it is designed to help any mariners in port who may have limited access to the internet, such as relatively low-bandwidth WiFi provided in many remote marinas and ports. The new weather elements have been added to the existing set to help keep mariners informed and safe. The new experimental weather forecast elements include the following:

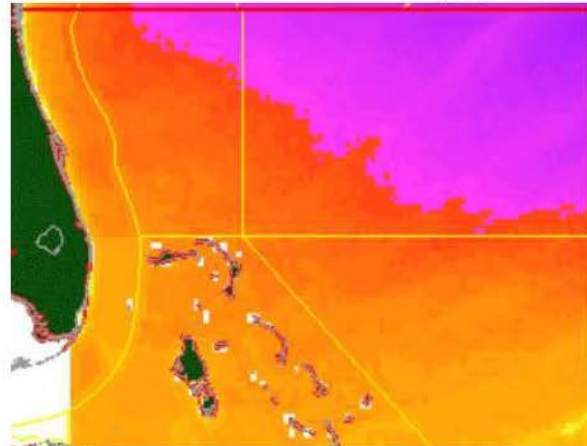
- 30-meter (~100 feet) and 50-meter (~165 feet) Winds:



- **Significant Wave Heights in meters:**



- **Cumulative Maximum Winds over five days (10-meter winds):**



These new experimental weather elements are available via the existing TAFB's Marine Graphical Composite Forecast maps:

Gulf of Mexico, Caribbean Sea and Tropical North Atlantic
https://www.nhc.noaa.gov/marine/forecast/enhanced_atlcfull.php

Tropical Eastern North Pacific:
https://www.nhc.noaa.gov/marine/forecast/enhanced_epacfull.php

6) Annual update to the track forecast error cone

The size of the tropical cyclone track forecast error cone for the Atlantic and eastern North Pacific basins will be very similar compared to 2020, with any changes less than 5 nautical miles at all time periods. The cone represents the probable track of the center of a tropical cyclone, and is formed by enclosing the area swept out by a set of imaginary circles placed along the forecast track (at 12, 24, 36 hours, etc.). The size of each circle is set so that two-thirds of historical official forecast errors over the previous five years (2016-2020) fall within the circle. The circle radii defining the cones in 2021 for the Atlantic, and eastern and central North Pacific basins are given in the table below:

Forecast Period (hours)	2/3 Probability Circle, Atlantic Basin (nautical miles)	2/3 Probability Circle, Eastern North Pacific Basin (nautical miles)	2/3 Probability Circle, Central North Pacific Basin (nautical miles)
12	27	25	34
24	40	37	49
36	55	51	66
48	69	64	81
60	86	77	95
72	102	89	120
96	148	114	137
120	200	138	156

A video showing how to properly interpret and use the cone graphic can be found at: www.nhc.noaa.gov/cone_usage.php

Pronunciation of storm names

Pronunciation guides for storm names including the phonetic pronunciations of all Atlantic and eastern North Pacific storm names is found on the NHC website at:

Atlantic: www.nhc.noaa.gov/pdf/aboutnames_pronounce_atlc.pdf

Eastern North Pacific: www.nhc.noaa.gov/pdf/aboutnames_pronounce_epac.pdf

Social Media

1) The National Hurricane Center has a **Facebook** page. The “NOAA NWS National Hurricane Center” page provides updates about the NHC outreach and education campaign and other items that might be of interest to the public throughout the year. During the hurricane season, the site contains a daily tropical weather update for both the Atlantic and eastern North Pacific basins, as well as alerts regarding any tropical cyclone activity as needed. The NHC also conducts Facebook Live briefings during tropical cyclone events. The NHC Facebook page is found at: www.facebook.com/NWSNHC

2) The National Hurricane Center is on **Twitter** – and has five twitter accounts:

Interactive Outreach (**@NWSNHC**) - The broadest in scope of NHC's Twitter accounts, **@NWSNHC** is our primary mechanism for engaging the public and our partners in two-way conversations. This account will cover general topics such as education and outreach, NWS products and policies concerning tropical cyclones, significant events, or just fun facts – from across all the branches that comprise NHC.

There are two operational Twitter feeds, one for the Atlantic basin - **@NHC_Atlantic** (which includes the Gulf of Mexico and Caribbean Sea) and one for the eastern North Pacific basin - **@NHC_Pacific**. Automated tweets are sent via these accounts whenever NHC issues:

- A public advisory regarding a tropical cyclone (TCP)
- A tropical cyclone update (TCU)

Each tweet contains a link to access the corresponding product on the NHC website. These two operational accounts will also be used to supplement and augment the formal tropical cyclone product suite, with occasional notices on such topics as reconnaissance aircraft status, announcements on NHC's intention to initiate advisories on a new tropical cyclone, highlights of key messages during active cyclones, etc.

The NHC storm surge group can be followed on Twitter at **@NHC_Surge**. This account enhances storm surge forecasts by providing real-time reports and observations during an event (resources permitting). The feed will enhance preparedness and outreach efforts throughout the year, and provide news and announcements on updates to the SLOSH modeling system and storm surge decision support tools.

The Tropical Analysis and Forecast Branch (TAFB) is on Twitter at **@NHC_TAFB**. TAFB, an operational arm of the NHC, is responsible for issuing more than 100 marine products daily covering millions of square miles of the Atlantic and eastern Pacific Ocean. This account highlights significant weather events over the marine area as well as its outreach programs.

3) An audio podcast will be available when the media pool is activated.

The audio podcast RSS/XML feed for top-of-the-hour briefings will be operational when the media pool is activated: www.nhc.noaa.gov/audio. The media pool is typically activated when a hurricane watch is issued for any portion of the U.S. contiguous coastline.

9) On the Web:

National Hurricane Center: www.hurricanes.gov

Graphical Tropical Weather Outlook:
www.nhc.noaa.gov/aboutnhcgraphics.shtml#GTWO

Definition of NHC Track Forecast Cone: www.nhc.noaa.gov/aboutcone.shtml
www.nhc.noaa.gov/cone_usage.php

National Hurricane Preparedness Week: www.hurricanes.gov/prepare

National Hurricane Center Facebook page: www.facebook.com/NWSNHC

National Hurricane Center Twitter page: www.nhc.noaa.gov/twitter.shtml

Contact: NHC Public Affairs: nhc.public.affairs@noaa.gov

April 01, 2021