

How Hazard Services will affect convective warnings at the WFO in the future

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NOAA's Global Systems Laboratory (GSL) developed the Hazard Services platform for the purpose of revolutionizing the process of generating and disseminating hazardous weather information for the National Weather Services (NWS). All warnings, watches, and advisories (WWAs) will be eventually issued by Weather Forecast Offices (WFOs) using Hazard Services. In addition, many of the NWS National Center products will be issued using Hazard Services. In 2019, the first version of Hazard Services became operational at all WFOs for all hydrology-related WWAs. Development and evaluation of newer versions of Hazard Services has been underway at GSL, and includes most of the additional WWA hazard types as well as several National Center products.

There are numerous advantages to using Hazard Services, including a powerful "recommender" framework for assisting with the generation of science-based WWAs, as well as a flexible output format to meet partners' needs. This presentation will provide an update on the development and deployment status, as well as highlight improvements.

A summary of the latest functionality will be provided and will include:

- Tornado and Severe Thunderstorm Warning capabilities and advantages
- Enhancements made to the Threats-In-Motion (TIM) project to allow for convective warnings to be extended in area and time to provide equitable lead times to populations downstream of the warning
- A recommender for utilizing Warn-on-Forecast output as guidance for Tornado and Severe Thunderstorm Warnings
- Collaborative framework for National Centers to allow for collaboration on watches and warnings between WFOs and National Centers
- Plans for the capability to issue polygon-based, long-fused WWAs to more closely match threat areas