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From: Jason Levit
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Subject: Soliciting Public Comments on the Replacement of Hybrid Single-Particle Lagrangian Integrated Trajectory (HYSPLIT) Forecast Smoke Products with Rapid Refresh (RAP) Smoke Forecast Products through January 6, 2022

The National Centers for Environmental Prediction (NCEP) is seeking comments through January 6, 2022 on replacing all smoke forecast products from the Hybrid Single-Particle Lagrangian Integrated Trajectory (HYSPLIT) forecast model system. The content in those products will be replaced by content created via the Rapid Refresh (RAP) forecast model system smoke products.

The HYSPLIT Smoke model is initialized daily at 0600 Coordinated Universal Time (UTC) and produces hourly forecast output through 48 forecast hours (F00-F48) for contiguous U.S. (CONUS), Alaska and Hawaii grids. All of this data will be removed and discontinued, which includes two products: a) the hourly-averaged surface smoke concentration on the 5km Advanced Weather Interactive Processing System (AWIPS) #227 grid for the CONUS, the 6km AWIPS grid #198 for the Alaska domain and the 2.5km AWIPS grid #196 for the Hawaii domain; and b) the hourly-averaged 0-5km smoke concentration on the 5km AWIPS #227 grid for the CONUS, the 6km AWIPS grid #198 for the Alaska domain and the 2.5km AWIPS grid #196 for the Hawaii domain.

The products will be replaced with data from the Rapid Refresh Model (RAP) initialized daily at 0300 UTC, with hourly forecast output available through 51 forecast hours (F00-F51) on CONUS, Alaska and Hawaii grids. However, the content of the products will change from what is available via HYSPLIT smoke, given differences in the smoke output fields available from the RAP. The two products that will be produced are: a) instantaneous value of mass density smoke at 8 meters on the 5km AWIPS #227 grid for the CONUS, the 6km AWIPS grid #198 for the Alaska domain and the 2.5km AWIPS grid #196 for the Hawaii domain; and b) instantaneous

value of column-integrated mass density smoke computed over the depth of the entire atmosphere on the 5km AWIPS #227 grid for the CONUS, the 6km AWIPS grid #198 for the Alaska domain and the 2.5km AWIPS grid #196 for the Hawaii domain.

In addition, graphical web products affected are HYSPLIT 1-hour Average Surface Smoke and 1-hour Average Vertical Smoke Integration for CONUS, Alaska and Hawaii. They will be removed from the operational <http://airquality.weather.gov>. All smoke products will be replaced with the RAP smoke products on <https://digital.mdl.nws.noaa.gov/airquality/> and [https://idpgis.ncep.noaa.gov/arcgis/rest/services/NWS Forecasts Guidance Warnings](https://idpgis.ncep.noaa.gov/arcgis/rest/services/NWS_Forecasts_Guidance_Warnings).

For differences between HYSPLIT and RAP smoke products, see the section above.

If these product changes are approved, a Service Change Notice (SCN) will be issued giving 75 days of notice of the termination date. The SCN notice will contain information on the binary data that will be removed from NOAA Operational Model Archive and Distribution System (NOMADS)/NCEP Web Services, tgftp, and the Satellite Broadcast Network (SBN)/NOAAPort, as well as information on where the new RAP grids will be found on those services. Sample RAP smoke product data will also be made available prior to the change.

If you have comments regarding changes to model products, please contact:

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If you have comments regarding the data flow aspects, please contact:

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