

September 27, 2011

MEMORANDUM FOR: NCEP Model Implementation Scientific Review Team

FROM: Chris Caruso Magee, Team Lead, Production Control  
Production Management Branch, NCEP Central Operations

SUBJECT: Proposed Implementation of Global Real-Time Ocean Forecast System  
V1.0.0

The Environmental Modeling Center (EMC) has proposed implementation of the Global Real-Time Ocean Forecast System (RTOFS) V1.0.0. This new system will run once a day (split out into 4 separate jobs to fit on the NOAA supercomputing system) and will produce a 6-day-long forecast. It will be the first global eddy resolving ocean forecast system to be implemented at NWS/NCEP and is based on a 1/12 degree global HYCOM.

The system includes :

1. Boundary conditions and initializations for other basin-wide (e.g. RTOFS-Atlantic) and regional systems (e.g. HyHWRF).
2. Output will be in NetCDF format and includes global surface files, global volume files, and regional volume files.
  - a. Volume files include salinity, temperature, and u- and v-velocity.
    - i. Daily for global
    - ii. 6-hrly for regional
  - b. Surface files include SST, SSS, u- and v-velocity, speed, layer density (diagnostic), SSH, MLD, BLD, ice coverage, and ice thickness (prognostic).
    - i. Daily and 3-hrly
  - c. Regional volume files are created for the US East Coast, the US West Coast, and Alaska.

**Near real time parallel data:**

Beginning Wednesday, September 28, 2011, and starting with the 1200Z cycle, a consistent parallel feed of data will be available at:

HTTP:

<http://nomads.ncep.noaa.gov/pub/data/nccf/com/rtofs/para/rtofs.YYYYMMDD>

FTP:

<ftp://ftp.ncep.noaa.gov/pub/data/nccf/com/rtofs/para/rtofs.YYYYMMDD>

where YYYYMMDD is the current year/month/day.

A detailed description of Global RTOFS NetCDF files on NOMADS may be found at:

[http://polar.ncep.noaa.gov/ofs/developmental/global/about/regional\\_description.shtml](http://polar.ncep.noaa.gov/ofs/developmental/global/about/regional_description.shtml)

This web page is password-protected. Users outside of NOAA/NCEP should contact Avichal Mehra ([avichal.mehra@noaa.gov](mailto:avichal.mehra@noaa.gov)) for the ID and password in order to gain access to this web page.

**Data delivery, Timing, Volume and Content changes:**

This is a new model. Output files range in size from just under 100 MB to nearly 2 GB each. The analysis starts at 0030Z and ends around 0550Z. The forecast step 1 (first 2 days) starts around 0450Z (start of prep) and ends around 1140Z (end of post), step 2 (2<sup>nd</sup> 2 days) starts around 1110Z (start of prep) and ends around 1740Z (end of post), and step 3 (3<sup>rd</sup> 2 days) starts around 1830Z (start of prep) and ends around 2340Z (end of post).

### **Request for Evaluation**

Please complete the attached “Intent to Participate” form and return to [Chris.Caruso.Magee@noaa.gov](mailto:Chris.Caruso.Magee@noaa.gov) no later than October 3, 2011. NCO requires an intent form be filed by all NCEP Service Centers. For the NCEP Service Centers, if, in your estimation the nature of the proposed change would have little or no impact on the forecast process at your Service Center, simply indicate that you do not intend to participate in the subjective evaluation and return the form.

The 2-week evaluation period will start at 12Z on Wednesday, September 28 and run through October 12. Participants need to complete the attached “Model Implementation Subjective Evaluation Report” form and return to [Chris.Caruso.Magee@noaa.gov](mailto:Chris.Caruso.Magee@noaa.gov) no later than October 17, 2011. Please indicate the overall performance of the product, with any additional comments on specific cases with noteworthy positive or negative performance. Please note that NCO requires evaluators to specifically address the benefits stated in the attached form as to whether those benefits were observed or not. Any feedback you wish to provide during the evaluation period should be emailed to [Chris.Caruso.Magee@noaa.gov](mailto:Chris.Caruso.Magee@noaa.gov) .

A final coordination teleconference will be scheduled to review the objective evaluation and address any outstanding issues. Based on the outcome of that teleconference EMC and NCO will prepare a recommendation for Dr. Uccellini (NCEP Director). This teleconference has not yet been scheduled.

### **Points of Contact**

[Chris.Caruso.Magee@noaa.gov](mailto:Chris.Caruso.Magee@noaa.gov) (NCO)

[Avichal.Mehra@noaa.gov](mailto:Avichal.Mehra@noaa.gov) (EMC)

[Hendrik.Tolman@noaa.gov](mailto:Hendrik.Tolman@noaa.gov) (EMC)

**Intent To Participate  
Model Implementation Subjective Evaluation**

**Scientific Review Team Member:** \_\_\_\_\_

**Team Member E-mail:** \_\_\_\_\_

**Region, Service Center Company Representing:** \_\_\_\_\_

**(Govt Only) Authorizing Official or  
Service Center Director:** \_\_\_\_\_

**Intent to Participate:**

\_\_\_\_ Will Participate in the Evaluation

\_\_\_\_ Will Not Participate in the Evaluation



**Recommendation:**

**Implement as proposed** \_\_\_\_

**Reevaluate after changes** \_\_\_\_

**Do not implement** \_\_\_\_