

## **Verification and Analysis of the NOAA/NWS Baltimore/Washington Weather Forecast Office Winter Storm Threat Experimental Product**

CONNOR BELAK<sup>1</sup> AND BRIAN LASORSA<sup>1</sup>

### **ABSTRACT**

Information about winter storms occurring in the medium range (days 3-7) is in high demand by emergency managers, transportation planners, the general public, and broadcast/print media. The NOAA/National Weather Service Baltimore/Washington Weather Forecast Office (WFO LWX) developed and implemented an experimental product in 2016 that assesses and depicts both forecaster confidence and potential impact for winter storms in the medium forecast range. This [publicly available](#) experimental product is called the Days 3-7 Winter Storm Threat (WST). The WFO LWX Days 3-7 WST experimental product is designed for easy interpretation by general users, while also displaying uncertainty information for decision makers.

The WST product integrates data from the National Blend of Models (NBM), the National Centers for Environmental Prediction (NCEP)/Weather Prediction Center (WPC), and local expertise from WFO LWX staff. This local expertise is derived from forecaster experience working with core customers, combined with knowledge of local winter climatology and meteorology, to determine the level of winter storm threat. The product integrates locally known impacts and forecaster confidence to develop the winter storm threat to a region and is used by forecasters as a decision-making aid during impact-based decision support briefings.

This presentation will provide verification results of the WFO Days 3-7 WST from the winters of 2020-2021 through 2022-2023, analyze performance, and highlight several impactful events. Emphasis on this presentation will be the performance of the WST during Winter 2022-2023, when the algorithms were changed to become based on the NBM. The results of this research will guide future improvements to the Winter Storm Threat experimental product.

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<sup>1</sup> NOAA/NWS Baltimore/Washington Weather Forecast Office, Sterling, VA, USA  
Corresponding author: [connor.belak@noaa.gov](mailto:connor.belak@noaa.gov)