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PNSWSH

TECHNICAL IMPLEMENTATION NOTICE 07-57  
NATIONAL WEATHER SERVICE HEADQUARTERS WASHINGTON DC  
1103 AM EDT MON AUG 20 2007

TO: FAMILY OF SERVICES /FOS/ SUBSCRIBERS  
NOAA WEATHER WIRE SERVICE /NWS/ SUBSCRIBERS  
EMERGENCY MANAGERS WEATHER INFORMATION NETWORK /EMWIN/  
SUBSCRIBERS  
NOAAPORT SUBSCRIBERS  
OTHER NWS PARTNERS...USERS AND EMPLOYEES

FROM: PAUL HIRSCHBERG  
CHIEF...SCIENCE PLANS BRANCH  
OFFICE OF SCIENCE AND TECHNOLOGY

SUBJECT: UPGRADE OF THE NCEP AIR QUALITY FORECAST /CMAQ/ SYSTEM: EFFECTIVE  
SEPTEMBER 18 2007

EFFECTIVE TUESDAY SEPTEMBER 18 2007...AT 1200 COORDINATED UNIVERSAL TIME  
/UTC/...THE NATIONAL CENTERS FOR ENVIRONMENTAL PREDICTION /NCEP/ WILL  
UPGRADE THE CMAQ MODEL RUN IN ITS OPERATIONAL PRODUCTION SUITE. THIS  
UPGRADE WILL PROVIDE THE FOLLOWING CHANGES TO THIS SYSTEM:

- THE OPERATIONAL CMAQ DOMAIN WILL BE EXPANDED TO COVER THE ENTIRE  
CONTINENTAL U.S. /CONUS/.
- IMPLEMENT THE COMMON NONHYDROSTATIC MESOSCALE MODEL /NMM/ VERTICAL  
COORDINATE INTO CMAQ.
- UPDATE NATIONAL EMISSION INVENTORY FOR CALIFORNIA WITH 2002 ESTIMATES.
- UPDATE ALL OTHER POINT...AREA AND MOBILE SOURCE EMISSIONS.
- USING THE DEPARTMENT OF ENERGY ANNUAL ENERGY OUTLOOK FOR  
2007...IMPLEMENT THE ASYMMETRIC CONVECTIVE MODEL DEEP CONVECTIVE MIXING  
INTO CMAQ TO REDUCE INTRUSION OF STRATOSPHERIC AIR INTO THE TROPOSPHERE  
FROM DEEP CONVECTION.
- IMPLEMENT THE ASYMMETRIC CONVECTIVE MODEL-2 BOUNDARY LAYER MIXING SCHEME  
INTO CMAQ.
- REMOVE THE USE OF GFS OZONE PREDICTION FOR CMAQ TOP LATERAL BOUNDARY  
CONDITIONS /THIS WILL BE REIMPLEMENTED AT A LATER DATE ONCE THE OVER  
PREDICTION BIAS CAUSED BY THESE SPECIFICATIONS IS CORRECTED/.

ONCE OPERATIONAL...THE OUTPUT FROM THIS ENHANCED PROCESSING WILL BE  
AVAILABLE FROM THE NWS...NATIONAL DIGITAL GUIDANCE DATABASE /NDGD/ SERVER  
LOCATED AT /USE LOWER CASE EXCEPT FOR SL...ST...DF...DC AND AR/:

[HTTPS://WEATHER.NOAA.GOV/PUB/SL.US008001/ST.OPNL/DF.GR2/DC.NDGD/AR.CONUS/](https://weather.noaa.gov/pub/sl.us008001/st.opnl/df.gr2/dc.ndgd/ar.conus/)

OUTPUT FROM THE NEW CMAQ MODEL SYSTEM IS CURRENTLY BEING GENERATED DAILY  
AT NCEP. THESE DATA CAN BE OBTAINED FROM THE EXPERIMENTAL NDGD SERVER  
LOCATED AT /USE LOWER CASE EXCEPT FOR SL...ST...DF...DC AND AR/:

[HTTPS://WEATHER.NOAA.GOV/PUB/SL.US008001/ST.EXPR/DF.GR2/DC.NDGD/AR.CONUS/](https://weather.noaa.gov/pub/sl.us008001/st.expr/df.gr2/dc.ndgd/ar.conus/)

MORE INFORMATION ON NCEP MODEL CHANGES CAN BE FOUND AT THE LINK BELOW /USE LOWER CASE/:

[HTTP://WWW.NCO.NCEP.NOAA.GOV/PMB/CHANGES](http://www.nco.ncep.noaa.gov/pmb/changes)

IF YOU HAVE ANY QUESTIONS...PLEASE CONTACT:

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NATIONAL TECHNICAL IMPLEMENTATION NOTICES ARE ONLINE AT /USE LOWER CASE/:

[HTTPS://WWW.WEATHER.GOV/NOTIFICATION/ARCHIVE](https://www.weather.gov/notification/archive)

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