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PNSWSH

TECHNICAL IMPLEMENTATION NOTICE 05-68 AMENDED
NATIONAL WEATHER SERVICE HEADQUARTERS WASHINGTON DC
1054 AM EDT TUE JUN 13 2006

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

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

SUBJECT: AMENDED: REPLACEMENT OF NCEP ETA MODEL WITH THE NON-HYDROSTATIC
MESOSCALE MODEL POSTPONED TO JUNE 20 2006 DUE TO CRITICAL WEATHER
DECLARATION

AMENDED: DUE TO THE DECLARATION OF CRITICAL WEATHER FOR THE TROPICAL STORM
IN THE GULF OF MEXICO...THE EFFECTIVE DATE FOR THE REPLACEMENT OF THE NCEP
ETA MODEL WITH THE NON-HYDROSTATIC MESOSCALE MODEL HAS BEEN DELAYED FROM
JUNE 13 2006 UNTIL JUNE 20 2006.

THE ORIGINAL MESSAGE WITH AMENDED EFFECTIVE DATE FOLLOWS:

ON JUNE 20 2006...BEGINNING WITH THE 1200 COORDINATED UNIVERSAL TIME /UTC/
RUN...THE NATIONAL CENTERS FOR ENVIRONMENTAL PREDICTION /NCEP/ WILL
REPLACE THE FORECAST MODEL CURRENTLY RUN IN THE NORTH AMERICAN MESOSCALE
SYSTEM. THE 12 KM HORIZONTAL RESOLUTION ETA MODEL IS CURRENTLY USED IN
THIS SYSTEM. THE MODEL WILL BE REPLACED WITH A 12 KM HORIZONTAL
RESOLUTION WEATHER RESEARCH AND FORECASTING /WRF/ VERSION OF THE NON-
HYDROSTATIC MESOSCALE MODEL /NMM/ MODEL.

THE DIFFERENCES BETWEEN THE NCEP ETA AND WRF NMM SYSTEMS ARE AS FOLLOWS:

1. MODEL CHANGES:

- REPLACE ETA PREDICTION MODEL WITH WRF VERSION OF THE NON-HYDROSTATIC
MESO MODEL /WRF-NMM/.
- EXTENDED MODEL TOP PRESSURE FROM 25 MB TO 2 MB.
- REPLACE ETA STEP-MOUNTAIN VERTICAL COORDINATE WITH NMM HYBRID SIGMA-
PRESSURE VERTICAL COORDINATE.
- REFINED/RETUNED NUMEROUS ASPECTS OF THE ETA MODEL PHYSICS FOR USE IN THE
NMM.

2. ANALYSIS CHANGES:

- REPLACE ETA 3DVAR ANALYSIS SYSTEM WITH THE NEW UNIFIED GRIDPOINT
STATISTICAL INTERPOLATION /GSI/ ANALYSIS SYSTEM THAT HAS BEEN ADAPTED FOR
APPLICATION TO THE WRF-NMM.

- REPLACE NEXRAD LEVEL II.5 DATA IN ETA 3DVAR WITH NEXRAD LEVEL II RADIAL WIND DATA IN GSI. GSI USES BACKGROUND ERRORS BASED ON WRF-NMM FORECASTS...ETA 3DVAR USED BACKGROUND ERRORS BASED ON GFS FORECASTS.
- USE OF DYNAMICALLY RETUNED OBSERVATIONAL ERRORS.

3. DATA ASSIMILATION CHANGES:

- IMPLEMENT DIRECT USE OF OBSERVED PRECIPITATION ANALYSIS VALUES IN THE LAND-SURFACE PHYSICS MODULES - THIS REPLACES PRIOR USE OF NUDGING /TO PRECIPITATION AND GOES CLOUD TOP PRESSURES/.

THERE WILL BE NO NAME CHANGES ASSOCIATED WITH THIS MODEL REPLACEMENT. PRODUCTS AVAILABLE ON NOAAPORT WILL ALSO REMAIN UNALTERED WITH THIS CHANGE. ALL CURRENT NAM GUIDANCE PRODUCTS WILL CONTINUE TO BE AVAILABLE AT THE SAME TIME IN THEIR CURRENT RESOLUTIONS AFTER THIS CHANGE IS IMPLEMENTED.

NCEP CENTRAL OPERATIONS /NCO/ HAS BEGUN PARALLEL TESTING OF THE NAM WITH THE WRF NMM MODEL. THE OUTPUT FROM THIS PARALLEL RUN WILL BE AVAILABLE BEGINNING THE WEEK OF MARCH 20 2005 AT THE FOLLOWING FILE TRANSFER PROTOCOL /FTP/ LOCATION /USE LOWER CASE/:

[FTP://FTPPRD.NCEP.NOAA.GOV/PUB/DATA/NCCF/COM/NAM/PARA/](ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/nam/para/)

AND AT AN ADDITIONAL FTP LOCATION /USE LOWER CASE AND FOLLOW URL WITH DATE /YYYYMMDD/:

[FTP://FTPPRD.NCEP.NOAA.GOV/PUB/DATA/NCCF/COM/NAWIPS/PARA/NAM](ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/nawips/para/nam)

ADDITIONAL INFORMATION ON THIS CHANGE...INCLUDING PARALLEL DATA AVAILABILITY...FTP SERVER PRODUCT CHANGES AND OTHER SCIENTIFIC INFORMATION CAN BE FOUND AT /USE LOWER CASE/:

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

FOR QUESTIONS CONCERNING THESE CHANGES...PLEASE CONTACT:

GEOFF DIMEGO
NCEP...MESOSCALE MODELING BRANCH
CAMP SPRINGS MARYLAND
PHONE: 301-763-8000 X 7221
EMAIL: GEOFF.DIMEGO@NOAA.GOV

OR

ERIC ROGERS
NCEP...MESOSCALE MODELING BRANCH
CAMP SPRINGS MARYLAND
PHONE: 301-763-8000 X 7227
EMAIL: ERIC.ROGERS@NOAA.GOV

OR

BRENT GORDON
NCEP...PRODUCTION MANAGEMENT BRANCH
CAMP SPRINGS MARYLAND
PHONE: 301-763-8000 X 7193
EMAIL: BRENT.GORDON@NOAA.GOV

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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