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Public Information Statement 26-17
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From: Fanglin Yang
Acting Chief, Coupled Modeling Division
NCEP/Environmental Modeling Center

Subject: Soliciting Comments through April 15, 2026 on Upgrading Real-Time Ocean Forecast System (RTOFS) to version 3.0.

NWS is soliciting comments on proposed changes of the products generated by RTOFS through an update to version 3.0 through April 15, 2026.

The current operational RTOFS v2.5 consists of the Hybrid Coordinate Ocean Model (HYCOM), Community Ice CodE (CICE) version 4 (CICE4) and data assimilation for both sea ice and ocean. Its products include global fields of hourly 2D ocean surface archives and six-hourly 3D archives, as well as high vertical resolution regional 3D archives. The output data in native archive format, NetCDF, GRIB2 and compressed file formats (see below for further details) is available via NCO operational NOMADS (http://nomads.ncep.noaa.gov/pub/data/nccf/com/rtofs/prod/).

The update of RTOFS from v2.5 to v3.0 will replace the current numerical modeling components with those from the NOAA's Unified Forecast System (UFS), specifically HYCOM ocean model with the Modular Ocean Model version 6 (MOM6) and CICE4 sea ice model with CICE6. This upgrade allows all the science and technology developed via the UFS to transfer to RTOFS. Additional scientific improvements will be shared with the public through the NWS Service Change Notices after RTOFS v3.0 configuration is finalized.

As a consequence of the UFS adaptation in RTOFS v3.0, the following RTOFS products will be DISCONTINUED:

1. Binary-formatted meteorological fields (*.a, *.b, *.B): These files contained fields from GDAS/GFS ingested by the CICE4 sea ice model. The RTOFSv3 CICE6 component now reads NetCDF-formatted fields directly from GDAS/GFS.
2. HYCOM native archives (*.a, *.b, *.B): UFS/MOM6 and UFS/CICE6 produce output natively in NetCDF format; therefore, these legacy binary products will no longer be generated.
3. Tar-compressed HYCOM/CICE4 binary files (*.tgz): UFS

produces native NetCDF output, including restart files, rendering these files obsolete.

4. Compressed sea surface temperature and velocity files (*.tar.gz, *.gz): All information contained in these files (e.g., rtofs_glo_{var}_yyyymmdd) will be provided in standard UFS NetCDF files.

The following RTOFS products will be RENAMED or CONSOLIDATED:
GRIB2 files (*.grb2):
Current: rtofs_glo.t00z.f{HHH}_{region}_std.grb2,
rtofs_glo.t00z.n024_{region}_std.grb2

New: rtofs_glo.t00z.f{HHH}.{region}.std.grib2,
rtofs_glo.t00z.tm000.{region}.std.grib2 respectively.

2D Surface Diagnostic and Prognostic files (*2ds*.nc):
Current: rtofs_glo_2ds_f{HHH}_ice.nc,
rtofs_glo_2ds_f{HHH}_diag.nc, rtofs_glo_2ds_f{HHH}_prog.nc,
rtofs_glo_2ds_n{HHH}_ice.nc, rtofs_glo_2ds_n{HHH}_diag.nc, and
rtofs_glo_2ds_n{HHH}_prog.nc

New: rtofs_glo_2ds.f{HHH}.ice.nc, rtofs_glo_2ds.f{HHH}.nc,
rtofs_glo_2ds.tm{HHH}.ice.nc, rtofs_glo_2ds.tm{HHH}.nc.

3D Products (*3dz*.nc):
Current: rtofs_glo_3dz_f{HHH}_6hrly_hvr_{region}.nc,
rtofs_glo_3dz_n{HHH}_6hrly_hvr_{region}.nc

New: rtofs_glo_3dz.f{HHH}.6hrly_hvr.{region}.nc,
rtofs_glo_3dz.tm{HHH}.6hrly_hvr.{region}.nc

Current: rtofs_glo_3dz_f{HHH}_daily_3z{var}io.nc,
rtofs_glo_3dz_n024_daily_3z{var}io.nc

New: rtofs_glo_3dz.f{HHH}.daily.3z{var}io.nc,
rtofs_glo_3dz.tm000.daily.3z{var}io.nc

To summarize, the RTOFS v3.0 product will continue to include GRIB2 and NetCDF files as in RTOFS v2.5. RTOFS products will continue to be available from the NOAA Operational Model Archive and Distribution Services (NOMADS)/FTPPRD web services.

The NWS will evaluate all comments to determine whether to proceed with the proposed upgrade. If approved, a Service Change Notice will be issued 30 days before the model implementation date. Please submit comments and questions on the proposed RTOFS v3.0 upgrade to:

Santha Akella
RTOFS Project Lead
Coupling Modeling Division
NCEP/Environmental Modeling Center
College Park, MD
Email: santha.akella@noaa.gov

For questions regarding the data flow aspects, please contact:

Margaret Curtis
Acting NCEP Central Operations Dataflow Team Lead
College Park, MD
ncep.pmb.dataflow@noaa.gov

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