

***NATIONAL WEATHER SERVICE  
PRODUCT DESCRIPTION DOCUMENT (PDD)  
TYPE: Enhancement to Official Product  
DATE: September 23, 2009***

Enhanced Product – National Implementation of the Use of 1-inch Diameter Hail as a  
Criterion for  
Severe Thunderstorm Warnings in the NWS  
Feedback Period: September 23 – November 30, 2009

**Part 1 -Mission Connection**

**1 Product/Service Description:**

The Severe Thunderstorm Warning (SVR) is an alphanumeric product providing short-fused warning information on hazardous conditions associated with thunderstorms which are expected to pose a threat to life and/or real property. This product is prepared by each National Weather Service (NWS) Weather Forecast Office (WFO) for their County Warning Area (CWA) of responsibility. In the Western Region (WR) and Central Region (CR) a Severe Thunderstorm Warning is currently being issued experimentally based on expectation of winds gusting to 58 mph or greater and/or hail of one (1) inch diameter or greater. Pending successful completion of this experiment, all NWS sites will issue Severe Thunderstorm Warnings based on these criteria.

**2 Purpose/Intended Use:**

WR and CR are currently conducting an expanded experiment involving a larger hail criterion than is currently used for the Severe Thunderstorm Warning nationwide (3/4 inch diameter.) This change is based on research indicating significant damage does not occur until hail size reaches 1 inch in diameter and as a response to requests by core partners in emergency management and the media. In the WR and CR this product is issued and updated on an unscheduled basis for localized, short duration, hazardous conditions associated with thunderstorms capable of producing winds of 50 knots (58 mph) or greater, and/or hail 1 inch in diameter or larger. This product is generally restricted to the 0 to 1 hour time frame. It is prepared for media, emergency managers and the general public, disseminated as a polygon-based warning which outlines the specific area threatened, the time frame for which the threat exists, and pertinent calls to action. This product is intended to provide information assisting in the protection of life and property, and enhancing the nation's economy.

**3 Audience:**

The target audience for the product includes: national, state and local emergency managers; media partners; government and military agencies; and the general public.

**4 Presentation Format:**

The product is made available in a bulleted alphanumeric format in accordance with national policy as defined in NWSI 10-511, WFO Severe Weather Products Specification. It is prepared in a consistent manner by all WFOs. This format is identical to the Severe Thunderstorm Warning issued nationwide, including all elements and parameters required by national directive.

## **5 Feedback Method:**

Continuous feedback is available via an Internet page email link to the program managers on the Western Region Headquarters Web page. Feedback on this product is also obtained at Focus Group meetings, Media and Emergency Manager Workshops, and Customer Surveys.

Technical and policy questions and comments for the National SVR may be addressed to:

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## **Part 2 -Technical**

### **1 Format and Science Basis:**

The SVR product is disseminated in an alphanumeric format and contains the area affected, defined by a polygon with latitude/longitude coordinates, the reason for the warning issuance, the type and magnitude of the expected severe weather, the warning valid time and expiration time, and appropriate call-to-action statements. The product is written in a bulleted format containing all required warning elements.

### **2 Availability:**

SVRs are issued when one or more severe thunderstorm criteria are expected to be met. Preparation and dissemination are accomplished via the WarnGen application of the Advanced Weather Interactive Processing System (AWIPS) and the Satellite Broadcast Network.

### **3 Additional Information:**

For an example of the SVR, go to: [http://www.crh.noaa.gov/crh/SVR\\_example.pdf](http://www.crh.noaa.gov/crh/SVR_example.pdf)