

NWS Product Description Document (PDD) for:
Experimental Enhanced Thunder Product in the SPC Product Suite (Experimental SPC
Thunderstorm Outlook

Part 1 - Mission Connection

a. Product Description - The Storm Prediction Center (SPC) is the National Weather Service's (NWS) center of expertise for forecasting convection, including economically-disruptive weather events such as tornadoes, large hail, damaging winds and heavy rainfall. Included within the SPC Convective Outlooks for the CONUS is a forecast for a 10% or greater probability of thunderstorms. Since these thunderstorm forecasts cover a 24 hour period with only the 10% probability contour, they provide little in the way of temporal or spatial resolution. The Experimental SPC Thunderstorm Outlook adds greater temporal and spatial resolution by depicting the expected areal coverage and probabilities for thunder in 4 or 8 hour time periods. A 40% probability means that given similar environmental conditions, thunder would be observed at any one location (in either a county or city) within the 40% thunder probability area four times out of ten, or 40% of the time.

This Product Description Document replaces the existing PDD, whose evaluation period expired 5 February 2010, and revises the current Experimental SPC Thunderstorm Outlook product based on customer and partner feedback. The revision to be tested this year provides greater temporal detail and year-round availability. This year's test will also evaluate changes in the distribution of SPC forecaster workload and the ability to maintain this product for all scheduled convective outlook times.

b. Purpose - Forecasts of thunderstorms are critical for the protection of life and property since every thunderstorm contains lightning that is a potential killer. The greater temporal and spatial resolution of the Experimental SPC Thunderstorm Outlook will aid both NWS forecasters and NWS Partners in time-sensitive decisions related to thunderstorms, and ultimately provide greater safety for the United States public.

c. Audience - The target audience for this product includes both NWS Weather Forecast Offices (WFOs) and a wide range of core NWS Partners including other federal government agencies (e.g., Federal Aviation Administration(FAA), Federal Emergency Management Agency (FEMA), National Park Service), state and local emergency managers, state and local public works, and the general public.

d. Presentation Format - The SPC will again make the Experimental SPC Thunderstorm Outlooks open to all customers at <http://www.spc.noaa.gov/products/exper/enhstm/> . Since the product would be in the public domain, this outlook can be repackaged and re-transmitted in accordance with standard NWS product use policies. Pending continued success, the SPC plans to distribute these probabilistic thunderstorm outlooks via AWIPS and the NDFD for use by both NWS WFOs and NOAA partners. An NWS Public Information Statement (PNS) Service Change Notice (SCN) will be issued prior to official product distribution

e. Feedback Method - Web feedback from the broader community will be sought via an internet

link *beginning on January 1, 2011 and ending on 30 September 2011*, at which time a decision to proceed with testing, revise the test or to continue on the path to operational production will be made.

Comments may also be provided to:
NWS Storm Prediction Center
120 David L. Boren Blvd. Suite 2312
Norman, OK 73072
Attn: Dr. Russell Schneider

Part II - Technical Description

a. Format and Science Basis - . Each of these forecasts will contain 10%, 40% and 70% contours for the probability of thunderstorms during the forecast period. Similar outlooks have been produced both internally and publicly by the SPC for three years and verification indicated these forecasts are skillful and statistical reliable.

b. Product Availability - The Experimental SPC Thunderstorm Outlook issuance and valid times of the new product will be:

Issue Time	Valid Periods (UTC)
0600Z	1200-1600, 1600-2000, 2000-0000
1300Z	1600-2000, 2000-0000, 0000-0400
1630Z	2000-0000, 0000-0400, 0400-1200
2000Z	0000-0400, 0400-1200
0100Z	0400-1200

c. Additional Information - See <http://www.spc.noaa.gov/products/exper/enhtstm/> for both the web-based graphic and links to more information.