

## **SPC Categorical Day 1-3 Convective Outlooks**

### **Product Description Document (PDD)**

#### **Part I - Mission Connection**

- a. Product Description – The SPC Categorical Day 1-3 Convective Outlooks include a defined areas of general non-severe thunderstorms, and 5 risk categories of severe convection (1 - Marginal, 2- Slight, 3-Enhanced, 4-Moderate, and 5-High).
- b. Purpose – The SPC issues narrative and graphical Day 1-3 Categorical Convective Outlooks to provide severe threat information that closely compares to the Day 1-3 Probabilistic Convective Outlooks (see technical description below).
- c. Audience - The target audience includes NWS CONUS Weather Forecast Offices (WFOs), the public, media and emergency managers. The product has been widely used to adequately prepare days in advance for the potential of severe convective weather.
- d. Presentation Format – The SPC Categorical Day 1-3 Convective Outlooks are available as web graphics with text discussion, Redbook Graphics, Points products, and NDFD grids.

#### **Part II - Technical Description**

- a. Format and Science Basis – Probabilities associated with the existing risk categories SLIGHT, MODERATE and HIGH are essentially unchanged (with the exception of the high end probabilities of the SLIGHT risk category).

The two new risk categories “Marginal” and “Enhanced” are defined below where percentages are numerical probabilities of severe weather within 25 statute miles of any point within a given forecast area.

Day 1:

- a. General Thunderstorms
  - 10% or greater probability of non-severe or near severe thunderstorms.
- b. Severe Category 1 – Marginal
  - 2% or greater tornado probability, or
  - 5% or greater severe hail or severe wind probability.
- c. Severe Category 2 – Slight
  - 5% or greater tornado probability, or
  - 15% or greater severe hail or severe wind probability.
- d. Severe Category 3 - Enhanced
  - 10% or greater tornado probability, or
  - 30% or greater severe hail or severe wind probability.
- e. Severe Category 4 – Moderate
  - 15% or greater tornado probability and 10% or greater probability of an EF2+ tornado, or
  - 45% or greater severe wind and 10% or greater probability of a wind gusts 75 mph or greater,

or

- 45% or greater severe hail probability and 10% or greater probability of hail 2 inches or greater in diameter.

f. Severe Category 5 – High

- 30% or greater tornado probability and 10% or greater probability of an EF2+ tornado, or
- 60% or greater severe wind probability and a 10% or greater probability of a wind gust 75 mph or greater.

Days 2 and 3:

a. General Thunderstorms

- 10% or greater probability of non-severe or near severe thunderstorms.

b. Severe Category 1 - Marginal

- 5% or greater total severe probability.

c. Severe Category 2 – Slight

- 15% or greater total severe probability.

d. Severe Category 3 – Enhanced

- 30% or greater total severe probability.

e. Severe Category 4 – Moderate

- 45% or greater total severe probability AND 10% or greater probability of an EF2+ tornado, wind gust 75 mph or greater, or hail 2 inches or greater in diameter.

f. Severe Category 5 – High (Day 2 only)

- 60% or greater total severe probability AND 10% or greater probability of an EF2+ tornado, or a wind gust 75 mph or greater.

The following products reflect these changes:

WMO Header	AWIPS ID	Description
ACUS01	KWNS SWODY1	Day 1 Convective Outlook Discussion
WUUS01	KWNS PTSDY1	Day 1 Convective Outlook Areal Outline
PGWE46	KWNS RBG940	Day 1 Red Book Graphic Categorical Outlook
LDIZ17	KWNS	Day 1 NDFD Categorical Outlook
ACUS02	KWNS SWODY2	Day 2 Convective Outlook Discussion
WUUS02	KWNS PTSDY2	Day 2 Convective Outlook Areal Outline
PGWK48	KWNS RBG990	Day 2 Red Book Graphic Categorical Outlook
LDIZ27	KWNS	Day 2 NDFD Categorical Outlook
ACUS03	KWNS SWODY3	Day 3 Convective Outlook Discussion
WUUS03	KWNS PTSDY3	Day 3 Convective Outlook Areal Outline
PGWI47	KWNS RBG980	Day 3 Red Book Graphic Categorical Outlook
LDIZ37	KWNS	Day 3 NDFD Categorical Outlook

A more detailed description and examples of the enhanced Day 1-3 Outlooks are available at:  
<http://www.spc.noaa.gov/exper/dyl-3example/>

The “points” products (PTSDY1, PTSDY2, and PTSDY3) will include new labels “MRGL” (Marginal) and “ENH” (Enhanced).

b. Availability – No changes to the issuance times of these products.