



## Update on NHC Products and Services for 2013

The National Hurricane Center will implement the following changes to its text and graphical products for the 2013 hurricane season:

### 1) New use of the Tropical Cyclone Update (TCU) replaces the Tropical Cyclone Position Estimate.

The Tropical Cyclone Update (TCU) text product provides notice of significant changes in a tropical cyclone that occur in between regularly scheduled public advisories. The TCU has traditionally been issued to:

- Provide timely information of an unusual nature, such as the time and location of landfall, or to announce an expected change in intensity that results in an upgrade or downgrade of status (e.g., from a tropical storm to a hurricane).
- Provide advance notice that significant changes to storm information will be conveyed shortly, either through a subsequent TCU or through a Special Advisory.
- Announce changes to international watches or warnings made by other countries, or to cancel U.S. watches or warnings.
- Issue a U.S. watch or warning, but only if the TCU precedes a special advisory that will contain the same watch/warning information, and indicates the special advisory will be issued shortly.

Beginning in 2013, the TCU will also be issued to **provide a continuous flow of information regarding the center location of a tropical cyclone, when watches or warnings are in effect and the center can be easily tracked with land-based radar.** Previously this information was conveyed by the Tropical Cyclone Position Estimate (TCE). However, recent changes to the TCU, which now includes a formatted summary block of key storm information, have made a separate TCE product unnecessary. In all cases where a TCE would previously have been issued, NHC will now issue a TCU instead. More information on this change can be found at:

[http://www.nws.noaa.gov/om/notification/scn19tce\\_termination.htm](http://www.nws.noaa.gov/om/notification/scn19tce_termination.htm)

### 2) Use of tropical cyclone watch/warnings for post-tropical cyclones; Issuance of NHC advisories for post-tropical cyclones

The National Weather Service has modified the tropical cyclone watch and warning definitions to allow them to be used after a tropical cyclone has become post-tropical. A related change allows the NHC to optionally continue issuing advisory products after a tropical cyclone becomes post-tropical, in those cases when the system continues to pose a significant threat to

life and property, and when the transfer of responsibility to another office would result in an unacceptable discontinuity in service.

NHC text advisory products would continue to be issued under the POST-TROPICAL CYCLONE XXXXXX header, and be accompanied by the full suite of standard tropical cyclone products. Local NWS WFOs would continue to issue Hurricane Local Statements (under the POST-TROPICAL CYCLONE XXXXXX header) until NHC advisories were discontinued.

The tropical storm and hurricane watch and warning definitions have been modified as follows (changes underlined):

**Hurricane Warning**: An announcement that sustained winds of 74 mph or higher are expected somewhere within the specified area in association with a tropical, subtropical, or post-tropical cyclone. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the warning is issued 36 hours in advance of the anticipated onset of tropical-storm-force winds. The warning can remain in effect when dangerously high water or a combination of dangerously high water and waves continue, even though winds may be less than hurricane force.

**Hurricane Watch**: An announcement that sustained winds of 74 mph or higher are possible somewhere within the specified area in association with a tropical, subtropical, or post-tropical cyclone. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the watch is issued 48 hours in advance of the anticipated onset of tropical-storm-force winds.

**Tropical Storm Warning**: An announcement that sustained winds of 39 to 73 mph are expected somewhere within the specified area within 36 hours in association with a tropical, subtropical, or post-tropical cyclone.

**Tropical Storm Watch**: An announcement that sustained winds of 39 to 73 mph are possible somewhere within the specified area within 48 hours in association with a tropical, subtropical, or post-tropical cyclone.

More information on this change can be found at:

[http://www.nhc.noaa.gov/news/20130404\\_hsu\\_postTropicalChanges.php](http://www.nhc.noaa.gov/news/20130404_hsu_postTropicalChanges.php)  
[http://www.nhc.noaa.gov/news/20130404\\_pa\\_postTropicalChanges.pdf](http://www.nhc.noaa.gov/news/20130404_pa_postTropicalChanges.pdf)  
[http://www.nws.noaa.gov/om/notification/scn13-28tropical\\_watch-warn.htm](http://www.nws.noaa.gov/om/notification/scn13-28tropical_watch-warn.htm)

### **3) Planned extension of the time period covered by the NHC Tropical Weather Outlook.**

Pending completion of some technical development, NHC is planning to extend the time covered by the NHC Tropical Weather Outlook (TWO) from 48 hours to 5 days. The NHC TWO is a text product that describes areas of disturbed weather and the potential for tropical cyclone development during the following 48-hour period. A probabilistic genesis forecast, to the nearest 10 percent, describing the chance of tropical cyclone formation within the next 48 hours is included for each area of disturbed weather described in the Outlook. In July or August of the 2013 hurricane season, NHC is planning to begin including information about a system's potential for development during the following five-day period. This information will be provided probabilistically in 10-percent increments, and will supplement the 48-hour probabilistic formation potential already provided. NHC is currently developing a corresponding five-day genesis potential graphic that might also be available in 2013. The current Graphical Tropical

Weather Outlook that highlights the location of areas of disturbed weather and shows the 48 hour probabilistic genesis potential will remain unchanged.

**4) Audio podcasts 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: <http://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.

**5) Tropical Cyclone forecast cone will be reduced in size.**

The size of the tropical cyclone forecast cone will be a bit smaller. 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 (2008-2012) fall within the circle. The circle radii defining the cones in 2013 for the Atlantic and eastern North Pacific basins are given in the table below:

Forecast Period (hours)	Circle radius Atlantic Basin (nautical miles)	Circle radius Eastern North Pacific Basin (nautical miles)
12	33	30
24	52	49
36	72	66
48	92	82
72	128	111
96	177	157
120	229	197

**6) NWS/NHC transitioning from deterministic to probabilistic storm surge forecasts in the 2013 hurricane season.**

Effective with the 2013 hurricane season, the NWS/NHC will no longer provide output from individual runs of the Sea, Lake, and Overland Flooding from Hurricanes (SLOSH) model during tropical cyclones. Individual “deterministic” SLOSH runs will often conflict with official NWS forecasts for storm surge, and could be interpreted as being inconsistent with evacuation decisions from emergency managers. For several years, the NHC has been providing probabilistic storm surge products as part of a long-term, multiyear NWS effort to improve communications on storm surge. In addition to the operational and experimental probabilistic storm surge products, the NWS is also actively developing inundation graphics and a storm surge watch/warning.

Additional information on the discontinuation of deterministic SLOSH model output can be obtained at: [http://www.nhc.noaa.gov/news/20130305\\_tin\\_slosh.php](http://www.nhc.noaa.gov/news/20130305_tin_slosh.php)

A description of the current suite of operational, probabilistic storm surge guidance products can be found at: <http://www.nhc.noaa.gov/aboutnhcgraphics.shtml>

The NWS/NHC will be providing an experimental suite of probabilistic storm surge products for 2013 that communicate inundation in terms of feet above ground level. This information will be provided on an interactive Google Earth background map and as a static image. Information on these experimental products is available at: <http://www.nws.noaa.gov/mdl/phish>

### **Other items of interest for 2013:**

- 1) Pronunciation guides for storm names including the phonetic pronunciations of all Atlantic and Eastern North Pacific storm names can be found on the NHC website at:

Atlantic: [http://www.nhc.noaa.gov/pdf/aboutnames\\_pronounce\\_atlc.pdf](http://www.nhc.noaa.gov/pdf/aboutnames_pronounce_atlc.pdf)

Eastern North Pacific: [http://www.nhc.noaa.gov/pdf/aboutnames\\_pronounce\\_epac.pdf](http://www.nhc.noaa.gov/pdf/aboutnames_pronounce_epac.pdf)

- 2) 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 Facebook page is found at: <http://www.facebook.com/US.NOAA.NationalHurricaneCenter.gov>

- 3) The National Hurricane Center is on Twitter. NHC has two automated 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. NHC can also tweet a special message at any time.

The NHC Director Dr. Richard Knabb is on Twitter. Dr. Knabb can be followed at: **@NHCDirector**.

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.

**Experimental Products:** (Note that the timeliness and accuracy of these products cannot be guaranteed)

- 1) Live video/audio feed of top-of-the-hour hurricane briefings when the media pool is activated: <http://www.imaphurricane.info/>
- 2) NHC provides various advisory products in GIS format. Information on these products can be found at: <http://www.nhc.noaa.gov/gis/>
- 3) In 2013, NHC will be working behind the scenes on potential enhancements to products and services. These planned in-house (non-public) experiments include extending tropical cyclone track and intensity forecasts out to seven days from the current five-day period, creation of track and intensity forecasts for disturbances with a high chance of formation, and the issuances of tropical cyclone watches and warnings prior to the formation of a cyclone.

**On the Web:**

National Hurricane Center  
<http://www.hurricanes.gov>

National Hurricane Center Product Description Document-A User's Guide to Hurricane Product  
[http://www.nhc.noaa.gov/pdf/NHC\\_Product\\_Description.pdf](http://www.nhc.noaa.gov/pdf/NHC_Product_Description.pdf)

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

Saffir Simpson Hurricane Wind Scale:  
<http://www.nhc.noaa.gov/aboutsshws.php>

Definition of NHC Track Forecast Cone:  
<http://www.nhc.noaa.gov/aboutcone.shtml>

National Hurricane Center Facebook page:  
<http://www.facebook.com/US.NOAA.NationalHurricaneCenter.gov>

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

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