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Public Information Statement 20-41 National Weather Service Headquarters Silver Spring MD 250 PM EDT Mon Jun 8 2020

- To: Subscribers: -NOAA Weather Wire Service -Emergency Managers Weather Information Network -NOAAPort Other NWS Partners, Users and Employees
- From: Jason Levit, Chief Verification, Post-Processing, Product Generation Branch NCEP/Environmental Modeling Center

Subject: Soliciting Public Comments on Changing the Product Suite from the Proposed Upgrade of the Real Time Ocean Forecast System (RTOFS) Global Model through July 8, 2020

The National Centers for Environmental Prediction (NCEP) is soliciting comments on removing, adding and changing certain products from the Real-Time Ocean Forecast System (RTOFS) on or after November 11, 2020.

The following products will be removed from NCEP Web Services, including the NOAA Operational Model Archive and Distribution System (NOMADS) grib filter, OpenDap, and ftpprd.

For Nowcast:

-rtofs_glo.t00z.n-NN.archs.a
-rtofs glo.t00z.n-NN.archs.b

These files contain Global Surface binary data for HYbrid Coordinate Ocean Model (HYCOM) at 1-hourly intervals (Nowcast Hours: NN: 25-48, 1hour increments).

Fields available in these files are Montgomery Potential (montgl), Sea Surface Height (srfhgt), Steric height (steric), Thermal Energy Flux (surflx), Salinity Flux (salflx), Boundary Layer Depth (bl_depth), Mix layer Depth (mix_depth), Ice Coverage (covice), Ice Thickness (thkice), Ice Temperature (icetem), U Barotropic Velocity (u_btrop), V Barotropic Velocity (v_btrop), U Velocity (u_vel), V Velocity (v_vel), Layer Thickness (thkness), Temperature (temp) and Salinity (salin)

-rtofs_glo.t00z.n-NN.archv.a
-rtofs glo.t00z.n-NN.archv.b

These files contain Global Volume binary data for HYbrid Coordinate Ocean Model (HYCOM) at 6-hourly intervals (Nowcast hours: NN: 25-48, 6-hour increments) at 41 hybrid levels.

Fields available in these files are Montgomery Potential (montgl), Sea Surface Height (srfhgt), Steric height (steric), Thermal Energy Flux (surflx), Salinity Flux (salflx), Boundary Layer Depth (bl_depth), Mix layer Depth (mix_depth), Ice Coverage (covice), Ice Thickness (thkice), Ice Temperature (icetem), U Barotropic Velocity (u_btrop), V Barotropic Velocity (v_btrop), U Velocity (u_vel), V Velocity (v_vel), Layer Thickness (thkness), Temperature (temp) and Salinity (salin)

Nowcast in the new upgrade is run for one day (n-24 to n00) and hence the above files are removed. For n-48 to n-24, users can use the previous day's nowcast files from n-24 to n00.

-rtofs glo 2ds nNNN 3hrly [diag/prog].nc

These files contain Global Surface data in netCDF format in 3-hourly intervals (Nowcast hours: NNN: 000 to 048 in 3-hour increments).

-rtofs_glo_2ds_nNNN_daily_[diag/prog].nc

These files contain Global Surface data in netCDF format in daily/24-hour intervals (Nowcast hours: NNN:000 to 048 in 24-hour increments).

Fields available in rtofs_glo_2ds_nNNN_[3hrly/daily]_diag,nc are Ice Coverage, Ice_thickness, U Barotropic Velocity, V Barotropic Velocity, Sea Surface Height (SSH), Surface Boundary Layer Thickness and Mixed Layer Thickness.

Fields available in rtofs_glo_2ds_nNNN_[3hrly/daily]_prog.nc are U Velocity, V Velocity, Sea Surface Temperature (SST), Sea Surface Salinity (SSS) and Layer Density.

The reason for removing the above nowcast files (*prog* and *diag*) is that they are redundant. In current production, *1hrly* files get copied to *3hrly* and *daily* files. So, we have three copies of the same file which causes redundancy. Hence, we plan to have one copy of the files with *hrly* and *daily* removed from the filenames (more on that below).

-rtofs glo 3dz nNNN 6hrly hvr REGION.nc

These files contain Regional Volume data in netCDF format in 6-hourly intervals [Nowcast hours: NNN: 030, 036, 042, 048]. Regions available are REGION US East, US West and Alaska [REGION: US east, US west alaska].

Fields available in these files are U Velocity (u), V Velocity (v), Temperature and Salinity.

-rtofs glo.t00z.n048 REGION std.grb2

This file contains Regional Surface data in gridded binary version two (GRIB2) format (REGION: alaska, arctic, bering, guam, gulf_alaska, honolulu, hudson_baffin,samoa,trop_paci_lowres,west_atl,west_conus)

Fields available in this file are Temperature (wtmp), Salinity (salty), U Velocity (UOGRD), V Velocity (VOGRD), U Barotropic Velocity (UBARO), V Barotropic Velocity (VBARO), Sea Surface Height (SSHG).

Nowcast in the new upgrade is run for one day (n-24 to n00) and hence, the above files are removed. For n-48 to n-24, users can use the previous day's nowcast files from n-24 to n00.

For Forecast:

-rtofs glo 2ds fNNN 3hrly [diag/prog].nc

These files contain Global Surface data in netCDF format in 3-hourly intervals (Forecast Hours: NNN: 000 to 072; 3-hourly intervals).

-rtofs glo 2ds fNNN daily [diag/prog].nc

These files contain Global Surface data in netCDF format in daily/24-hour intervals (Forecast Hours: NNN:000 to 192 in 24-hour increments).

Fields available in rtofs_glo_2ds_fNNN_[3hrly/daily]_diag,nc are Ice Coverage, Ice_thickness, U Barotropic Velocity, V Barotropic Velocity, Sea Surface Height (SSH), Surface Boundary Layer Thickness and Mixed Layer Thickness.

Fields available in rtofs_glo_2ds_fNNN_[3hrly/daily]_prog.nc are U Velocity, V Velocity, Sea Surface Temperature (SST), Sea Surface Salinity (SSS) and Layer Density.

The reason for removing the above forecast files (*prog* *diag*) is that they are redundant. In the current production, *1hrly* files get copied to *3hrly* and *daily* files. So, we have three copies of the same file which causes redundancy. Hence, we plan to have one copy of the files with *hrly* *daily* removed from the filenames (more on that below).

The following products will be changed on the web services:

rtofs glo [2ds] [f/n]NNN 1hrly [diag].nc

These files contain Global Surface data in netCDF format in 1-hourly intervals for both nowcast and forecast [f/n] (Nowcast Hours: NNN: 000 to 024 and Forecast Hours: NNN : 000 to 192). Ice coverage and Ice thickness will be removed from the "diag" files and added on to Global Surface ice data files in netCDF format in 1-hourly intervals for both nowcast and forecast. This *ice* is a new file that will be provided with this upgrade.

rtofs glo [2ds] [f/n]NNN 1hrly ice.nc files

Comments: Fields in *diag* files for both Nowcast and Forecast will have U Barotropic Velocity, V Barotropic Velocity, Sea Surface Height (SSH), Surface Boundary Layer Thickness and Mixed Layer Thickness.

Changing file names:

Also all the Global Surface 1hrly files: rtofs_glo_[2ds]_[f/n]NNN_1hrly_[diag/prog/ice].nc will be renamed as: rtofs_glo_[2ds]_[f/n]NNN_[diag/prog/ice].nc

Where f/n: forecast/nowcast Nowcast hours: NNN: 000 to 024 for nowcast Forecast Hours: NNN: 000 to 192 for forecast.

Further, all nc files will be converted to NetCDF4 with compression.

World Meteorological Organization (WMO) GRIB data to be removed from the Satellite Broadcast Network (SBN)/NOAAPort:

48-hour nowcast output for the following regions will be removed: alaska, arctic, bering, guam, gulf_alaska, honolulu, hudson baffin,samoa,trop paci lowres,west atl,west conus.

Please see the list of headers here:

https://www.nco.ncep.noaa.gov/pmb/changes/RTOFS 48hr nowcast headers.txt

If these product changes are approved, a Service Change Notice will be issued giving 30 days' notice of the termination date.

Please send comments on this proposal to:

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For questions on the data flow aspects, please contact:

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National Public Information Statements are online at:

https://www.weather.gov/notification/

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