

**INTERDEPARTMENTAL COMMITTEE FOR METEOROLOGICAL SERVICES AND
SUPPORTING RESEARCH (ICMSSR)**

**WORKING GROUP FOR TROPICAL CYCLONE OPERATIONS AND RESEARCH
(WG/TCOR)**

Meeting 2020-1

February 25, 2020

Aircraft Operations Center,
Lakeland, Florida

1. OPENING REMARKS

The WG/TCOR Executive Secretary, Mr. David Chorney provided opening remarks and reviewed the agenda.

2. OLD ACTION ITEMS

- Item 19-01 Michael Brennan, NHC Title: Make 60-hour forecast information operational

DISCUSSION: In 2019, NHC began providing 60-h forecast track, intensity, and 34/50-kt wind radii forecasts internally within the NWS via the PRETCM. These forecasts were also used as inputs into PSurge and the NHC wind speed probabilities.

RECOMMENDATION: Make the 60-h forecast information operational in 2020. Modify directives, inform IHC and WMO RA-IV Hurricane Committee, issue SCN.

NOTES:

- **ITEM 19-01 ACTION:**

Priority 3

1. The recommendation is approved. NHC, CPHC, WPC and the Tropical Program will work on an SCN to go out before the end of the calendar year announcing the change for the 2020 hurricane season.
2. The spring collaboration testing will incorporate this change.

TC FORECAST CENTER ADVISORY PRODUCTS

- **ITEM 19-16 Eric Blake, NHC Title: Change advisory product headers to better match local time zones in the eastern Atlantic basin**

DISCUSSION: NHC has gradually been changing the time zones for the TCP and TCD in the Pacific to match local times (5 years ago it used to all be in PDT, now it ranges from CDT to HST), which makes it

much easier to convey information for the general public. However, we haven't done it as quickly in the Atlantic basin. The problem is especially acute in the eastern Atlantic region, where the Azores and the Cabo Verde Islands are 3-4 hours ahead of eastern time.

RECOMMENDATION:

- For systems located south of 35N and east of 30W, use Cape Verde Standard Time (GMT-1) for the TCP, TCD and all graphical products that use local time.
- For systems located north of 25N and east of 45W, use GMT (equivalent to Azores Summer Time) for the TCP, TCD and all graphical products that use local time.
- Inform IHC and WMO RA-IV Hurricane Committee, issue SCN if necessary.

NOTES: Time zone areas depicted in this [Google Slide](#)

- **ITEM 19-16 ACTION:**

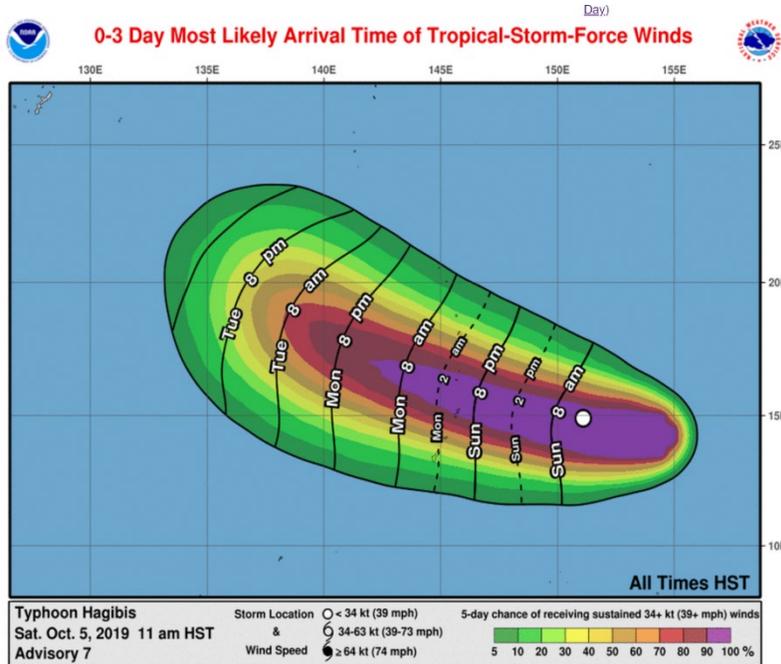
Priority 3

1. The recommendations are accepted.

- **Item 19-21 Chris Brenchley, Central Pacific Hurricane Center (CPHC) Title: Wind Speed Probability for southern Pacific tropical cyclones**

DISCUSSION: In order to provide Wind Speed Probability Graphics for the South Pacific (including American Samoa), and to apply tropical wording in the HPA gridded domain for the High Seas South Pacific, the wind speed probabilities need to be produced based on the JTWC forecasts for the South Pacific. They are already produced for the West Pacific based on the JTWC forecast. In addition, capabilities have been added for TOA graphics in the West Pacific basin.

RECOMMENDATION: CPHC to produce the wind speed probabilities for the South Pacific based on the JTWC forecast.



NOTES: From AFS26: 1) Need confirmation that there are no WMO issues with CPHC providing this information in Nadii's AOR using JTWC's forecast. 2) If there are no WMO issues, determine if it is possible to populate WSP graphics from JTWC probabilities 3) Determine if cone graphics for S Pac are still experimental in 2020 and, if so, where they will be posted.

RELATED ITEM - 18-P1: Action 1) PRH and CPHC will discuss what needs to be done to make GIS-friendly cone of uncertainty information.

- **ITEM 19-21 ACTION:**

Priority 1

1. Tropical Program will work with CPHC to update the 10-102 package for the South Pacific cone graphic to extend it's experimental status and correct the URL.
2. NHC/CPHC/PRH will coordinate with CIRA on the code for the WSPs for American Samoa. NHC needs a technical POC from JTWC. PRH will provide this.
3. NHC and CPHC staff will have a meeting on code management for the TC graphics to avoid divergence in the code.
4. The Tropical Program will forward this item to the IHC

- **ITEM 19-28 John Quagliariello, Frank Alsheimer (WFO Columbia, SC), Steven Pfaff (WFO Wilmington, NC), and Kimberly McMahon (ERH) Title: addition of Graphic Depicting Potential Peak Surge**

DISCUSSION: The Potential Storm Surge Flooding Map has become an invaluable tool for Emergency Managers and other core partners in making evacuation decisions and refining those evacuations to the most at-risk areas. However, users must reduce the map scale to interpret the surge potential for any portion of the coast, which can be problematic when used to brief partners at the state, regional and/or national level. It is also very difficult to include detailed P-surge inundation graphics in partner briefings in

an efficient way. Lastly, during recent hurricane events the NHC has successfully implemented a similar graphic for use in social media posts to quickly convey the main areas of threat with associative inundation values.

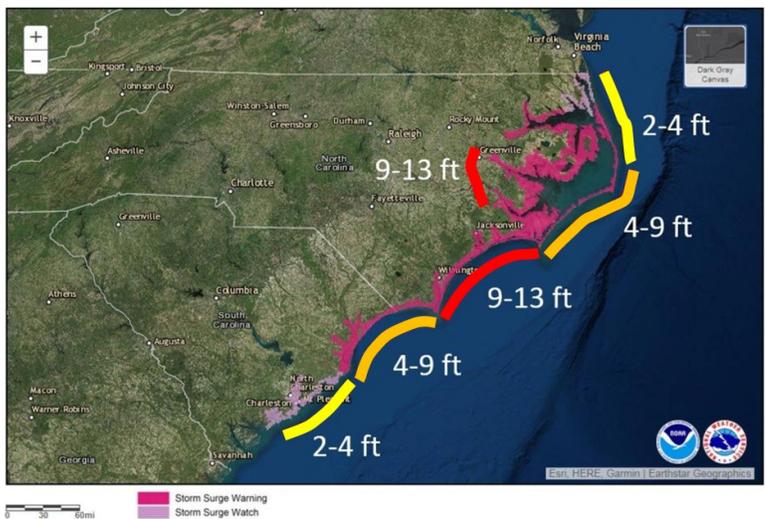
RECOMMENDATION: We recommend adding a product that graphically depicts the potential peak surge values found in the NHC Public Advisories. This product would bridge the gap from detailed P-surge analysis and the textual summaries included in the NHC Public Advisories. This graphic would be easy to use and interpret in partner briefings on multiple levels, and provide a big picture look at areas along the coast under the greatest threat from storm surge inundation.

HAZARDS AFFECTING LAND

STORM SURGE: The combination of a dangerous storm surge and the tide will cause normally dry areas near the coast to be flooded by rising waters moving inland from the shoreline. The water has the potential to reach the following heights above ground if peak surge occurs at the time of high tide...

Cape Fear NC to Cape Lookout NC, including the Neuse, Pamlico, Pungo, and Bay Rivers...9-13 ft
North Myrtle Beach SC to Cape Fear NC...6-9 ft
Cape Lookout NC to Ocracoke Inlet NC...6-9 ft
South Santee River SC to North Myrtle Beach SC...4-6 ft
Ocracoke Inlet NC to Salvo NC...4-6 ft
Salvo NC to North Carolina/Virginia Border...2-4 ft
Edisto Beach SC to South Santee River SC...2-4 ft

Here's a potential example (using Hurricane Florence):



NOTES:

- ITEM 19-28 ACTION:**

- Priority 1 (Public Notification)**

- NHC will provide this experimental graphical depiction of the storm surge values in the TCP in 2020 on the hurricanes.gov website.

2. The Tropical Program will usher this experimental product through the 10-102 process.
 3. The Tropical Program will forward this item to the IHC
- **ITEM 19-35 Krizia Negron (WFO Melbourne), Roberto Garcia (WFO San Juan), Orlando**

Bermudez (WFO Austin/San Antonio), Melinda Bailey (Southern Region Headquarters)
Title: Spanish Translation of the “Key Messages” in TCD product

DISCUSSION: As the Spanish-speaking population grows in the U.S. and more requests are made for Spanish interviews during TCs, the need for weather information in Spanish is growing as well. The Tropical Cyclone Discussion (TCD) product provides a summary of the most important aspects of the forecast and impacts at the bottom of the TCDAT#, called "Key Messages." The translation of the "Key Messages" of the TCD product is a useful resource during tropical cyclones, especially if those areas that will be affected have a big population of Spanish speakers. It is proposed that WFO SJU facilitate the translation of the “Key Messages” for the NWS with the help of the Multimedia Assistance in Spanish (MAS) team. In the past, the workload at San Juan has occasionally precluded the translation of the entire TCD and the associated “Key Messages.” The “Key Messages” are being used in an NHC graphical product, in conjunction with the forecast cone and wind speed probabilities that are easy to share. We are proposing the development of a revised procedure for translating the Key Messages and sharing the translation within the NWS.

RECOMMENDATION:

Our recommendations are:

1. WFO SJU will translate the “Key Messages” when added at the bottom of the TCD product. Multimedia Assistance in Spanish (MAS) team has offered to assist in the translation of the “Key Messages” if WFO SJU cannot. This will be coordinated via pre-established methods.
2. The translated “Key Messages” would then be put into a Google Folder or Form. Then, NHC could use the translated text to generate a Spanish version of the Key Messages graphic and post to their website. ([Examples of the graphical Key Messages](#))

NOTES:

RELATED ITEM -[17-10](#): Development of a Spanish Language Baseline HLS/TCV and HTI

UPDATE ON ENTERPRISE SOLUTION FOR NWS PRODUCTS FOR LIMITED ENGLISH PROFICIENCY:

Portfolio Integration Council update from 6/28/19 says "Awaiting resource availability for resource analysis. Added FY20 AOP to perform that analysis. Planning a kickoff meeting for FY2020 Q2."

- **ITEM 19-35 ACTION:**

Priority 1 - Strategic Plan: Goal 1

1. WFO SJU will translate the “Key Messages” when added at the bottom of the TCD product. Multimedia Assistance in Spanish (MAS) team, when staffing resources allow, will assist in the translation of the “Key Messages” if WFO SJU cannot. This will be coordinated via pre-established methods.

2. NHC and SRH will determine by February 15 if the TCD will continue to be translated to Spanish for the 2020 hurricane season.
 3. The translation of the NHC TC "Key Messages" has the highest priority for Spanish translations from the MAS Team.
 4. The translated "Key Messages" will then be put into a TBD vehicle (TBD by February 15), and NHC will use the translated text to generate a Spanish version of the Key Messages graphic to post to their website in 2020.
 5. NHC will provide a template for the preferred format of the translation by the end of December to SRH to share with WFO SJU and the MAS Team.
 6. NHC and WFO SJU/MAS Team will conduct a demonstration of this process NLT than April 1.
 7. The Tropical Program will forward this item to the IHC
- **ITEM 19-41 Chris Landsea, NHC/TAFB and Ivan PopStefanija, ProSensing Title: Adding Wide Swath Radar Altimeter to Required Orion WP-3D Aircraft equipment**

DISCUSSION: The Wide Swath Radar Altimeter (WSRA) is an instrument that provides continuous, real-time reporting of directional ocean wave spectra and significant wave heights when mounted aboard one of the Aircraft Operations Center's Orion WP-3Ds. The WSRA was tested and refined as part of a Joint Hurricane Testbed project several years ago and, subsequently, the National Hurricane Center made a decision to implement the observations of the WSRA into operations. The significant wave height measurements are crucial for proper analysis of the high seas for both the Hurricane Specialists Unit (analysis of 12' seas by quadrant) and the Tropical Analysis Forecast Branch (analysis of 8' seas and greater and their forecast out through five days). These data have been transmitted in real-time and made available within NAWIPS for the NHC forecasters (see figure below). These data also have the potential to be assimilated into coming generations of oceanic wave models (such as WaveWatch III) and mesoscale hurricane models (such as HWRF).

A limitation in the use of the WSRA data is that it is not a required piece of instrumentation for the Orion WP-3D and can be bumped in favor of other instruments. For example, until Hurricane Lorenzo in 2019, the WSRA has not been regularly available aboard either of the Orion WP-3Ds for several years because of other non-operational requests for instrumentation.

RECOMMENDATION:

1. The Wide Swath Radar Altimeter (WSRA) shall be part of the minimum operational configuration on one of the Orion WP-3Ds during the June through November time frame of the Atlantic hurricane season. If only one of the WP-3Ds is available for a significant portion (at least a month) of the season, then that WP-3D shall be equipped with the WSRA.

Modify Section 5.4.7 of the NHOP to read:

The minimum operational configuration of the WP-3D will include the stepped frequency microwave radiometer (SFMR), Doppler radar and the advanced vertical atmospheric profiling system (AVAPS). In addition, the Wide Swath Radar Altimeter (WSRA) will be available on one WP-3D from June through November.

Modify the directives accordingly and forward to IHC and RA-IV for informational purposes.

3. NEW RECOMMENDED ITEMS

- **The list of NHC products - none list anything to do with Storm Surge Watch / Warnings and at least the definitions should be included in Section 3.1 of the NHOP.**

Action Item: Update definitions in NHOP.