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PNSWSH

TECHNICAL IMPLEMENTATION NOTICE 06-44 AMENDED  
NATIONAL WEATHER SERVICE HEADQUARTERS WASHINGTON DC  
245 PM EDT FRI JUL 21 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: UPGRADES TO THE NATIONAL CENTERS FOR ENVIRONMENTAL  
PREDICTION GLOBAL FORECAST SYSTEM POSTPONED UNTIL AUGUST 22 2006

AMENDED TO DELAY THE IMPLEMENTATION DATE OF THIS UPGRADE FROM JULY 25 2006  
TO AUGUST 22 2006. IN ADDITION...THE ORIGINAL NOTICE INDICATED THAT THE  
NATIONAL CENTERS FOR ENVIRONMENTAL PREDICTION /NCEP/ WOULD BE SWITCHING  
THE GLOBAL FORECAST SYSTEM /GFS/ TO USE A HYBRID COORDINATE SYSTEM FOR ITS  
PROCESSING. THIS CHANGE HAS BEEN REMOVED FROM THE UPGRADE PACKAGE. THE  
GFS WILL CONTINUE TO BE PRODUCED IN THE PRESSURE COORDINATE SYSTEM.

THE ORIGINAL NOTICE...MINUS INFORMATION ON THE HYBRID COORDINATE  
CHANGE...IS GIVEN BELOW.

ON THE ABOVE EFFECTIVE DATE...BEGINNING WITH THE 1200 COORDINATED  
UNIVERSAL TIME /UTC/ RUN...THE NATIONAL CENTERS FOR ENVIRONMENTAL  
PREDICTION /NCEP/ WILL IMPLEMENT UPGRADES TO ITS GLOBAL FORECAST SYSTEM  
/GFS/ MODEL. THESE UPGRADES ARE AS FOLLOWS:

- BEGIN USE OF THE HYBRID /SIGMA-PRESSURE/ VERTICAL COORDINATE SYSTEM  
/SPECTRAL STATISTICAL INTERPOLATION ANALYSIS REMAINS IN SIGMA COORDINATE/.
- ADDITION OF NAVAL RESEARCH LABORATORY /NRL/ OZONE PHYSICS.
- ADDITION OF GLACIAL ICE PHYSICS WITH MODIFIED OROGRAPHY.
- IMPROVED GLOBAL SNOW ANALYSIS /LESS INTERPOLATION/.
- CORRECTION TO SURFACE DOWNWARD LONGWAVE RADIATION.
- CHANGE OF THE TIME-FILTER COEFFICIENT /0.85/.
- UPGRADES TO SURFACE CYCLING...COMPATIBLE WITH THE NEW SNOW ANALYSIS.
- USES EARTH SYSTEM MODELING FRAMEWORK /ESMF/ SUPERSTRUCTURE.
- RESTART FILES ARE IN FULL PRECISION /FORECASTS ARE THUS REPRODUCIBLE/.
- WILL ALLOW MULTIPLE ENSEMBLE MEMBER FORECASTS TO BE RUN CONCURRENTLY.

THE PURPOSE OF THESE CHANGES IS TO:

- USE ESMF.
- MAKE MINOR IMPROVEMENTS /TIME FILTER COEFFICIENT AND DOWNWARD LONGWAVE  
RADIATION/.
- MAKE UPGRADES THAT HAVE BEEN PLANNED FOR A WHILE /NEW SNOW ANALYSIS/.

- MAKE PHYSICS CHANGES /OZONE...GLACIAL ICE/.

THE EXPECTED IMPACTS ARE GENERALLY MINOR...THOUGH ULTRAVIOLET /UV/  
FORECASTS SHOULD BE IMPROVED BY THE CHANGED OZONE SCHEME.

THE NCEP ENVIRONMENTAL MODELING CENTER /EMC/ BEGAN RUNNING PARALLEL  
FORECASTS ON MAY 9 2006 AND IS CURRENTLY UP TO REAL TIME. STATISTICAL  
SCORE COMPARISONS FOR BOTH THE OPERATIONAL AND NEW GFS ARE AVAILABLE AT  
THE FOLLOWING WEBSITES /USE LOWER CASE/:

EMC.NCEP.NOAA.GOV/GC\_WMB/WD20XW/HTML\_DIE/INDEX\_PRYO\_NEW.HTML  
EMC.NCEP.NOAA.GOV/GC\_WMB/WD20XW/HTML\_LINE/INDEX\_PRYO\_NEW.HTML

IF YOU HAVE QUESTIONS ABOUT THESE CHANGES...PLEASE CONTACT:

MARK IREDELL  
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CAMP SPRINGS MARYLAND  
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OR

BRENT GORDON  
NCEP...PRODUCTION MANAGEMENT BRANCH  
CAMP SPRINGS MARYLAND  
PHONE: 301-763-8000 X 7193  
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NATIONAL TECHNICAL IMPLEMENTATION NOTICES ARE ONLINE AT /USE LOWER CASE/:

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

END  
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