# PRODUCT DESCRIPTION DOCUMENT

## Day 4 to 8 Convective Outlook Element in the National Digital Forecast Database

Approved: David B. Caldwell Date: 10/10/09

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# National Digital Forecast Database (NDFD)
# Day 4 To 8 Convective Outlook Element
# NWS Product Definition Document (PDD)
## December 1, 2009

**Part 1 - Mission Connection**

a. Product Description - - The NWS provides access to operational and experimental gridded forecasts of weather elements (e.g., maximum temperature, sky cover) through the National Digital Forecast Database (NDFD). The NDFD contains a seamless mosaic of digital forecasts from NWS field offices and the National Centers for Environmental Prediction (NCEP). NCEP's Storm Prediction Center (SPC) operationally produces detailed outlooks and probability products for severe convective weather for Days 1, 2, and 3, and a more general Day 4 to 8 convective outlook (available as text and graphic products at http://www.spc.noaa.gov/products/exper/day4-8/). This element is a forecast for organized severe thunderstorms over the contiguous United States. A severe weather area depicted in the day 4 to 8 period indicates a 30% or higher probability for severe thunderstorms within 25 miles of any point.

b. Purpose – The SPC Day 4 to 8 convective outlooks provide national guidance on a critical public safety issue for media, emergency managers, local National Weather Service Forecast Offices and ultimately the United States Public. These outlooks allow customers to adequately prepare several days in advance of an expected severe weather episode, and are aligned with a NOAA Strategic Objective for FY2006 -2011 to "Improve predictability of the onset, duration and impact of hazardous severe weather and water events." This element also supports the National Research Council's (NRC) Fair Weather Report recommendation 5 for the NWS to "make its data and products available in Internet-accessible digital form." This NDFD element was in an experimental period from September 30, 2008 until February 28, 2009, and users were encouraged to provide comments to determine the benefit and usefulness of this element. Based on a technical analysis and a review of the comments received, it was determined to transition this element to operational status on or about December 1, 2009.

c. Audience - The current audience for NDFD gridded data is large volume users of forecast information, such as utilities, emergency managers, businesses/industry, academia, and any others who wish to decode and explore various potential applications of the NWS digital data.

d. Presentation Format - The Day 4 to 8 Convective Outlook Element is available for the Contiguous United States (CONUS) in Gridded Binary Data, Edition 2 (GRIB2) format from the NDFD server via hypertext transfer protocol (HTTP) and anonymous file transfer protocol (FTP), extensible markup language (XML) via SOAP service, geography markup language (GML) via web feature service (WFS), and graphics via web browser.

**Part II - Technical Description**

a. Format and Science Basis: The Day 4 to 8 Convective Outlook Elements are available for each day in 24 hour periods from 12Z to 12Z. Grid points are either 5 (five) or 0 (zero). A grid point of 5 (five) is a point where at least a 30 percent probability for severe thunderstorms exists. This is equivalent to a higher end slight risk threat. A grid point of 0 (zero) is a point where predictability of severe weather or the potential for severe weather is too low.

b. Product Availability: The NDFD Day 4 to 8 Convective Outlook elements are available for the CONUS via HTTP, FTP, XML, GML, or web browser. For further availability and technical information (e.g., temporal and spatial resolutions, forecast projections, and geographic coverage) please visit the following URL: http://www.weather.gov/ndfd/technical.htm

c. Additional information: More information can also be found at the SPC web site at http://www.spc.noaa.gov/products.