NOUS41 KWBC 101555
PNSWSH

Service Change Notice 26-102
National Weather Service Headquarters Silver Spring MD
1055 AM EST Tue Nov 10 2026

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

From: Wanqiu Wang
Chief, Operational Monitoring Branch
Climate Prediction Center
NWS/National Centers for Environmental Prediction

Subject: The National Weather Service (NWS) Climate Prediction Center (CPC) will upgrade the Atmospheric Teleconnection Products on or about February 15, 2027.

The National Weather Service (NWS) Climate Prediction Center (CPC) will upgrade the Atmospheric Teleconnection Products on or about February 15, 2027. Currently, daily monitoring and forecasts from the Global Forecast System (GFS) and Global Ensemble Forecast System (GEFS) of the Arctic Oscillation (AO), North Atlantic Oscillation (NAO), Pacific North American pattern (PNA), and the Antarctic Oscillation (AAO) are provided alongside monthly monitoring. Monthly monitoring is also provided for eight other teleconnections including: East Atlantic (EA), East Atlantic/Western Russia (EAWR), Scandinavia (SCAND), Polar/Eurasia (POL/EUR), West Pacific (WP), East Pacific/North Pacific (EP/NP), Tropical/Northern Hemisphere (TNH), and Pacific Transition (PT) patterns.

The upgrades to these products will feature several enhancements, new teleconnections, and filename/format changes.
Descriptions of upgrades are listed below:

(A) Enhancements

(1) Updated teleconnection loading pattern methodology: The current daily and monthly teleconnection indices are calculated from loading patterns derived from two different methodologies. The AO and the AAO are calculated using Empirical Orthogonal Function (EOF) of year-round geopotential height anomalies for the period 1979-2000. The other teleconnections are calculated Rotated EOFs of seasonally varying geopotential height anomalies for the period 1950-2000. In this upgrade, the methodology of the teleconnection loading patterns will be consolidated and be based on EOFs for NAO and PNA year-round geopotential height anomalies from 1951-2020, with a climatological base period of 1991-2020. The other eight modes EA, EAWR, SCAND, POL/EUR, WP, EP/NP, TNH, and PT will continue to be calculated based on Rotated EOFs.

(2) Transition to Conventional Observation Reanalysis (CORe):

The teleconnections loading patterns as well as the daily and monthly teleconnections monitoring products are currently calculated using the Climate Data Assimilation System (CDAS). Because the internal production of CDAS will be terminated in March 2027, these products will be transitioned to the new CORe data.

(B) New teleconnections

Daily GFS and GEFS forecasts as well as daily and monthly monitoring will be provided for the North Atlantic Ridge (NAR) and the North Pacific Oscillation (NPO)

(C) Legacy teleconnections

The monthly monitoring of the EA, EAWR, SCAND, POL/EUR, WP, EP/NP, TNH, and PT patterns will transition to legacy products. These products will be updated such that the monthly indices are calculated using CORe data, but no other changes will be made and may be discontinued in 2030.

(D) Format Changes

The current teleconnections data files are provided in numerous formats: netcdf, comma-separated values(csv), ascii. There are also several other text formats: .tim, .dat, and .nh. To reduce redundancy and improve consistency all data files will be provided in netcdf and csv formats. Furthermore, several filename changes have been made to improve clarity of the filename contents. These changes do not apply to the legacy teleconnections.

(E) Graphical upgrades

To improve quality and readability of the graphical products, several updates have been made. First, the forecast and verification graphics will be separated. Second, all forecast products will include the most recent forecast as well as the forecasts from the previous two days to illustrate the run-to-run consistency.

(F) Discontinuation of products

(1) To reduce redundancy the following graphics will be discontinued:
https://www.cpc.ncep.noaa.gov/products/precip/CWlink/daily_ao_index/ao.gfs.diff.png
https://www.cpc.ncep.noaa.gov/products/precip/CWlink/daily_ao_index/ao.gefs.ensm.diff.png
https://www.cpc.ncep.noaa.gov/products/precip/CWlink/daily_ao_index/aao/aao.gfs.diff.png
https://www.cpc.ncep.noaa.gov/products/precip/CWlink/daily_ao_index/aao/aao.gefs.ensm.diff.png
https://www.cpc.ncep.noaa.gov/products/precip/CWlink/pna/nao.gfs.diff.png
https://www.cpc.ncep.noaa.gov/products/precip/CWlink/pna/nao.gefs.ensm.diff.png
https://www.cpc.ncep.noaa.gov/products/precip/CWlink/pna/pna.gfs.diff.png
https://www.cpc.ncep.noaa.gov/products/precip/CWlink/pna/pna.gefs.ensm.diff.png

These graphics are a form of verification and that information can be obtained from the verification graphics. See the full list of changes for details and alternative products.

(2) The following data file will be discontinued
https://www.cpc.ncep.noaa.gov/products/precip/CWlink/pna/norm.daily.ao.nao.pna.aao.gdas.120days.csv

The data in these can be obtained from the individual GFS forecast data files. See the full list of changes for details and alternative products.

(G) Website upgrades

To accommodate the new teleconnections and upgraded graphics, the website will be updated accordingly.

An full list of changes can be found at:
https://www.cpc.ncep.noaa.gov/products/precip/CWlink/teleconnections/scn/pdf/scn-changes-to-cpc-teleconnections-products.pdf

CPC encourages all users to ensure their applications are able to handle the changes to these products.

For questions regarding these changes, please contact:

Laura Ciasto
Meteorologist, Climate Prediction Center
Laura.Ciasto@noaa.gov

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

NNNN