

NOAA NATIONAL HURRICANE CENTER

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Update on National Hurricane Center Products and Services for 2022

1) Graphical depiction of storm surge inundation values

Since May 2020, the NWS has been providing an experimental graphic that depicts the Peak Storm Surge Forecast from the Tropical Cyclone Public Advisory Product when storm surge watches or warnings are in effect. The graphic has been modified for the 2022 season to include an updated disclaimer and color coding for the peak storm surge inundation forecast at the coast as follows:

Blue = Up to 3 ft above ground level

Yellow = Up to 6 ft above ground level

Orange = Up to 9 ft above ground level

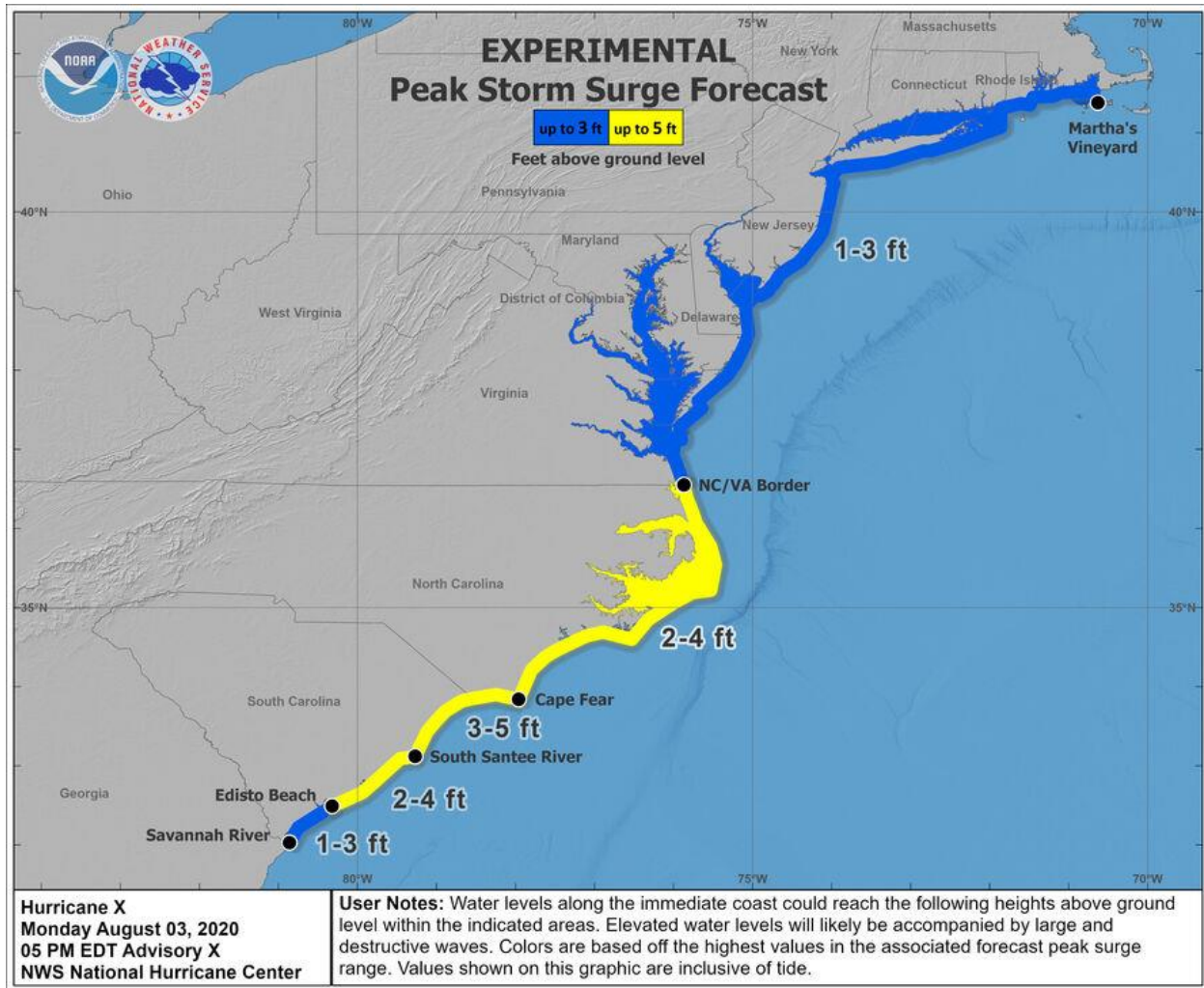
Red = Up to 12 ft above ground level

Purple = 12 ft or greater above ground level

Values and colors in the legend will max out at the highest storm surge inundation forecast as appropriate.

Storm surge watches and warnings are currently issued in the Atlantic basin only for locations along the U.S. East and Gulf Coasts and in Puerto Rico and the U.S. Virgin Islands. The graphic will be made available approximately 15 minutes after the release of the scheduled advisory time. Scheduled advisory times are 5 a.m., 11 a.m., 5 p.m. and 11 p.m. EDT. When storm surge watches or warnings are active, the graphic can be found in the relevant active storm table on the NHC website.

An example of the graphic is:



2) Geographic or System Descriptors in the Tropical Weather Outlook

NHC will begin including section headers in the Tropical Weather Outlook (TWO) that identify each weather disturbance of interest, or where each disturbance is located within the ocean basin. Paragraphs describing active systems for which advisories are being issued will also begin with a header. The purpose is to make the TWO text product more readable and scannable, and to make it easier to identify or differentiate multiple weather disturbances. *The text blocks linked to the Graphical Tropical Weather Outlook will continue to include disturbance numbers as in previous hurricane seasons.* An example of the new text TWO format is shown below

Tropical Weather Outlook
NWS National Hurricane Center Miami FL
200 PM EDT Sun Sep 12 2021

For the North Atlantic...Caribbean Sea and the Gulf of Mexico:

Active Systems:

The National Hurricane Center is issuing advisories on newly formed Tropical Storm Nicholas, located over the southwestern Gulf of Mexico.

Near Cabo Verde Islands:

Shower activity associated with a tropical wave located just west of the westernmost Cabo Verde Islands has diminished since this morning. Environmental conditions have become unfavorable, and significant development of this system is no longer expected.

* Formation chance through 48 hours...low...near 0 percent.

* Formation chance through 5 days...low...near 0 percent.

Far Northeastern Atlantic:

Shower and thunderstorm activity remains limited in association with a non-tropical area of low pressure located over the far northeastern Atlantic a few hundred miles east-northeast of the Azores. This system is forecast to move south-southeastward towards warmer waters, which could allow the low to gradually acquire some tropical or subtropical characteristics during the next day or so. After that time, the system is forecast to move inland over Portugal ending any further development chance.

* Formation chance through 48 hours...low...20 percent.

* Formation chance through 5 days...low...20 percent.

Eastern Tropical Atlantic:

Another tropical wave is forecast to move off the west coast of Africa on Monday. Gradual development of this system is possible thereafter, and a tropical depression could form by the middle of the week while it moves westward across the eastern tropical Atlantic Ocean.

* Formation chance through 48 hours...low...20 percent.

* Formation chance through 5 days...medium...60 percent.

Northeast of the Bahamas:

An area of low pressure is expected to form north of the southeastern or central Bahamas in a few days resulting from a tropical wave interacting with an upper-level trough. Gradual development of this system is possible, and a tropical depression could form later this week several hundred miles southeast of the Carolinas while it moves northwestward across the western Atlantic.

* Formation chance through 48 hours...low...near 0 percent.

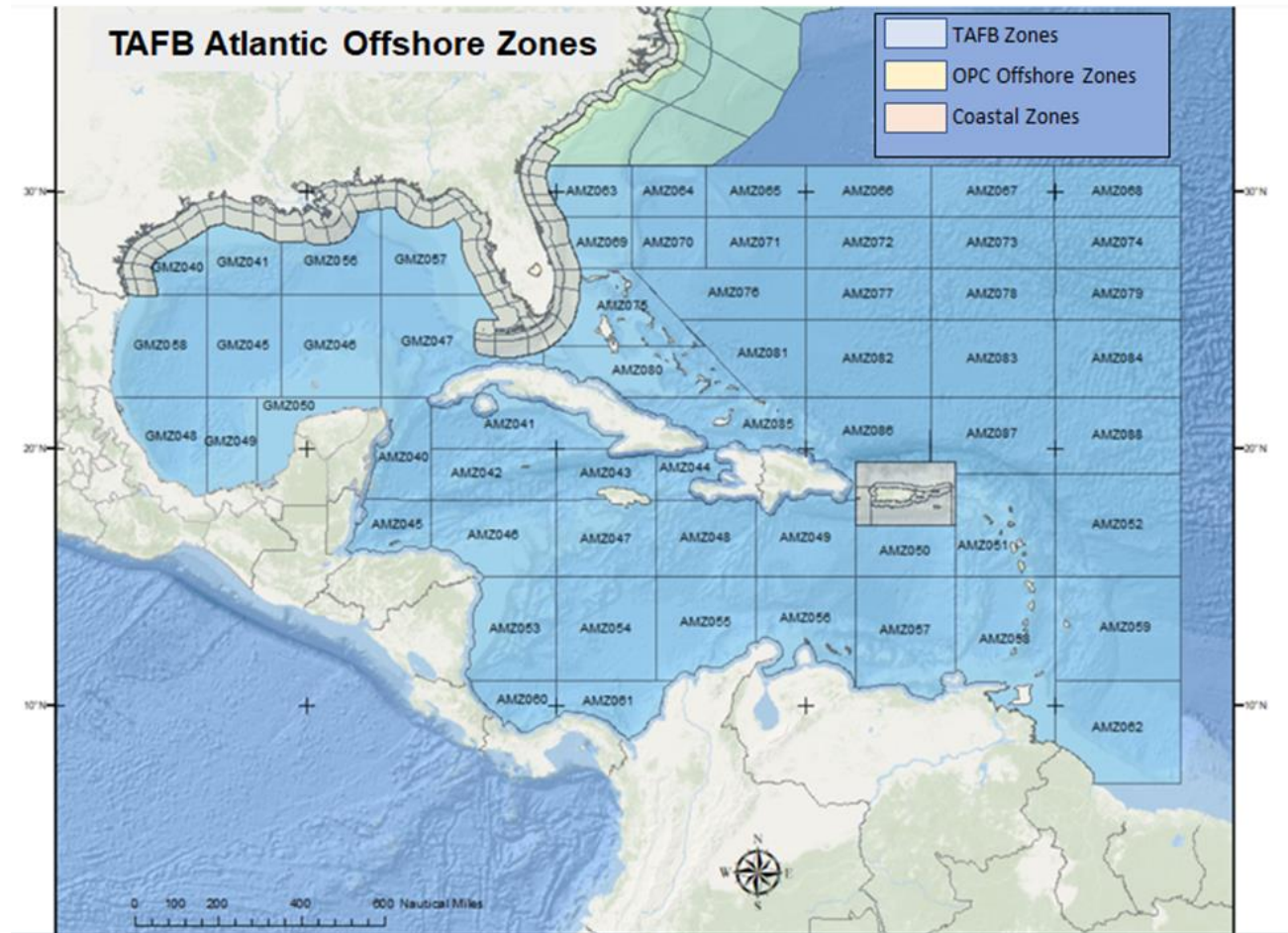
* Formation chance through 5 days...medium...50 percent.

Forecaster XXXX

3) Expansion of Marine Forecast Zones

The Tropical Analysis and Forecast Branch (TAFB) of the National Hurricane Center issues a plain text marine forecast for 32 zones in the Gulf of Mexico, Caribbean Sea, and much of the Atlantic Ocean south of 31N and west of 55W. Several of the zones are fairly large as a result, occasionally requiring TAFB forecasters to include additional text during the active weather pattern, resulting in complex text. Smaller zones balance precision and clarity. The configuration for 32 zones goes back to 2011 when the zones were designed to offer merely adequate forecast precision while limiting the number of zones as much as possible. Now, the existing 32 zones have become 52 zones including the Gulf of Mexico, Caribbean Sea, and 8 new zones in the Atlantic Ocean. This will benefit mariners with a better quality to the forecast with the zones configuration more closely adhered to the local climatology. The smaller zones will consequently aid in more precise wording and would thus better inform mariners about adverse conditions.

These Offshore Waters Forecasts will continue to provide mariners with a general overview of large scale environmental marine conditions out five days, to include winds, seas, and major weather impacts. Marine warnings such as gale warnings or warnings for tropical storms or hurricanes will be headlined for each affected zone through the first 36 to 48 hours of the forecast period. In addition, brief, plain-language synopses are included in the Forecast for the Gulf of Mexico, the Caribbean Sea and Tropical Atlantic, and the Southwest North Atlantic areas. Below is the map showing the new configuration of TAFB Atlantic Offshore marine zones:



4) Annual update to the track forecast error cone

The size of the tropical cyclone track forecast error cone for the Atlantic basin will be slightly smaller compared to 2021. For the eastern North Pacific basin, it will be unchanged at the 3, 12 and 36-hour forecast periods and slightly larger at the other time periods when compared to 2021.

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 (2017-2021) fall within the circle. The circle radii defining the cones in 2022 for the

Atlantic and eastern North Pacific basins are given in the table below. The change from 2021 values (in parenthesis) are expressed for both nautical miles (n mi) and percent.

| Track Forecast Cone Two-Thirds Probability Circles (n mi) | | |
|---|----------------|-----------------------------|
| Forecast Period (h) | Atlantic Basin | Eastern North Pacific Basin |
| 3 | 16 (0: 0%) | 16 (0: 0%) |
| 12 | 26 (-1: -4%) | 25 (0: 0%) |
| 24 | 39 (-1: -3%) | 38 (1: 3%) |
| 36 | 52 (-3: -6%) | 51 (0: 0%) |
| 48 | 67 (-2: -3%) | 65 (1: 2%) |
| 60 | 84 (-2: -2%) | 79 (2: 3%) |
| 72 | 100 (-2: -2%) | 93 (4: 4%) |
| 96 | 142 (-6: -4%) | 120 (6: 5%) |
| 120 | 200 (2: 1%) | 146 (8: 5%) |

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

Alternate name lists (used when the 6-year list is exhausted):

Atlantic: https://www.nhc.noaa.gov/pdf/aboutnames_pronounce_atlc_alt.pdf

Eastern North Pacific:

https://www.nhc.noaa.gov/pdf/aboutnames_pronounce_epac_alt.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).

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

May 9, 2022