

GFE Operations during a Tropical Cyclone – 2016 Season

(Initiate if the CWA is within the periphery of the NHC Forecast Cone, or the Incremental Wind Speed Probability Thresholds have been met, or Tropical Cyclone Watches/Warnings have been issued for the CWA. Steps 1, 5, 7, 8, 10, 13, 16, and 17 should be run regardless of a tropical cyclone watch/warning in effect for the CWA. The rest of the steps should **ONLY** be run when a tropical cyclone watch/warning is in effect for the CWA. Steps 7-18 highlighted in blue should be completed **AFTER** NHC issues a 03Z/09Z/15Z/21Z advisory.)

- 1.) Load the **Tropical_Cyclone** (or **HTI**) Weather Element Group in GFE.
- 2.) Run the **TCStormSurgeThreat** Procedure at **2230Z, 0430Z, 1030Z, and 1630Z**. Ensure that the **18Z (21Z Advisory Time), 00Z (03Z Advisory Time), 06Z (09Z Advisory Time), and 12Z (15Z Advisory Time)** P-Surge data is in AWIPS. Use the same confidence level as NHC's SSU. Otherwise, use the defaults. Use the **ISC** option, after coordinating with the SSU, if P-Surge data is unrepresentative. Use the **Manually Replace** or **Manually Add** options if this is the first advisory and/or no P-Surge runs are available. *StormSurgeThreat, InundationMax, InundationTiming, SurgeHtPlusTideMSL, SurgeHtPlusTideNAVD, SurgeHtPlusTideMLLW, and SurgeHtPlusTideMHHW* grids will be produced. **DO NOT POST-EDIT any of these grids!**
- 3.) Check to make sure that the latest *ProposedSSnc* grid has arrived from the SSU. If so, then run the **CopyNHCPoposed** Procedure which will copy the *ProposedSSnc* grid into the *ProposedSS* grid. Make any edits, if necessary, to the *ProposedSS* grid and then save. Finalize this process by no later than **0230Z, 0830Z, 1430Z, and 2030Z**.
- 4.) By **0200Z, 0800Z, 1400Z, and 2000Z**, begin creating the HLS "*Situation Overview*" within the **SATWRKHLS** text product.
- 5.) At **0230Z, 0830Z, 1430Z, and 2030Z**, initialize the *QPF* with the latest WPC guidance. Make any edits, if necessary.
- 6.) At **0240Z, 0840Z, 1440Z, and 2040Z**, run the **TCFloodingRainThreat** Procedure. Use the default value of 0.75. A *FloodingRainThreat* grid will be produced and can be edited, if necessary.
- 7.) Delete existing *Wind* grids. Then use appropriate guidance for the background winds and save. Once the **TCMAT#** and **MIARCLAT#** text products arrive in AWIPS, run the **TCMWindTool** Procedure. If the **RCLAT#** is unavailable or incomplete, ensure representative radii values exist for Days 3-5. Otherwise, use the default selections.
- 8.) Produce the *WindGust* grids. Use a similar gust multiplier (1.2 to 1.4) that NHC and surrounding WFOs use.
- 9.) Once the **TCVAT#** text product arrives in AWIPS, then run the **PlotTPCEvents** Procedure. The *Hazards* grid will be modified with land-based tropical cyclone watches/warnings issued by the NHC. Extend or shrink the length of these TC hazards to match the duration of TS/HU force winds. Produce TC hazards for both inland & marine zones after coordinating with neighboring WFOs. Besides wind, use incremental WSP thresholds (table above) to refine the extent of inland wind hazards.
- 10.) Ensure that cumulative and incremental wind speed probabilities have arrived in AWIPS, usually 7-15 minutes after the advisory has been issued. If so, then run the **PWS_Procedure**. *Cumulative (prob34, prob64), Incremental (pwsD34, pwsD64, pwsN34, pwsN64), and Interval (pws34int, pws64int)* *Wind Probability* grids will be produced.
- 11.) Run the **TCWindThreat** Procedure. Use the defaults. A *WindThreat* grid will be produced. **DO NOT POST-EDIT!**
- 12.) Run the **TCTornadoThreat** Procedure. A *TornadoThreat* grid will be produced and can be edited, if necessary.
- 13.) Save and publish grids from both the **Tropical_Cyclone** (or **HTI**) and **All** weather element groups.
- 14.) Run the **Hazard_TCV** Formatter and transmit the **SATTCVCRP** by **0320Z, 0920Z, 1520Z, and 2120Z**. **DO NOT POST-EDIT!**
- 15.) Run the **HLS** Formatter. Use appropriate selections and entries for *Steps 1-7* within the HLS GUI. Ensure that the formatter has copied the "*Situation Overview*" text from **SATWRKHLS** into the **SATHLSCRIP**. Make additional edits as needed to the area descriptors and PPA section framing code. Once finalized, transmit the **SATHLSCRIP** by **0330Z, 0930Z, 1530Z, and 2130Z**.
- 16.) Run both the **ZFP** and **CWF** Formatters with the "*Include Tropical?*" option set to "*Yes*" and then transmit both products.
- 17.) Run the **Hazard_MWW** Formatter. Make any edits and then transmit the **SATMWWCRP** text product.
- 18.) Check the NDFD web page (<http://digital.weather.gov/>) to ensure HTI and WSP grids have been updated. Also, check the NWS Hurricane Threats and Impacts web page (<http://weather.gov/hti/>) to ensure that the HTI KML files have been updated.

Incremental Wind Speed Probability Thresholds

Period	PWS64	PWS34
0-12 hour	25%	45%
13-24 hour	20%	35%
25-36 hour	15%	30%
37-48 hour	12.5%	25%
49-60 hour	10%	22.5%
61-72 hour	8%	20%
73-84 hour	7%	17.5%
85-96 hour	6%	15%
97-108 hour	5%	12.5%
109-120 hour	4%	10%