

**National Weather Service
Product Description Document (PDD)**

**Scaled Predictive Ice Storm Aftermath Index (Southern Region/Central Region)
September 2013**

Part I - Mission Connection

1. Product Description

The Scaled Predictive Ice Storm Aftermath Index (SPIA Index) utilizes gridded forecasts routinely prepared by NWS WFOs as a part of the National Digital Forecast Database. Forecast wind and ice accumulation grids are parsed to determine where specific overlapping criteria are met. Based on the experience of Sid Sperry, Oklahoma Association of Electric Cooperatives, the affects of the wind and ice accumulation are scaled from zero to five, with each element of the scale describing expected impacts to exposed electric utility systems (see Development and Testing of an Ice Accumulation Algorithm: <http://www.crh.noaa.gov/images/sgf/IceDamageIndex/IceUtilityIndexPaper.pdf>). During an ice storm, forecast grids are combined with observed wind and ice accumulations grids to fully quantify the impacts.

2. Purpose / Intended Use

The SPIA Index was developed to provide decision support to emergency management officials, utility companies and the public during the hours and days leading up to an ice storm. The index quantifies the potential for electrical interruptions, and thereby gives more tangible information to the public concerning the extent of preparations thought necessary. Emergency management officials benefit from the more specific impact forecasts and can better assess the need for additional resources (like generators at key locations), and better prepare for sheltering operations. Utility companies benefit from the SPIA Index through assessing the more detailed information and potentially pre-positioning assets, and checking the availability of the critical materials needed to restore their systems.

3. Audience

The SPIA Index can be used by emergency managers, utility companies, and the public.

4. Presentation Format

The SPIA Index is presented in a graphical format, depicting the 0 through 5 levels. The SPIA Index is driven by the NWS NDFD, and the final output is in a gridded format.

5. Feedback Method / Period

The comment period will be from October 1, 2013 - April 15, 2014. At the end of the comment period, the product will be evaluated for transition to operational status at other NWS WFOs, as applicable.

Comments regarding this enhancement can be provided at: <http://www.nws.noaa.gov/survey/nws-survey.php?code=SPISA>

Comments and suggestions concerning the SPIA Index can also be directed to:

Steven Piltz

Meteorologist-In-Charge

National Weather Service
10159 East 11th Street
Suite 300
Tulsa, OK 74128

918-832-4115

Part II - Technical

1. Format and Science Basis

A minor modification to the NDFD Ice Accumulation grid will be required. The resolution of this grid will be changed at participating WFOs from 0.10 inches to 0.01 inches.

2. Availability

The SPIA Index will be made available on the web pages of participating WFOs, and from Southern Region Headquarters via GIS applications.

Graphics illustrating forecast index values will be made available as part of the routine forecast provided online at the following Southern Region Offices:

<http://www.srh.noaa.gov/tsa/>
<http://www.srh.noaa.gov/lzk/>
<http://www.srh.noaa.gov/meg/>
<http://www.srh.noaa.gov/ohx/>
<http://www.srh.noaa.gov/oun/>
<http://www.srh.noaa.gov/jan/>

Central Region Weather Forecast Offices in Springfield, Pleasant Hill and St. Louis, Missouri in addition to Paducah, Kentucky are also participating in the test and the Index can be accessed via the following links:

http://www.crh.noaa.gov/sgf/?n=ice_impact_index
http://www.crh.noaa.gov/eax/?n=ice_impact_index
http://www.crh.noaa.gov/lxx/?n=ice_impact_index
http://www.crh.noaa.gov/pah/?n=ice_impact_index