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TECHNICAL IMPLEMENTATION NOTICE 06-44
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...OTHER NATIONAL WEATHER
SERVICE /NWS/ CUSTOMERS AND PARTNERS...NWS
EMPLOYEES

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

SUBJECT: AMENDED: UPGRADES TO THE NATIONAL CENTERS FOR
ENVIRONMENTAL PREDICTION GLOBAL FORECAST SYSTEM
POSTPONED UNTIL AUGUST 22 2006.

REFER TO: TECHNICAL IMPLEMENTATION NOTICE /TIN/ 06-44
TRANSMITTED ON JUNE 20 2006

THIS NOTICE AMENDS TIN 06-44 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 WEB SITES /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
NCEP...GLOBAL MODELING BRANCH
CAMP SPRINGS MARYLAND
PHONE: 301 763 8000 X7231
EMAIL: MARK.IREDELL@NOAA.GOV

OR

BRENT GORDON
NCEP...PRODUCTION MANAGEMENT BRANCH
CAMP SPRINGS MARYLAND
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THIS AND OTHER NWS TECHNICAL IMPLEMENTATION NOTICES ARE AVAILABLE ONLINE AT /USE LOWER CASE LETTERS/:

[HTTP://WWW.NWS.NOAA.GOV/OM/NOTIF.HTM](http://WWW.NWS.NOAA.GOV/OM/NOTIF.HTM)

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