

Experimental 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 area of general non-severe thunderstorms (labeled SEE TEXT), and three defined risk categories of severe convective weather (SLIGHT, MODERATE, and HIGH). Two enhancements are included in this Product Description Document (PDD):

1) The SPC will replace the SEE TEXT designator with a new GIS-compatible graphical outline labeled "**Marginal**" risk to delineate sub-slight risk threat areas, and

2) The SPC will add a new category for areas of high-end Slight risk labeled as "**Enhanced**" risk. The result will be 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 enhancements to the SPC Day 1-3 Categorical Convective Outlooks provide additional severe threat information and more closely compare to the Day 1-3 Probabilistic Convective Outlooks. The text product often includes general descriptions of sub-slight risk, but the graphics currently only include SEE TEXT. Interested users must view the Probabilistic Convective Outlooks to see the geo-specific areas. Replacing SEE TEXT with new “Marginal” risk areas enhances the usefulness of the Categorical Convective Outlooks. In addition, the current SLIGHT risk includes a rather broad range of probabilities of severe weather potential. Partners have requested the SPC Categorical Outlooks include a new category for the high-end slight risk areas that can currently only be seen in the SPC Probabilistic Outlooks. The SPC will add a new category for areas of high-end slight labeled as “Enhanced” risk.

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.

e. Feedback Method - Web feedback from the broader community will be sought via an [NWS customer survey link](#) on the SPC webpage beginning around April 17 and ending June 17, 2014. At that time a decision will be made to proceed with testing, revise the test, or to continue on the path to operational production.

Comments may also be provided to:

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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.

A more detailed description and examples of the enhanced Day 1-3 Outlooks are available at: <http://www.spc.noaa.gov/exper/dy1-3example/>

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

c. Additional Information – Current vs Experimental Example

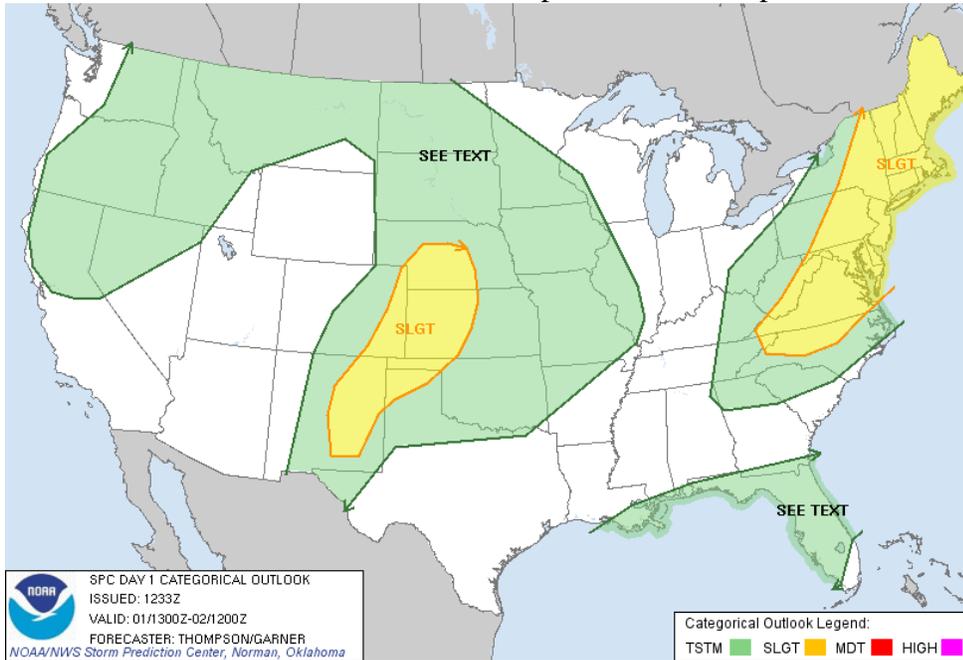


Figure 1: Legacy Day 1 Outlook Graphics

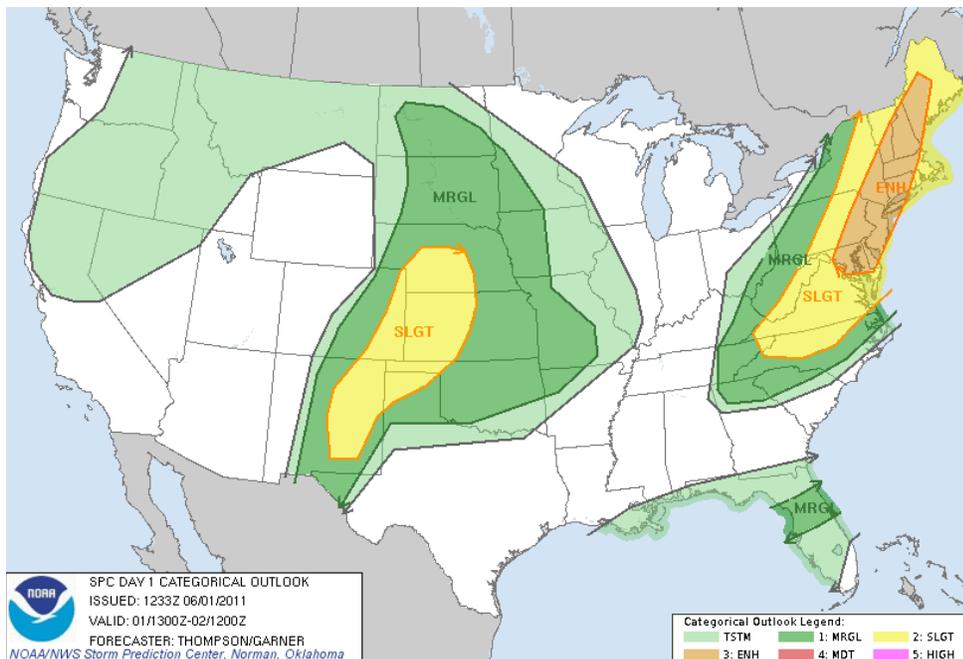


Figure 2: New Day 1 Categorical Outlook