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PNSWSH

TECHNICAL IMPLEMENTATION NOTICE 07-33 AMENDED  
NATIONAL WEATHER SERVICE HEADQUARTERS WASHINGTON DC  
830 AM EDT FRI JUN 22 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: AMENDED: NATIONAL CENTERS FOR ENVIRONMENTAL PREDICTION /NCEP/  
REAL TIME OCEAN FORECAST SYSTEM /RTOFS/ MODEL UPGRADE: EFFECTIVE JUNE 5  
2007

REFER TO: [TECHNICAL IMPLEMENTATION NOTICE /TIN/ 07-43](#).

AMENDED TO REMOVE REFERENCE TO PARALLEL DATA SETS AND TO PROVIDE A VALID  
FILE TRANSFER PROTOCOL /FTP/ SERVER LINK FOR CURRENT OPERATIONAL RTOFS  
MODEL DATA.

NOTE: NCEP COASTAL OCEAN FORECAST SYSTEM /COFS/ TO BE DISCONTINUED 90 DAYS  
AFTER THE IMPLEMENTATION OF THIS RTOFS UPDATE. SEE DETAILS BELOW.

EFFECTIVE TUESDAY JUNE 5 2007...BEGINNING WITH THE 1200 COORDINATED  
UNIVERSAL TIME /UTC/ RUN...NCEP WILL UPGRADE THE RTOFS FORECAST SYSTEM.

THIS UPGRADE IS EXPECTED TO IMPROVE THE RTOFS ANALYSIS AND FORECAST SKILL  
AS WELL AS EXTEND THE PRODUCTS SUITE FOR THE RTOFS ATLANTIC DOMAIN.

DETAILS OF THESE CHANGES ARE AS FOLLOWS:

ALGORITHM CHANGES:

A. DATA ASSIMILATION

- FOR SEA SURFACE TEMPERATURE /SST/: CHANGES IN NUDGING  
PARAMETERS...REMOVAL OF BIAS FOR GOES SST OBSERVATIONS.
- FOR SEA SURFACE HEIGHT: NEW ALGORITHMS TO ASSIMILATE SEA SURFACE HEIGHT  
ANOMALIES FROM JASON AND GFO.
- FOR VERTICAL PROFILES OF TEMPERATURE AND SALINITY: NEW ALGORITHMS TO  
ASSIMILATE TEMPERATURE AND SALINITY PROFILES.

B. HYCOM MODEL

- REMOVE APPROXIMATION TO BOTTOM PRESSURE IN MONTGOMERY POTENTIAL  
CALCULATION.

- IMPROVE STABILITY IN PRESSURE GRADIENT CALCULATIONS.
- THE TWO INVARIANT EXTERNAL MODE BOUNDARY CONDITION IS BEING RE-DEPLOYED.
- FOR WATER FLUXES INTO THE OCEAN /RIVERS AND PRECIPITATION MINUS EVAPORATION/: THE WATER COLUMN MIGHT BE REFRESHED TO ARBITRARY DEPTH...AS NEEDED.

#### C. DATA INPUTS AND MODEL PARAMETERS

- USE REVISED AND EXTENDED HYDROBASE CLIMATOLOGY NCEP VERSION 6.
- NUMBER OF VERTICAL LEVELS INCREASED FROM 25 TO 26 WITH IMPROVED DENSITY TARGETS.
- USE REVISED RIVER INFLOW DATA /LOCATION...STRENGTH/ FROM UNITED STATES GEOLOGICAL SURVEY RIVER OUTFLOW DATA IN REAL TIME.
- REMOVE NOISE IN NET HEAT FLUX.
- IMPROVED VALUES OF TRANSPORT AND SURFACE ELEVATION USED AT OPEN BOUNDARIES.

#### D. PRODUCTS

- USE GRIDDED BINARY /GRIB/ FILES ON NATIVE GRIDS.
- USE REGIONAL GRIB FILES FOR GULF OF MEXICO NORTH-WEST ATLANTIC /TWO SUB-REGIONS/ FOR EFFICIENT TRANSMISSION.

OPERATIONAL RTOFS MODEL DATA OUTPUT CAN BE FOUND AT THE FOLLOWING LINK /USE LOWER CASE/:

[FTP://FTP.NCEP.NOAA.GOV/PUB/DATA/NCCF/COM/OOFS/PROD/OOFS.YYYYMMDD](ftp://ftp.ncep.noaa.gov/pub/data/nccf/com/oofs/prod/oofs.yyyyymmdd)

SAMPLES OF NOWCAST AND FORECAST FIELDS...ADDITIONAL INFORMATION AND NOWCAST/FORECAST EVALUATIONS ARE AVAILABLE ONLINE AT /USE LOWER CASE/:

[HTTP://POLAR.NCEP.NOAA.GOV/OOFS](http://polar.ncep.noaa.gov/oofs)

IF YOU HAVE ANY QUESTIONS ABOUT THIS CHANGE...PLEASE CONTACT:

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NCEP...MARINE MODELING AND ANALYSIS BRANCH  
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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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