2023 Software Updates

NOTE: The Tropical Wiki team is in the process of converting to a new Tropical Wiki site. Thus, since we are in a transition time period, for the 2023 season, all required and optional software updates are only listed at the top of this page and not segmented out below as in years past.

For offices with public zone changes, in addition to the following required and optional updates, please see additional necessary steps detailed below that will also need to be completed.

Once all of this configuration is complete and tested, **upload your configuration to the central server so backup will work!**

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Required Software:

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Hurricane Threats and Impacts (HTI)

Tropical HTI Software Updates - All tropical offices will need to update their HTI software via the Tropical Hti SCP page. The following changes are included in this software update:

- HTI grids will be extended in length to 3 days (wind, tornado, flooding rain) and approximately 102 hours (surge)
- The TCStormSurgeThreat_enhanced tool that was used by some WFOs experimentally in 2022 will become operational as the TCStormSurgeThreat tool. The experimental tool allowed forecasters to utilize pre-defined storm surge edit areas to assign specified values, view storm surge model data, and highlight grids to assign inundation timing rather than using slider timing bars. The operational version updated for 2023 will also give CONUS WFOs the ability to ingest a second p-surge run and give WFO San Juan the ability to ingest a Puerto Rico-specific p-surge run.
- TCFlooding RainThreat grid now aligns with the ERO. The category bump when QPF was >10” in 24 hours was removed.
- TCTornadoThreat grid now better aligns with the GHWO and SPC categories
- The PWS_Procedure now creates a prob50 Wind Speed Probability grid

UPDATE 9/19/23: Ensure the script entry in your site GFEConfig file for HTI looks like:

```
"Make and Send HTI:" + "nohup ssh pv2 /awips2/GFESuite/hti/bin/make_hti.sh {site}",
```

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PSH

New Post Tropical Cyclone Report (PSH) Software - Beginning for the 2023 season, the PSH will become a combination of the PSH text product issued through AWIPS and CSV and PDF files posted to the web. Tropical offices will need to set up the PSH formatter in AWIPS via the PSH text formatter instructions on the SCP and follow the instruction guide (only available to view on the PC) to set up the webpage, Google Doc, and Google Sheet. A PSH job sheet resource and PSH Training Webinar recording (only available to view on the PC) are also available. The full PSH Google Drive that contains the instructions and templates is available here.

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Tropical Cyclone Wind Hazard Recommender

All Tropical WFOs: Configuration steps for the TC Wind Hazard Recommender will be included in the pre- and post-install instructions for 21.4.1, but are also available in this Google Doc . Offices should be sure these are completed pre and post install.

Western Region: For the 2023 hurricane season, the TC Wind Hazard Recommender is **only** operational in Western Region. Resources for Western Region WFOs:

- WFO job sheet for the Tropical Cyclone Wind Hazard Recommender
- Overview of the grids provided by the Tropical Cyclone Wind Hazard Recommender Tool

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TropicalTE

The TropTE has gone through an overhaul/cleanup. All offices should install the new version following these Install Instructions. It is also recommended that sites register for this application to be notified of future updates. New User Guide is also available here

The main highlights of this new version are:

- Adds PSurge 3.0 data, including for SJU, so all sites can run the new TCStormSurgeThreat procedure
- Updates preTCV's for 2023 zone changes
- Changes wind speed probability model from TPCWindProb to TPCWindProb_Prelim to better match operations
- Adds a button on the GUI to repopulate the WSP data if purged
- Ability to ingest surge data for sites that do not have ProposedSS data, like SJU
- Adds a button on the GUI to repopulate the ProposedSS grid if purged
- Updated User Guide to account for these new features
- Removed Steve from available storms
- Directory structure change

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Optional Software:

Tropical Ops Assistant - This software is a collection of tools to assist during tropical operations including: auto-populating PWS grids, providing notifications of GTCM data arrival, and automatically enable “tropical mode” for the ZFP and CWF. New for 2023 this tool can automate the TcTermsOfUncertainty tool (see below) and help control cycle times on NOAA Weather Radio.

TcTermsOfUncertainty - This tool creates a 12-hr GFE grid that graphically depicts the tropical terms of uncertainty text (i.e., hurricane conditions possible) that will appear in the ZFP and Point-n-Click.

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Offices with Public Zone Changes

If your office had zone changes, you will also need to also take the following steps once the zone changes are implemented:

- TCV Updates:
    - The site-level Hazard_TCV_XXX_Overrides file needs to be updated to reflect the zone changes. In the localization perspective, modify the file to reflect the zone changes by updating the coastal and inland area definitions for the new zone numbers.
    - Edit site-level Hazard_TCV_XXX_Definition and change to showZoneCombiner = 1
    - Delete dv3:/awips2/edex/data/utility/cave_static/site/XXX/gfe/combinations/Combinations_TCV_XXX
    - Restart CAVE
    - Run Hazard_TCV and select new zone order and save combination file as Combinations_TCV_XXX
    - Edit site-level Hazard_TCV_XXX_Definition again and change back to showZoneCombiner = 0
- HLS Updates:
    - The site-level HLS_XXX_Overrides file needs to be updated via the Localization Perspective to reflect the zone changes. Update the coastal and inland areas definitions for the new zone numbers that match what was done in the Hazard_TCV_XXX_Overrides.
- TCVAreaDictionary:
    - In the localization perspective, do a compare between the Configured and Site TCVAreaDictionary files. Edit the Site-level one to add the new zones from Configured and adjust Locations Affected entries accordingly. If any affected zone had Impact statement overrides, make those changes as needed for the new zones.
- Storm Surge:
    - Shannon will work with coastal sites individually to make sure the extent of the new zones matches the coverage of the old zones.
- Run through the Software Testing Exercise when all config is complete to ensure it is correct. Then update your configuration on the central server.