

NOUS41 KWBC 201700
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Service Change Notice 21-91
National Weather Service Headquarters Silver Spring MD
100 PM EDT Wed Oct 20 2021

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

From: Douglas C. Young
 Chief, Digital and Graphical Information Support Branch

Subject: Addition of Polygons to Non-Weather Emergency Messages
 (NWEMs) and Transition to Mixed Case in World Meteorological
 Organization (WMO) Text Products: Effective on or about January
 10, 2022

Effective on or about January 10, 2022, NWS will add polygons to most NWEMs disseminated via WMO text products when polygons are defined and provided by civil alerting authorities and received by NWS from the Federal Emergency Management Agency's Integrated Public Alert and Warning System (IPAWS). Additionally, all WMO-formatted NWEMs disseminated by NWS will transition to using mixed case text/95 ASCII character set format.

The NWS supports alerting authorities by relaying NWEMs via NOAA Weather Radio All Hazards (NWR) and conveying NWEMs to the Emergency Alert System (EAS). These messages provide the public with time-critical life or property-saving emergency information. The messages are also conveyed on NOAA Weather Wire Service (NWS), the Emergency Managers Weather Information Network (EMWIN) and the NOAAPort/Satellite Broadcast Network. Examples of NWEMs include the Civil Emergency Message and Evacuation Immediate. The complete list of state and local NWEMs is provided in [NWS Instruction \(NWSI\) 10-518](#), Non-Weather Emergency Products Specification. The list of specific NWEMs recommended for conveyance by broadcasters to EAS at the state and local levels is detailed in respective state and local EAS plans.

Today, NWS disseminates NWEMs over NWR and conveys messages to the EAS on a full-county basis. As a first step towards a broader NWS goal to better target the dissemination of NWEMs, NWS will incorporate most polygons--when provided by alerting authorities--into WMO-formatted NWEMs. This change will provide third party information providers and decision makers with the exact boundaries associated with NWEMs.

The format of the Initial Operating Capability (IOC) for adding polygons to NWEMs conforms to the existing NWS requirements for adding polygons to NWS WMO products, as specified in [NWSI 10-1701](#), Text Product Formats and Codes: the maximum number of vertices included will be 20; normally, there will be four points per line of text, as needed; and the last point connects back to the first point. Coded pairs will identify the latitude

and longitude of a single point, in degrees and hundredths.

Therefore, NWS will only include NWEM polygon information when civil alerting authorities describe the alert area by only one polygon and limit the polygon to 20 or fewer vertices. The vertices will be rounded to the nearest two decimal places in the WMO-formatted message. If alerting authorities include more than one polygon or a polygon with more than 20 vertices, then the NWEM will still be relayed by NWS, but will not include the polygon information. NWS plans to phase in the use of circles and more complex polygons (e.g., polygons with more than 20 vertices) in WMO products as NWS software is updated in the future.

The addition of polygons to WMO-formatted NWEMs supports the NWS potential to disseminate some NWEMs via NWR and EAS using Partial County Alerting in the future. Additional information on this NWR and EAS initiative will be provided in a future Public Information Statement.

Partners and users of NWEM text products should modify their systems to accommodate NWS dissemination using mixed case text/95 ASCII character set format.

For examples, please see the Service Description Document (SDD) at:

https://nws.weather.gov/products/PDD/SDD_NWEMs_Polygons_2021.pdf

Please send any questions to:

Tim Schott
Meteorologist, NWS Dissemination Services
NWS Headquarters
Silver Spring, Maryland
301-427-9336
Timothy.Schott@noaa.gov

NWS National Service Change Notices are online at:

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

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