

NATIONAL WEATHER SERVICE SERVICE DESCRIPTION DOCUMENT (SDD)

TYPE: Enhancement to Official Product

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Enhanced Product – Addition of Forecast Maximum Wind and Hail Size Coding to Severe Thunderstorm Warnings and Associated Follow-up Severe Weather Statements

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Part 1 – Mission Connection

1) Product Description

The Severe Thunderstorm Warning (SVR) and Severe Weather Statement (SVS) are alphanumeric products providing short-fused warning information on hazardous conditions associated with thunderstorms which are expected to pose a threat to life and/or real property. These products are prepared by each National Weather Service (NWS) Weather Forecast Office (WFO) for their County Warning Area (CWA) of responsibility. The SVR is issued based on expectation of winds gusting to 58 mph or greater and/or hail of one (1) inch diameter or greater. The SVS is a “follow-up” statement which provides updated information as to the status of storms within a SVR or Tornado Warning. For the purpose of this enhancement, only follow up statements for SVRs are included. This product enhancement adds a short tag line at the footer of the SVR and SVS products to clarify expected thunderstorm-induced maximum wind gusts and hail size, primarily for the purpose of assisting emergency management decisions.

2) Purpose

The addition of a short tag for the forecast maximum wind and hail size to the bottom of SVR and SVS products enhances the ability of our partners to make threshold-based decisions on the information we provide in our severe weather products.

One of the consensus outcomes of outreach with Emergency Managers, including the NWS Next Generation Warnings Workshop, was that the NWS should focus warnings to cover “What”, “Where”, “When” and “Intensity”, in a clearly delineated format. Each of these elements, with the exception of “Intensity”, is coded into the text of every warning. Adding intensity information to warning coding will aid in more effective dissemination of severe weather information to our key users and partners.

The proposed format allows for software to easily parse out and integrate the information into decision support systems. It also facilitates quick, easy scanning of the product to assimilate the expected strength of wind and/or hail threats and does not burden busy dispatchers or others from retrieving the information which would otherwise be “buried” in the text of the warning. By predetermining a threshold (e.g., 90 mph), the information in the wind-hail tag can either be

immediately deciphered at a glance, or pre-programmed into software which then alerts decision makers that their threshold has been exceeded.

Another application is the capability for a private vendor to use the tag line data to automatically alert their customers who require notification for severe thunderstorm threats above a certain threshold.

3) Audience

The target audience for the product includes: national, state and local emergency managers, media, the private weather enterprise; and government and military agencies.

4) Presentation Format

This wind/hail tag will can be found at the bottom of every SVR and SVR follow-up SVS statement originating from a participating NWS Eastern Region WFOs.

5) Feedback Method

We are always looking for feedback regarding the quality and utility of NWS products. To solicit user feedback on this product enhancement, a customer survey has been developed and can be accessed through the following URL:

www.nws.noaa.gov/survey/nws-survey.php?code=MWHSC

This product enhancement experiment will be conduct for a six (6) month period. Following this experimental period, all user feedback will be reviewed and evaluated of determine whether to make the service enhancement a permanent part of the official product format for all Eastern Region WFOs, or to remain restricted to a subset of them.

Part II – Technical Description

1) Format & Science Basis

The proposed wind/hail tag would be found at the bottom of every SVR and appropriate SVS products after the double ampersand (&&) directly below the existing TIME...MOT...LOC line and before the double dollar sign (\$\$).

The format of the SVR wind/hail tag will be a 24-character line appended to SVR and appropriate follow-up SVS products, inserted after the double ampersand (&&) and immediately following the “LAT... LON...” and “TIME... MOT... LOC...” lines, as follows:

WIND...HAIL xxxMPH y.yyIN

Where xxx represents the expected wind gusts in miles per hour, and y.yy represents the expected hail size in inches. For ~~severe strength~~ wind values under 100 mph, the leading zero will be omitted. For example:

&&

LAT...LON 3882 9418 3857 9414 3859 9458 3868 9460

TIME...MOT...LOC 1556Z 259DEG 31KT 3866 9451

WIND...HAIL 70MPH 2.00IN

\$\$

In this example, the hail/wind tag would represent a severe thunderstorm warning with expectations of 70 mph wind gusts and 2.00" (egg size) hail.

The allowable estimated values for hail and wind will be coded and defined as follows:

Hail (*Local office flexibility to add other events in 1/4 inch increments with 1.00 being the lowest allowable value, other than the "no hail" and "smaller than severe sized" values.*)

0.00 - Equates to no hail

<1.00 - Equates to hail smaller than severe sized

1.00 - 1.00 inch hail (quarter-sized)

1.50 - 1.50 inch hail (ping pong ball-sized)

1.75 - 1.75 Hail (golfball-sized)

2.00 - 2.00 hail (hen egg-sized)

2.50 - 2.50 hail (tennis ball-sized)

3.00 - 3.00 hail (large apple-sized)

4.00 - 4.00 Hail (grapefruit-sized) or larger and is the highest allowable value

Wind (*local office flexibility to add other events in 5 mph increments*)

<50 Wind gusts below severe criteria and lowest allowable value

60 - 60 mph peak wind gust and is the first allowable value above <50 (severe criteria)

75 - 75 mph peak wind gust (Hurricane force)

100 - 100 mph or higher peak wind gust and is the highest allowable value (significant structural damage)

2) Availability

This enhanced product is available through all distribution channels which disseminate SVR and SVS products. Active NWS Warnings can be found at <http://www.spc.noaa.gov/products/wwa/>

3) Additional Information

None.