NOUS41 KWBC 091620
PNSWSH

Service Change Notification 26-77
National Weather Service Headquarters Silver Spring MD
1220 PM EDT Wed Sep 9 2026

To: Subscribers
-NOAA Weather Wire Service
-Emergency Managers Weather Information Network
-NOAAPORT
Other NWS Partners, Users and Employees

From: David Michaud
Director
NWS Central Operations

Subject: Upgrade to SPC post processing for NWS models, Effective Oct 14, 2026

On or after Oct 14, 2026, beginning with the 1200 Universal Coordinated Time (UTC) model run, the National Weather Service (NWS) will upgrade SPC_POST, SPC's postprocessing package for the NWS model suite, to v3.0.

In the event that the implementation date is declared a Critical Weather Day (CWD), an Enhanced Caution Event (ECE), or other significant weather is occurring or is anticipated to occur, implementation of this change will take place at 1200 UTC on the next weekday not declared a CWD and when no significant weather is occurring.

Changes with this upgrade include:

RETIRED PRODUCTS:
Retirement of all of SPC's HREF-, SREF-, and NAM- based guidance, including HREF/GEFS and HREF/SREF severe hazard guidance, HREFCT calibrated thunder guidance, and HREFLD lightning density guidance. The naming convention of these files are:

ltgdensity/spc_post.tCCz.hrefld_ACChr.fFFF.grib2
severe/href_cal_VAR.tCCz.ACChr.fFFF.grib2
severe/spc_post.tCCz.href_cal_gefs_VAR_EE.ACChr.fFFF.grib2
thunder/spc_post.tCCz.hrefct_ACChr.fFFF.grib2

where CC is the REFS cycle (00, 06, 12, or 18), EE is the GEFS cycle (either the same as the REFS cycle or one cycle previous), ACC is the accumulation window, FFF is the forecast hour, and VAR is the variable (hail, tor, or wind).

NEW PRODUCTS:
Addition of a suite of guidance products based on REFS, including REFS/GEFS (GREFS) severe hazard guidance and REFSCT calibrated thunder guidance, and GEFS-based daily calibrated thunder guidance (GEFSCT). Furthermore, a HRRR-based mesoanalysis product (SFCOA-HRRR) will be added

along with a product post-processing RRFS forecasts (RRFSD) to get the same fields.

GREFS is based on a similar procedure as previously used in HREF/GEFS and HREF/SREF, producing calibrated guidance for probability of tornadoes, wind, and hail based on environment data from GEFS and storm attribute data from REFS. Guidance is available for 4-h periods and full (remainder of convective day) periods. The naming convention for these files will be:

grefs/spc_post.tCCz.grefs_EE.ACChr.fFFF.grib2

where CC is the REFS cycle (00, 06, 12, or 18), EE is the GEFS cycle (either the same as the REFS cycle or one cycle previous), ACC is the accumulation window, and FFF is the forecast hour.

REFSCT is calibrated thunder guidance based on the procedure used in HREFCT, but recalibrated for REFS. Guidance is available for 1-h and 4-h periods as well as full (remainder of convective day) periods. The naming convention for these files will be:

refsct/spc_post.tCCz.refsct_PER.fFFF.grib2

where CC is the REFS cycle (00, 06, 12, or 18), PER is the accumulation period ('1hr', '4hr', or 'full'), and FFF is the forecast hour.

In addition to the new REFS-based products, GEFSCT, a new daily machine-learning-based calibrated thunder guidance product will be added. GEFSCT uses GEFS as input and provides 24-h calibrated thunder probability out to 8 days across a North America domain. This will provide convective-day (i.e., 12Z-12Z) thunder guidance for oCONUS interests as well as provide extended-range thunder guidance for SPC forecasters. The files will have the following naming convention:

spc_post.tCCz.gefsct.fFFF.grib2

where CC is the GEFS cycle (00 or 12) and FFF is the forecast hour.

Also, SPC has been running RAP-based surface objective analysis (SFCOA) internally for many years (i.e., SPC mesoanalysis), and this has proven to be extremely useful for both SPC forecasters and the wider meteorological community. SPC_POST v3 will add SFCOA-HRRR, an updated version of the RAP-based SFCOA using the HRRR as the background first guess. This version also incorporates many more surface observations and better quality control procedures compared to the current RAP-based SFCOA. SFCOA-HRRR will be run twice per hour: the first guess with the previous hour's 1-hr HRRR forecast as background and the final analysis with the current HRRR analysis as background. The naming convention will be

sfcoa-hrrr/spc_post.tHHz.sfcoa_hrrr.ANA.nc

where HH is the valid hour (00 … 23) and ANA is either "firstguess" or "final".

Finally, RRFSD will be added, which processes RRFS forecasts, giving the same suite of fields as SFCOA-HRRR. This will allow forecasters to better interrogate RRFS forecasts for severe weather prediction out to 3 days. These files will be named as follows:

rrfsd/spc_post.tCCz.rrfsd.fFFF.nc

where CC is the RRFS cycle (00 … 23), and FFF is the forecast hour.

All these files will be available at:

https://nomads.ncep.noaa.gov/pub/data/nccf/com/spc_post/prod/

NCEP urges all users to ensure their decoders can handle changes in content order and volume changes. These elements may change with future NCEP model implementations. NWS will make every attempt to alert users to these changes before implementation. As part of NWS's standard 30-day parallel testing, the new output products will be available here:

https://nomads.ncep.noaa.gov/pub/data/nccf/com/spc_post/para/

For questions regarding this change, please contact:

Tim Supinie
NWS/Storm Prediction Center, Norman, OK
tim.supinie@noaa.gov

For questions regarding the data flow, please contact:
Margaret Curtis
NWS Central Operations HPC Dataflow Team Lead
Email: ncep.pmb.dataflow@noaa.gov

NSW National Service Change Notices are online at:

http://www.weather.gov/notification

NNNN