NOUS41 KWBC 181850 AAB
PNSWSH

Technical Implementation Notice 13-27 Amended
National Weather Service Headquarters Washington DC
150 PM EST Mon Nov 18 2013

To: Subscribers:
-Family of Services
-NOAA Weather Wire Service
-Emergency Managers Weather Information Network
-NOAAPort
Other NWS Partners, Users and Employees

From: Timothy McClung
Chief, Science Plans Branch
Office of Science and Technology

Subject: Amended: Upgrade the Real-Time Ocean Forecast System: Effective December 10, 2013

Amended to change the implementation date for all changes in this notification to December 10, 2013.

On or about Tuesday December 10, 2013, the National Centers for Environmental Prediction's (NCEP's) Real-Time Ocean Forecast System (RTOFS) products being disseminated to the NCEP servers will be changing. The resolution of the existing grids will change, and new gridded binary version 2 (GRIB2) output files will be added. In addition, NCEP will disseminate the new GRIB2 RTOFS files on NOAAPort.

The changes will replace the low (10 level depths) vertical resolution regional Network Common Data Form (NetCDF) files with high (40 level depths) vertical resolution regional NetCDF files.

The data volume difference will be an increase of 64 GB per day. Low vertical resolution files will no longer be available:

rtofs_glo_3dz_?FFF_6hrly_reg#.nc

High vertical resolution will now be available:

rtofs_glo_3dz_?FFF_6hrly_hvr_reg#.nc
--Where ? is either "n" for nowcast or "f" for forecast.
--FFF is the nowcast hour 006 to 048 or forecast hour from 006 to 192.
--# is the region number, 1-3.

NetCDF RTOFS products are disseminated at the following locations:

ftp://ftp.ncep.noaa.gov/pub/data/nccf/com/rtofs/prod/rtofs.YYYYMMDD

http://www.ftp.ncep.noaa.gov/data/nccf/com/rtofs/prod/rtofs.YYYYMMDD

and http://nomads.ncep.noaa.gov

New surface regional GRIB2 files will be available for the following sub-regions:

Region	Lat	Lon	Resolution	Filename
Alaska	40-84.7	140-244.7	0.3 X 0.3	rtofs_glo.t00z.fFFF_alaska_std.grb2
Arctic	60-79.92	160-235.92	0.08 X 0.08	rtofs_glo.t00z.fFFF_arctic_std.grb2
Bering	40-67.12	155-210.92	0.08 X 0.08	rtofs_glo.t00z.fFFF_bering_std.grb2
Guam	0-29.92	130-179.92	0.08 X 0.08	rtofs_glo.t00z.fFFF_guam_std.grb2
Gulf of Alaska	0-62	195-236	0.5 X 0.5	rtofs_glo.t00z.fFFF_gulf_alaska_std.grb2
Honolulu	0-39.92	180-229.92	0.08 X 0.08	rtofs_glo.t00z.fFFF_honolulu_std.grb2
Hudson-Baffin	45-77.5	252-333	0.25 X 0.25	rtofs_glo.t00z.fFFF_hudson_baffin_std.grb2
Samoa	-30- -0.08	170-214.72	0.08 X 0.08	rtofs_glo.t00z.fFFF_samoa_std..grb2
Trop Pac	-40-39	130-249	1 X 1	rtofs_glo.t00z.fFFF_trop_paci_lowres_std.grb2
West Atlantic	10-44.72	260-305.92	0.08 X 0.08	rtofs_glo.t00z.fFFF_west_atl_std.grb2
West CONUS	10-59.92	210-259.92	0.08 X 0.08	rtofs_glo.t00z.fFFF_west_conus_std.grb2

where FFF is forecast hour 024 to 144. The forecast hours start from 01 to 72 at 1-hour intervals, and from 75 to 144 at 3-hourly intervals.

The World Meteorological Organization (WMO) header template T1 T2 A1 A2 ii cccc will be as follows for the products on NOAAPort:

T1 = E - oceanographic in the NWS Advanced Weather Interactive Processing System (AWIPS)

T2 specifies the parameters:
H - Sea Surface Height Relative to Geoid (SSHG)
S - Salinity (SALTY)
T - Water Temperature (T)
U - U-Component of Current (UOGRD)
V - V-Component of Current (VOGRD)
U - Barotropic U Velocity (UBARO)

V - Barotropic V Velocity (VBARO)

A1 specifies the grid:
A - Alaska 0.3 km grid
B - Bering 0.08 km grid
C - Western CONUS 0.08 km grid
D - Arctic 0.08 km grid
G - Guam 0.08 km grid
I - Gulf of Alaska 0.5 km grid
K - Western Atlantic 0.08 km grid
H - Honolulu 0.08 km grid
S - Samoa 0.08 km grid
T - Tropical Pacific 1.0 km grid
J - Hudson-Baffin 0.25 degree grid

A2 specifies the forecast hours:
B = 01, 02, 03
C = 04, 05, 06
D = 07, 08, 09
E = 10, 11, 12
F = 13, 14, 15
G = 16, 17, 18
H = 19, 20, 21, 22, 23
I = 24, 25, 26, 27, 28, 29
J = 30, 31, 32, 33, 34, 35
K = 36, 37, 38, 39, 40, 41
L = 42, 43, 44, 45, 46, 47
M = 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59
N = 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71
O = 72, 75, 78, 81
P = 84, 87, 90, 93
Q = 96, 99, 102, 105, 108, 111, 114, 117
R = 120, 123, 126, 129
S = 132, 135, 138, 141
T = 144

ii = 01 - Depth Below Sea Level

cccc = KWBW, where 'W' is Real-Time Ocean Forecast System

Follow the link below for examples of the WMO headers and the GRIB2 data with filenames like:

wmo_grib2_rtofs_glo.t00z.(n|f)FFF_region_std (where FFF is forecast hour)

and

grib2_rtofs_glo.t00z.(n|f)FFF_region_std (where FFF is forecast hour)

http://www.nco.ncep.noaa.gov/pmb/codes/rtofs_wmo_headers_regions/

The new products will be delivered over NOAAPort and to the NCEP servers. The increase in data volume for the new GRIB2 regions will be around 2.0 GB per day.

The RTOFS model runs once a day in three steps occurring at 00Z, 06Z and 12Z. The daily run has two days of nowcast and eight days of forecasts. For more information on the RTOFS Global model, please visit:

http://polar.ncep.noaa.gov/global

See ON-388 Appendix A for WMO headers with NCEP GRIB information here:

http://www.nco.ncep.noaa.gov/pmb/docs/on388/appendixa.html

NCEP would encourage all users to ensure their decoders are flexible and are able to adequately handle changes in content, parameter fields changing order, changes in the scaling factor component within the Product Definition Section of the GRIB files and any volume changes which may be forthcoming. These elements may change with future NCEP model implementations. NCEP will make every attempt to alert users to these changes prior to any implementations.

For questions regarding the scientific content of the modeling system, please contact:

Avichal Mehra
NCEP/EMC
College Park, MD
Email: avichal.mehra@noaa.gov

For questions regarding the dataflow aspects of these data sets, please contact:

NCEP/ NCO Dataflow Team
College Park, MD
Phone: 301-683-0567
Email: ncep.list.pmb-dataflow@noaa.gov

National Technical Implementation Notices are online at:

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

$$
NNNN