

NWS Product Description Document (PDD) for:
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 Severe Weather (Convective) Outlook (SWO) 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 SPC Thunderstorm Outlook adds greater temporal and spatial resolution by depicting the expected areal coverage and probabilities for thunderstorms in 4 or 8 hour time periods. A 40% probability means that given similar environmental conditions, a thunderstorm would be observed at any one location (in either a county or city) within the 40% thunderstorm probability area four times out of ten, or 40% of the time.

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 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 Thunderstorm Outlooks are open to all customers at <http://www.spc.noaa.gov/products/exper/enhtstm/> . Since the product would be in the public domain, this outlook can be re-packaged and re-transmitted in accordance with standard NWS product use policies. The SPC will also distribute these probabilistic thunderstorm outlooks via AWIPS and NOAAPORT as Redbook Graphics. At a later date, a lat-lon points ASCII text product as well as an NDFD grid will be available 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 of the ASCII text and NDFD gridded products.

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 statistically reliable.

b. Product Availability - The 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
1700Z	2000-0000, 0000-0400, 0400-1200
2030Z	0000-0400, 0400-1200
0130Z	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.