NOUS41 KWBC 031515
PNSWSH

Public Information Statement 26-08
National Weather Service Headquarters Silver Spring MD
1015 AM EST Tue Feb 3 2026

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From: Debra Blondin
Acting Director
NCEP/Aviation Weather Center

Subject: Soliciting Comments on Experimental Graphical Turbulence Guidance (GTG) Nowcast (GTGN) product through March 5, 2026

The National Weather Service (NWS) is soliciting user comments on the Aviation Weather Center's (AWC) experimental GTGN product through March 5, 2026. This product is designed to provide a near real-time analysis of in-flight turbulence every 15 minutes, significantly enhancing support for the aviation community. GTGN uses a short-term (1 or 2-hour) forecast from the GTG as the basis for the nowcast. Recent observations of turbulence are then used to update the GTG forecast and create a blended analysis. Observational datasets currently used by GTGN include aircraft observations from pilot reports (PIREPs), automated in situ energy (eddy) dissipation rate (EDR) reports, EDR estimated from ground-based radar observations via the Nexrad Turbulence Detection Algorithm (NTDA), estimated EDR from lightning data and METAR data. The output of GTGN is energy dissipation rate to the one third power, or EDR. EDR is an atmospheric, aircraft independent metric of turbulence. The GTG forecast is based on NOAA's 3-km High-Resolution Rapid Refresh (HRRR) model over the CONUS, and thus its domain serves as the horizontal domain for GTGN. The vertical resolution of the nowcast starts at the surface (100 feet) and is output at every 1,000 feet up to 50,000 feet.

The GTGN display at the below experimental webpage will be upscaled to a 13-km horizontal resolution from the native 3-km to align with the AWC website framework. Additionally, levels 3,000 feet up to 42,000 feet in 3,000 foot intervals will be displayed, along with EDR maximums above and below 18,000 feet. These maximums are post-processed using all vertical levels above and below 18,000 feet.

The experimental GTG Nowcast product display is available at the following location:

https://testbed.aviationweather.gov/gtgn/

Input on the GTGN is being sought from user via the feedback form below:

Google Form: https://forms.gle/4Yri2PyJxB5hU59x8

Note that data on the testbed webpage is subject to outages when the development Weather and Climate Operational Supercomputing System (WCOSS) machine is unavailable for maintenance or if input data is otherwise unavailable. Please submit comments, questions, or requests pertaining to the experimental GTGN to:

Robert Hepper
NCEP/Aviation Weather Center
Email: robert.hepper@noaa.gov

National Public Information Statements are online at:

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

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