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Service Change Notice 17-54
National Weather Service Headquarters Silver Spring, MD
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From: Dave Myrick
 NWS Office of Science and Technology Integration

Subject: HYSPLIT Wild-Fire Smoke Prediction Update:
 Effective June 13, 2017

Effective on or about Tuesday, June 13, 2017, beginning with the 0600 Coordinated Universal Time (UTC) run, the National Centers for Environmental Prediction (NCEP) will upgrade the HYSPLIT wild-fire smoke prediction capability over CONUS, Alaska and Hawaii.

The scope of this upgrade includes:

Replace the current U.S. Forest Service BlueSky fire emission module (BSF) with an updated version (BSF v3.5.1) that provides wildfire smoke emissions to HYSPLIT smoke prediction for CONUS, AK, HI and to PM2.5 predictions from Community Multi-scale Air Quality (CMAQ) for CONUS.

The updated BlueSky version 3.5.1 has:

- the Fuel Characteristic Classification System version 2 (FCCS2), which includes a more detailed description of the fuel loadings with additional plant type categories.
- improved fuel consumption model and fire emission production system (FEPS).
- explicit fuel load map for Alaska (HYSPLIT only)

The expected impact of these changes include:

- Improved wildfire smoke predictions for CONUS, Alaska and

Hawaii especially from large forest fires

Predictions from the updated HYSPLIT model will be made available through a parallel feed at the following:

<http://para.nomads.ncep.noaa.gov/pub/data/nccf/com/hysplit/para/>

Experimental HYSPLIT smoke predictions over CONUS, Alaska and Hawaii will be available on the EMC air quality web page at:

http://www.emc.ncep.noaa.gov/mmb/hchuang/web/html/hysplit_bluesky_paral.html

Verification statistics of both HYSPLIT operational and experimental predictions compared to the GOES satellite smoke mask is found here:

<http://www.emc.ncep.noaa.gov/mmb/aq/fvs/hysplit/web/html/fho.html>

With this upgrade there are no changes to any output. Current HYSPLIT smoke prediction files are available at the following web services:

NWS Services:

<ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/DF.gr2/DC.ndgd/GT.aq/>

<http://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/DF.gr2/DC.ndgd/GT.aq/>

NCEP Services:

<ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/hysplit/prod/>

<http://www.ftp.ncep.noaa.gov/data/nccf/com/hysplit/prod/>

<http://nomads.ncep.noaa.gov/pub/data/nccf/com/hysplit/prod/>

Web graphics:

<http://airquality.weather.gov/>

For questions regarding these updated model forecast guidance, please contact:

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NWS Service Change Notices are online at:

<http://www.nws.noaa.gov/os/notif.htm>

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