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PNSWSH

Service Change Notice 26-99 Updated
National Ocean Service Headquarters Silver Spring MD
Relayed by National Weather Service Headquarters Silver Spring MD
1155 PM EST Tue Nov 3 2026

To: Subscribers:
-NOAA Weather Wire Service
-Emergency Managers Weather Information Network
-NOAAPORT
Other NWS and NOS partners and NWS and NOS employees

From: Patrick Burke
Chief, Oceanographic Division
NOS/Center for Operational Oceanographic Products
and Services

Subject: Updated: RESCINDED: NOS Operational Forecast System (OFS) Framework Version Updates and Implementation of Oceanographic Forecast Modeling Systems for the Northeastern Coastal Ocean:

Updated to rescind this Service Change Notice (SCN) as it was sent in error. An updated SCN will be issued with a new data prior to implementation. The original message being rescinded is below.

Effective on Tuesday, January 05, 2027 beginning at 1500 Coordinated Universal Time (UTC), NOAA/National Ocean Service's (NOS) Coastal Ocean Modeling Framework (COMF) will be updated to version 3.7. With this update, the Northeast Coast Operational Forecast System (NECOFS) will be implemented by NWS Central Operations(NCO)and maintained by the Center for Operational Oceanographic Products and Services (CO-OPS).

1. Implementation of the Northeast Coast Operational Forecast System (NECOFS)

The NECOFS is based on the Finite Volume Community Ocean Model (FVCOM). The model domain extends from Bald Head Island, North Carolina northeastward to Nova Scotia. The implementation of NECOFS will replace the existing New York and New Jersey OFS (NYOFS), Chesapeake Bay OFS (CBOFS), Delaware Bay OFS (DBOFS), and Gulf of Maine OFS (GoMOFS)and also provide coastal predictions in areas not currently covered by existing NOS OFS, such as Narragansett Bay, Long Island Sound, and Pamlico Sound.

The NECOFS unstructured triangular mesh has 207081 nodes and 371290 elements. The vertical grid follows the terrain and consists of 45 sigma-layers. The resolution varies from 80 m inside estuaries to 40 km along the open boundary.

The development and transition of NECOFS was funded by the Coastal and Ocean Modeling Testbed (COMT) as a joint project of the NOS/Center for Operational Oceanographic Products and Services (CO-OPS), the NOS/Office of Coast Survey (OCS), the U.S. Integrated Ocean Observing System (IOOS),

Northeastern Regional Association of Coastal Ocean Observing Systems (NERACOOS), the FVCOM development group at the University of Massachusetts, Dartmouth (UMASS-D), and NWS Central Operations (NCO).

NECOFS will provide users with nowcasts (analyses of near present) and forecast guidance of the physical conditions of water levels, 3-dimensional water currents, water temperature, and salinity out to 72 hours, four times per day.

Key users of NECOFS include marine forecasters at NWS regional forecast offices in the Northeast, the NWS Northeast River Forecast Center, USCG Search and Rescue Operations, NOS' Office of Response and Restoration, and commercial mariners (e.g., pilots and commercial fishermen). Additional users include state coastal managers, emergency managers, researchers, regional fisheries managers, and recreational mariners (such as sailors, surfers, paddlers, and powerboaters).

The NECOFS operates within the NOS Coastal Ocean Modeling Framework (nosofs.v3.7) and has four daily nowcast and forecast cycles at 00, 06, 12, and 18 UTC.

The meteorological forcing used to run NECOFS is based on the NWS' weather prediction model Rapid Refresh Forecast System (RRFS)for both nowcast and forecast. The NWS' Global Forecast System (GFS)is used as a backup for the RRFS products.

NECOFS uses the Copernicus Global Ocean Physics Analysis and Forecast (GOPAF) to provide open boundary temperature, salinity and sub-tidal water level and currents. Tidal water level and currents are constructed from 8 constituents (M2, S2, N2, K2, K1, O1, P1, Q1) of the Global Tidal Models Database (TPXO) from the Oregon State University. The National Water Model's River discharge outputs provide freshwater inputs at the selected rivers, water temperature at river input locations is from USGS real-time observations if available or from climatological water temperature derived from long-term simulations of the Water Balance Model (WBM) at the University of New Hampshire.

2. NECOFS Product Outputs:

NECOFS output is in NetCDF format. The output files include time series at the selected locations (stations) at 6-minute intervals and hourly fields for the entire model domain for water levels, currents, water temperature, and salinity. Other variables, such as winds and air pressure, which are interpolated from the meteorological forcing conditions and used to drive the model, are also included in the output files.

The naming conventions for each type of output are listed below:

Stations output:
necofs.tCCz.YYYYMMDD.stations.[nowcast|forecast].nc

Fields output: necofs.tCCz.YYYYMMDD.fields.[n|f]HHH.nc

Where:
CC is the model cycle of the day;
YYYYMMDD is the date of the model run;
[nowcast|forecast] & [n|f] denote either the nowcast or forecast results;
HHH is the nowcast or forecast hour; range from 001 to 006 for nowcast and from 001 to 072 for forecast.

The NECOFS website is currently displayed in developmental mode at:
https://tidesandcurrents.noaa.gov/ofs/dev/necofs/necofs.html

And NECOFS outputs are currently available from CO-OPS developmental THREDDS:
https://opendap.co-ops.nos.noaa.gov/threddsdev/catalog/catalog.html

After it is transitioned to production (early January, 2027), its web page will be:
https://tidesandcurrents.noaa.gov/ofs/necofs/necofs.html

NECOFS outputs will be available from CO-OPS production THREDDS:
https://opendap.co-ops.nos.noaa.gov/thredds/catalog/catalog.html

NECOFS products are monitored 24 x 7 by both NCO and CO-OPS Continuous Operating Real-time Management System (CORMS) personnel.

In addition to the model's output files, its input files can also be found on NOMADS. The input files' names follow the NCO's file naming convention as well.

Model Input Files:
Initial files for nowcast:
necofs.t{CC}z.{YYYYMMDD}.init.nowcast.nc
necofs.t{CC}z.{YYYYMMDD}.rst.nowcast.nc

Surface meteorological forcing files:
necofs.t{CC}z.{YYYYMMDD}.met.nowcast.nc
necofs.t{CC}z.{YYYYMMDD}.met.forecast.nc
necofs.t{CC}z.{YYYYMMDD}.hflux.nowcast.nc
necofs.t{CC}z.{YYYYMMDD}.hflux.forecast.nc

OBC forcing files:
necofs.t{CC}z.{YYYYMMDD}.obc.nc

River forcing files:
necofs.t{CC}z.{YYYYMMDD}.river.nc.tar

Runtime input files:
necofs.t{CC}z.{YYYYMMDD}.nowcast.in
necofs.t{CC}z.{YYYYMMDD}.forecast.in

Log files:
necofs.t{CC}z.{YYYYMMDD}.corms.log
necofs.t{CC}z.{YYYYMMDD}.jlogfile.log
necofs.t{CC}z.{YYYYMMDD}.nowcast.log
necofs.t{CC}z.{YYYYMMDD}.forecast.log

Other: necofs.status

NOS and NCO urge all users to ensure their applications depending on NYOFS, CBOFS, DBOFS, and GoMOFS can transition smoothly to the new NECOFS output. NYOFS will be retired when NECOFS goes into production. CBOFS, DBOFS, and GoMOFS will be retired on 8/24/2027.

As part of NCO's standard 30-day parallel testing, NECOFS outputs from NCO 30-day parallel testing will be available here around December 02, 2026:

https://nomads.ncep.noaa.gov/pub/data/nccf/com/nosofs/para

After NECOFS is implemented in production (early January, 2027), its files will be available:
https://nomads.ncep.noaa.gov/pub/data/nccf/com/nosofs/v3.7
https://nomads.ncep.noaa.gov/pub/data/nccf/com/nosofs/prod

Any questions, comments or requests regarding this implementation should be directed to the contacts below. We will review any feedback and decide whether to proceed.

If you have any questions concerning these changes, please contact:

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For questions regarding the dataflow aspects, please contact:

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National Service Change Notices are online at:
https://www.weather.gov/notification/

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