

NOUS41 KWBC 221735
PNSWSH

Service Change Notice 26-87
National Weather Service Headquarters Silver Spring MD
135 PM EDT Tue Sep 22 2026

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From: David Michaud
 Director
 NWS Central Operations

Subject: Upgrade of Current Icing Product (CIP) to CIP version 2 (CIP2):
Effective on or about October 22, 2026

Effective October 22, 2026, beginning at 1200 Coordinated Universal Time (UTC), the National Centers for Environmental Prediction (NCEP) will upgrade the Current Icing Product (CIP) to version 2 (CIP2).

The CIP is a Numerical Weather Prediction (NWP) based algorithm that assesses the state of the atmosphere for conditions related to in-flight icing over CONUS and adjacent coastal waters. The CIP combines sensor and near-term high-resolution model output to provide an hourly, three-dimensional diagnosis of the icing environment. The observational data used by CIP include MRMS reflectivity, METARs, PIREPs, five satellite channels, and global lightning. CIP currently outputs three parameters: icing probability, icing severity, and potential for supercooled large droplets (SLD). Common values for icing probabilities may range from 0-1 (0-100%). Icing severity is a derivative of the icing probability and the NWP generated precipitation conditions arriving at a categorical index encompassing five categories: none, trace, light, moderate, and severe. SLD is a non-calibrated parameter and as such, it is not a probability and does not have associated units. However, higher values are indicative of increasing potential for the presence of SLD conditions.

Summary of Changes

- (A) CIP2 will use the 3-km HRRR in place of the 13-km RAP
- (B) CIP2 includes two additional GOES-19 satellite channels, 5 (snow/ice) and 6 (cloud particle size)
- (C) The Liquid Water Content (LWC) parameter in the HRRR will be used in place of the Total Water Content (TWC)
- (D) Geostationary Lightning Mapper (GLM) will be used in place of National Lightning Detection Network (NLDN) Vaisala data.

3 km CIP2 GRIB2 files will be newly added to the NOAA Operational Model Archive and Distribution System (NOMADS) with the following details:

- Filename format: cip.tHHz.3km.grib2
- 60 vertical levels every 500 ft from 500 ft to 30,000 ft
- Icing Severity:
 1. GRIB2 CODE TABLE is 4.228
 2. GRIB2 category 19 and parameter number 37 (ICESEV)
- Icing Probability:
 1. GRIB2 category 19 and parameter number 233 (ICPRB)
- Supercooled Large Droplets:
 1. GRIB2 category 19 and parameter number 217 (SIPD)
- jpeg2000 compression with bitmap over land mask, no bitmap otherwise
- File size: Approximately 60 MB/cycle, but varies throughout the year

13-km CIP2 GRIB2 files will be available over the SBN to replace the RAP-based 13-km CIP1. SBN changes include:

- Modification of WMO header site ID from KWBC to KWBB
- Complex3 packing with no bitmap
- Icing Severity parameter number changed to 37 from 234 that includes the replacement of "heavy" to "severe".
- GRIB2 CODE TABLE is 4.228

(E) NOMADS link to access CIP2 GRIB2 files containing non-WMO headed products during the 30-day parallel:

- <https://nomads.ncep.noaa.gov/pub/data/nccf/com/cip/para>

NOMADS link to access CIP2 GRIB2 files containing non-WMO headed products post implementation:

- <https://nomads.ncep.noaa.gov/pub/data/nccf/com/cip/prod>

CIP1 to be removed:

https://tgftp.nws.noaa.gov/SL.us008001/DC.avspt/DS.cip20/PT.grid_DF.gr2/
with filename pattern: sn.*.bin

ftp://tgftp.nws.noaa.gov/SL.us008001/DC.avspt/DS.cip20/PT.grid_DF.gr2/
with filename pattern: sn.*.bin

In the event that the implementation date is declared a Critical Weather Day (CWD), an Enhanced Caution Event (ECE), or other significant weather is occurring or is anticipated to occur, implementation of this change will take place at 1200 UTC on the next weekday not declared a CWD and when no significant weather is occurring.

Please submit comments, questions, or requests pertaining to this implementation to:

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For questions about 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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