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Technical Implementation Notice 13-23, Amended
National Weather Service Headquarters Washington DC
658 AM EDT Mon Sep 23 2013

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From: Timothy McClung
Science Plans Branch Chief
Office of Science and Technology

Subject: Amended: Temporary Change to Preemption of HIRESW:
Effective August 13, 2013, updated September 19, 2013.

Amended to temporarily suspend all preemption of the High-Resolution Window Forecast System (HIRESW) system for the 2013 hurricane season

With the increased size and power of the Weather and Climate Operational Supercomputing System (WCOSS), the preemption of the HIRESW runs will be suspended and NWS will run HIRESW and the hurricane models concurrently. This change will allow HIRESW to provide heavy precipitation (e.g., Colorado floods) and severe weather guidance without affecting the Hurricane Center requests for runs of hurricane models. This change will ensure there will be no breaks in the Hurricane Weather Research and Forecast System data assimilation cycle that was introduced this season. Previously on August 13, 2013, NCEP relaxed the preemption of the HIRES to only preempt for four or more storms, but effective immediately no HIRESW runs will be preempted for the remainder of the 2013 hurricane season. Below is the text from the original TIN. Preemption is expected to return for the 2014 hurricane season.

Effective on or about Tuesday, August 13, 2013, beginning with the 1200 Coordinated Universal Time (UTC) run, the National Centers for Environmental Prediction (NCEP) will modify the preemption of the High-Resolution Window Forecast System (HIRESW).

Due to resource limitations, NWS has had to cancel select HIRESW runs during hurricane season depending on the number of hurricane models running during that cycle. Currently, the HIRESW runs are preempted when there are 3 or more tropical storms being run.

Because of the increased size and power of the new WCOSS

supercomputers, beginning August 13, the HIRESW runs will not be preempted until 4 or more tropical storms are being run. This rule will apply for the remainder of the 2013 hurricane season only. Once the HIRESW suite is upgraded late this year or early next year, the preemption limit likely will return to a smaller number of storms. With a subsequent upgrade to either the Hurricane Weather and Research Forecast (HWRF) or the HIRESW, the preemption could begin with just 1 storm. A new Technical Implementation Notice would alert users to such a change.

Long term, the HIRESW functionality will be covered by the High Resolution Rapid Refresh ENSEMBLE (HRRRE), which will provide 18-24 hour guidance updated hourly, and by the Short Range Ensemble Forecast (SREF), which will provide longer range ensemble guidance by extending the HRRRE members to 48-60 hours, 4 times per day. This configuration (roughly 2018) will alleviate the need for any preemption.

For questions regarding these model changes, please contact:

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