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Public Information Statement 25-41
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From: Richard Bandy
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Subject: Soliciting Comments on Proposed Discontinuation of the North American Mesoscale (NAM) model and other Regional Modeling Systems to be Replaced by the Rapid Refresh Forecast System (RRFS) through July 26, 2025.

The Environmental Modeling Center (EMC) at the National Centers for Environmental Prediction (NCEP) is working towards replacing the North American Mesoscale (NAM) model, the High Resolution Window (HiresW) aside from the Guam domain, the High Resolution Ensemble Forecast (HREF) and the North American Rapid Refresh Ensemble (NARRE) systems with the implementation of the Rapid Refresh Forecast System (RRFS) in early 2026. The NWS is seeking comments on this proposed change through July 26, 2025.

This transition to RRFS would provide an hourly updating modeling system over a North America region at 3 km horizontal grid spacing, which, combined with the model retirements, would greatly unify and simplify the “convective scale” (approximately 3 km grid spacing) regional models within the NWS operational modeling suite.

As a deterministic system running to 84 h, the RRFS would fully retire the NAM, and nearly fully retire the HiresW (aside from the Guam domain). As an ensemble forecast system, the RRFS Ensemble Forecast System (REFS) would fully retire the HREF and NARRE systems.

The deterministic RRFS generates full domain output at 3 km grid spacing, and subset grid output over the contiguous United States (CONUS) and Alaska (AK) (at 3 km grid spacing), and Hawaii (HI) and Puerto Rico (PR) (at 2.5 km grid spacing). The RRFS will also provide output from a separate 1.5 km RRFS fire weather run, with output provided over a 5 x 5 degree rotated latitude longitude region. Details of the RRFS output grids are available in
https://www.emc.ncep.noaa.gov/mmb/mpyle/rrfs_info/rrfs_grids.txt

Relative differences between RRFS output products and the proposed-to-be-retired system products will be discussed individually by the modeling system proposed for retirement.

FOR THE PROPOSED RETIREMENT OF THE NAM:

Both the 12 km parent domain and the 3 km nested domains (CONUS, AK, HI, PR) would be terminated. The NAM fire weather nest would also cease to run.

List of NAM output grids being retired (not being utilized by the RRFS):
https://www.emc.ncep.noaa.gov/mmb/mpyle/rrfs_info/nam_retiredgrids.txt

List of NAM nest output grids that will not be retired (being utilized by RRFS):
https://www.emc.ncep.noaa.gov/mmb/mpyle/rrfs_info/namnest_grids.txt

LIST OF NAM PRODUCTS NOT GENERATED BY THE RRFS AND DISCONTINUED:

https://www.emc.ncep.noaa.gov/mmb/mpyle/rrfs_info/nam_retirements.txt

FOR THE PROPOSED RETIREMENT OF THE HIRESW:

The Guam domain of HiresW will continue to run as in current operations.

HiresW domains encompassed by the RRFS domain (CONUS, AK, HI, PR) will be discontinued.

List of HiresW output grids being retired (not being produced by the RRFS):
https://www.emc.ncep.noaa.gov/mmb/mpyle/rrfs_info/hiresw_grids.txt

LIST OF HIRESW PRODUCTS NOT GENERATED WITHIN RRFS AND DISCONTINUED:
https://www.emc.ncep.noaa.gov/mmb/mpyle/rrfs_info/hiresw_retirements.txt

Products produced by the HiresW, but which will be generated by the Smartinit system processing RRFS output rather than directly generated by the RRFS:
https://www.emc.ncep.noaa.gov/mmb/mpyle/rrfs_info/smartinit_products.txt

NEW PRODUCTS IN DETERMINISTIC RRFS NOT GENERATED BY NAM OR HIRESW, AND NOT DESCRIBED IN PRODUCT RETIREMENT/CHANGES TO EITHER SYSTEM EARLIER:
https://www.emc.ncep.noaa.gov/mmb/mpyle/rrfs_info/rrfs_newitems.txt

PRODUCTS IN THE RRFS “SUBH” OUTPUT FILE AT 15 MINUTE INTERVALS FROM 15 MINUTES INTO THE FORECAST TO 18 HOURS INTO THE FORECAST:
https://www.emc.ncep.noaa.gov/mmb/mpyle/rrfs_info/rrfs_15min.txt

FOR THE PROPOSED RETIREMENT OF THE HREF:

The entire HREF system would be replaced by RRFS Ensemble Forecast System (REFS) products covering CONUS, AK, HI, and PR.

List of HREF output grids being retired due to change in grid spacing and geographic coverage:

https://www.emc.ncep.noaa.gov/mmb/mpyle/rrfs_info/href_grids.txt

Changes in timing:
- The REFS generates products to 60 h, while HREF only makes forecasts to 48 h
- While HREF generates products twice daily for non-CONUS domains (AK & PR at 06Z/18Z, and HI at 00Z/12Z), REFS products will be generated at 00Z/06Z/12Z/18Z for all regions

HREF TO REFS PRODUCT CHANGES BY OUTPUT FILE TYPE:
https://www.emc.ncep.noaa.gov/mmb/mpyle/rrfs_info/href_product_changes.txt

FOR THE PROPOSED RETIREMENT OF THE NORTH AMERICAN RAPID REFRESH ENSEMBLE (NARRE):

The entire system would be terminated and replaced by REFS products covering CONUS, AK, HI, and PR. The output from the REFS system will be on the same subset grids produced by the RRFS (CONUS 3 km, AK 3 km, HI 2.5 km, PR 2.5 km).

NARRE output generated on grid 130 (CONUS 13 km) and grid 242 (AK 11.25 km) will be retired.

Changes in timing:
While NARRE generates hourly updated ensemble products extending to 12 h, the REFS generates products to 60 h, but only updates every 6 h.

NARRE PRODUCTS DEFINED DIFFERENTLY WITHIN REFS OR RETIRED DUE TO NOT BEING GENERATED BY REFS:
https://www.emc.ncep.noaa.gov/mmb/mpyle/rrfs_info/narre_replacement.txt

In addition, all legacy system verification graphics will be removed from the following website:
https://emc.ncep.noaa.gov/users/verification/regional/

A new RRFS verification website will be created and available when the RRFS is officially implemented into operations.

Please submit comments regarding the proposal to discontinue these products to:

Email: rrfs.feedback@noaa.gov
Google Form: Soliciting Comments on the Rapid Refresh Forecast System Replacing Legacy Systems

National Public Information Statements are online at:
https://www.weather.gov/notification/

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