

***NATIONAL WEATHER SERVICE INSTRUCTION 10-512  
October 9, 2017***

***Operations and Services  
Public Weather Services, NWSPD 10-5***

***NATIONAL SEVERE WEATHER PRODUCTS SPECIFICATION***

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**NOTICE:** This publication is available at: <http://www.nws.noaa.gov/directives/>

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Signed \_\_\_\_\_  
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Date

National Severe Weather Products Specification

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1. **Introduction.** This procedural instruction describes the narrative and graphical severe weather products issued by the Storm Prediction Center (SPC) for the contiguous United States (CONUS).
2. **Categorical Convective Outlook.**
  - 2.1 **Mission Connection.** SPC issues narrative and graphical Categorical Convective Outlooks to provide CONUS Weather Forecast Offices (WFOs), the public, media and emergency managers with the potential for severe thunderstorms through Day 8 and general non-severe thunderstorms through Day 3.
  - 2.2 **Issuance Guidelines.**
    - 2.2.1 **Creation Software.** SPC will use the National Center's AWIPS (NAWIPS) and/or the SPC Product Generator (PRODGEN) for these products.
    - 2.2.2 **Issuance Criteria.** Categorical Outlooks are a scheduled product in UTC time and calendar day.
    - 2.2.3 **Issuance Time.** Products are issued at times listed in Table 1.
    - 2.2.4 **Valid Time.** Product valid times are listed in Table 1.
    - 2.2.5 **Product Expiration Time.** Product expiration time is 1200 UTC the next calendar day. See Table 1

<i><b>SPC Convective Outlook Schedule</b></i>						
<i><b>Issuance Time(UTC)</b></i>	<i><b>Valid Time (UTC)</b></i>	<i><b>AWIPS Text Graphic</b></i>	<i><b>WMO Graphic Header</b></i>	<i><b>WMO Text Header</b></i>	<i><b>NDFD Header</b></i>	<i><b>WMO Points Product</b></i>
0600	1200 Day 1 to 1200 Day 2 (0-24 hour period)	SWODY1 94O	PGWE46	ACUS01 KWNS	LDIZ[11-17]*	WUUS01 PTSDY1
0600 (Daylight) 0700 (Standard)	1200 Day 2 to 1200 Day 3 (24-48 hour period)	SWODY2 98O	PGWI47	ACUS02 KWNS	LDIZ[27 30 31] cat prob sigprob	WUUS02 PTSDY2
0730 (Daylight) 0830 (Standard)	1200 Day 3 to 1200 Day 4 (48-60 hour period)	SWODY3 99O	PGWK48	ACUS03 KWNS	LDIZ[37 40 41] cat prob sigprob	WUUS03 PTSDY3
0900 (Daylight) 1000 (Standard)	1200 Day 4 to 1200 Day 9 (60- 180 hour period)	SWOD48 48O	PGNM98	ACUS48 KWNS	LDIZ[4-8]7	WUUS48 PTSD48
1300	1300 Day 1 to 1200 Day 2 (23 hour period )	SWODY1 94O	PGWE46	ACUS01 KWNS	LDIZ[11-17]*	WUUS01 PTSDY1
1630	1630 Day 1 to 1200 Day 2 (19.5 hour period)	SWODY1 94O	PGWE46	ACUS01 KWNS	LDIZ[11-17] *	WUUS01 PTSDY1
1730	1200 Day 2 to 1200 Day 3 (24-48 hour period)	SWODY2 98O	PGWI47	ACUS02 KWNS	LDIZ[27 30 31] cat prob sigprob	WUUS02 PTSDY2
2000	2000 Day 1 to 1200 Day 2 (16 hour period)	SWODY1 94O	PGWE46	ACUS01 KWNS	LDIZ[11-17]*	WUUS01 PTSDY1
0100	0100 Day 1 to 1200 Day 2 (11 hour period)	SWODY1 94O	PGWE46	ACUS01 KWNS	LDIZ[11-17] *	WUUS01 PTSDY1

**Table 1: Issuance time, valid time, product ID and content of SPC Convective Outlook products (\*numbering convention – 11 tornado, 12 hail, 13 wind, 14 sigtorn, 15 sighail, 16 sigwind, and 17 categorical)**

2.3 Technical Description. Categorical outlooks should follow the format and content described in this section.

2.3.1 Mass News Disseminator Broadcast Line. None.

2.3.2 Mass News Disseminator Header. The SWO MND header is “DAY (1, 2 OR 3) CONVECTIVE OUTLOOK”.

2.3.3 Content. The Categorical Convective Outlook defines areas of Slight, Moderate and/or High Risk of severe thunderstorms. Severe thunderstorms are storms that produce hail one inch in diameter (quarter-size) or larger, convective winds of 50 knots (58 mph) or greater and/or

tornadoes. A convective day is defined as a 24 hour or less period beginning at 1200 UTC of one calendar day, or scheduled issuance time, and ending at 1200 UTC the next calendar day (i.e. 1200 UTC today to 1200 UTC tomorrow), also known as the current 24 hour period. Two letter postal state identifiers are used to specify all or parts of states in Moderate or High Risk areas (see Section 5.2).

The Day 1, Day 2, and Day 3 Outlooks also define areas where there is a 10% or greater probability of (general) thunderstorms. SPC has the option to use “SEE TEXT” for areas where convection may approach or slightly exceed severe criteria. The contour for “General Thunder” in the graphical forecast refers to a 10% or greater probability of non-severe convection. SPC may issue a Moderate or High Risk for the Day 2 Outlook and a Moderate Risk for the Day 3 Outlook, highlighting the possibility for significant severe weather events.

#### 2.3.4 Format.

```
ACUS0i (i=1,2,or 3) KWNS ddhhmm
SWODYn
SPC AC ddhhmm

DAY (1,2,3) CONVECTIVE OUTLOOK
NWS STORM PREDICTION CENTER NORMAN OK
time am/pm time_zone day mon dd yyyy

VALID DDHHMMZ - DDHHMMZ

...THERE IS A (SLGT, MDT, HIGH) RISK OF SVR TSTMS <valid time>
<location>...
There may be one or more areas headlined for the appropriate area of risk.

...SYNOPSIS...
Broad narrative providing a technical discussion of the overall severe
weather pattern.

...AREA OF CONCERN #1...
AREAS OF HIGHEST RISK ARE DISCUSSED FIRST (HIGH RISK, MDT RISK, SLGT RISK).
THE FORECAST PROVIDES A NARRATIVE TECHNICAL DISCUSSION.

...AREA OF CONCERN #2...
NARRATIVE TECHNICAL DISCUSSION

..FORECASTER(S) NAME.. MM/DD/YYYY
```

**Figure 1: Categorical Outlook Format**

2.4 Updates, Amendments and Corrections. Updates are scheduled (see issuance times). SPC will correct outlooks for format and grammatical errors. SPC will amend outlooks when it is recognized that the current forecast does not or will not reflect the ongoing or future convective development.

2.5 Graphics PGWE46, PGWI47 and PGWK48. These are the corresponding graphics to the text products and the formats of these products follow Redbook Graphic standards.

3. **Probabilistic Convective Outlook,**

3.1 **Mission Connection.** SPC issues probabilistic convective outlooks to provide CONUS WFOs, the public, media, and emergency managers with specific severe weather threats during the next 72 hours. SPC assigns each threat with a percent likelihood of occurrence.

3.2 **Issuance Guidelines.**

3.2.1 **Creation Software.** SPC will use the National Centers AWIPS (NAWIPS) and/or the SPC Product Generator (PRODGEN) for these products.

3.2.2 **Issuance Criteria.** Probabilistic Convective Outlooks are a scheduled product.

3.2.3 **Issuance Time.** See Table 2.

3.2.4 **Valid Time.** See Table 2.

<b>SPC PROBABILISTIC FORECAST PRODUCTS</b>				
<b>Redbook Graphics Format</b>				
<i>Issuance Times (UTC)</i>	<i>Valid Times (UTC)</i>	<i>AWIPS ID</i>	<i>WMO Redbook Graphics Header</i>	<i>Product Description</i>
0600	1200 Day 1 to 1200 Day 2 (0-24 hour period)	OH1 OW1 OT1	PENE00 PWNE00 PGNE00	Hail Probabilities Wind Probabilities Tornado Probabilities
0600 (Daylight) 0700 (Standard)	1200 Day 2 to 1200 Day 3 (24-48 hour period)	OA2	PGNI00	All Severe Probabilities
0730 (Daylight) 0830 (Standard)	1200 Day 3 to 1200 Day 4 (48-60 hour period)	OA3	PZNK00	All Severe Probabilities
1300	1300 Day 1 to 1200 Day 2 (23 hour period )	OH1 OW1 OT1	PENE00 PWNE00 PGNE00	Hail Probabilities Wind Probabilities Tornado Probabilities
1630	1630 Day 1 to 1200 Day 2 (19.5 hour period)	OH1 OW1 OT1	PENE00 PWNE00 PGNE00	Hail Probabilities Wind Probabilities Tornado Probabilities
1730	1200 Day 2 to 1200 Day 3 (24-48 hour period)	OA2	PGNI00	All Severe Probabilities
2000	2000 Day 1 to 1200 Day 2 (16 hour period)	OH1 OW1 OT1	PENE00 PWNE00 PGNE00	Hail Probabilities Wind Probabilities Tornado Probabilities
0100	0100 Day 1 to 1200 Day 2 (11 hour period)	OH1 OW1 OT1	PENE00 PWNE00 PGNE00	Hail Probabilities Wind Probabilities Tornado Probabilities

**Table 2: SPC Probabilistic Outlook Issuance time, valid time, ID and content**

3.2.5 Product Expiration Time. Product expiration time is 1200 UTC the next convective day. See Table 2.

3.3 Technical Description. Probabilistic outlooks should follow the format and content described in this section.

3.3.1 Mass News Disseminator Broadcast Line. Not applicable.

3.3.2 Mass News Disseminator Header. Not applicable.

3.3.3 Content. SPC will issue probabilistic convective outlooks in graphic format. The Day 1 Outlook will consist of separate graphics for tornadoes, hail, and (convective) damaging winds. The Day 2 and Day 3 Outlooks will have probabilities for all severe thunderstorm threats (tornado, large hail, and convective wind damage combined) in one graphic. These outlooks provide numerical probabilities of severe weather within 25 statute miles of any point within a given forecast area. The probability thresholds/contours in each graphic are as follows:

Day 1 Outlook for tornadoes: 2%, 5%, 10%, 15%, 30%, 45% and 60%

Day 1 Outlook for (convective) damaging winds: 5%, 15%, 30%, 45% and 60%

Day 1 Outlook for severe hail: 5%, 15%, 30%, 45% and 60%

Day 2 Outlooks (combined events): 5%, 15%, 30%, 45% and 60%

Day 3 Outlooks (combined events): 5%, 15%, 30% and 45%

SPC will include a hatched area (denoting a significant severe threat) on individual probabilistic graphical products indicating a 10% (or greater) chance of tornadoes that could produce EF2 or greater damage, two inch or greater diameter hail, and/or 65 knot or greater convective wind gusts within 25 miles of any one point of a forecast area. A hatched area on the Day 2 or Day 3 Outlooks would indicate a 10% (or greater) probability for a significant wind, hail and/or tornado event.

SPC will issue a Public Severe Weather Outlook (PWO) for all High Risk issuances and for Moderate Risks that contain at least a 15% probability of tornadoes or a 45% probability of damaging wind gusts. When a 10% (or greater) probability of significant tornadoes (defined as EF2 or greater) is expected to occur between 0300 and 1200 UTC, a PWO is also issued following the issuance of a 2000 UTC and/or 0100 UTC Day 1 Outlook (refer to Section 7). Convective Outlook narratives will reference Public Severe Weather Outlooks when necessary. SPC should issue narrative and graphical forecasts at the same time.

**Day 1 Probability to Categorical Outlook Conversion**  
 (SIGNIFICANT SEVERE area needed where denoted by hatching-  
 otherwise default to next lower category)

Outlook Probability	TORNADO	WIND	HAIL
2%	SEE TEXT	NOT USED	NOT USED
5%	SLGT	SEE TEXT	SEE TEXT
10%	SLGT	NOT USED	NOT USED
15%	MDT	SLGT	SLGT
30%	HIGH	SLGT	SLGT
45%	HIGH	MDT	MDT
60%	HIGH	HIGH	MDT

Table 3: Day 1 Probability to Categorical Outlook Conversion

**Day 2 Probability to Categorical Outlook Conversion**  
 (SIGNIFICANT SEVERE area needed where denoted by hatching-  
 otherwise default to next lower category)

Outlook Probability	Combined TORNADO, WIND, and HAIL
5%	SEE TEXT
15%	SLGT
30%	SLGT
45%	MDT
60%	HIGH

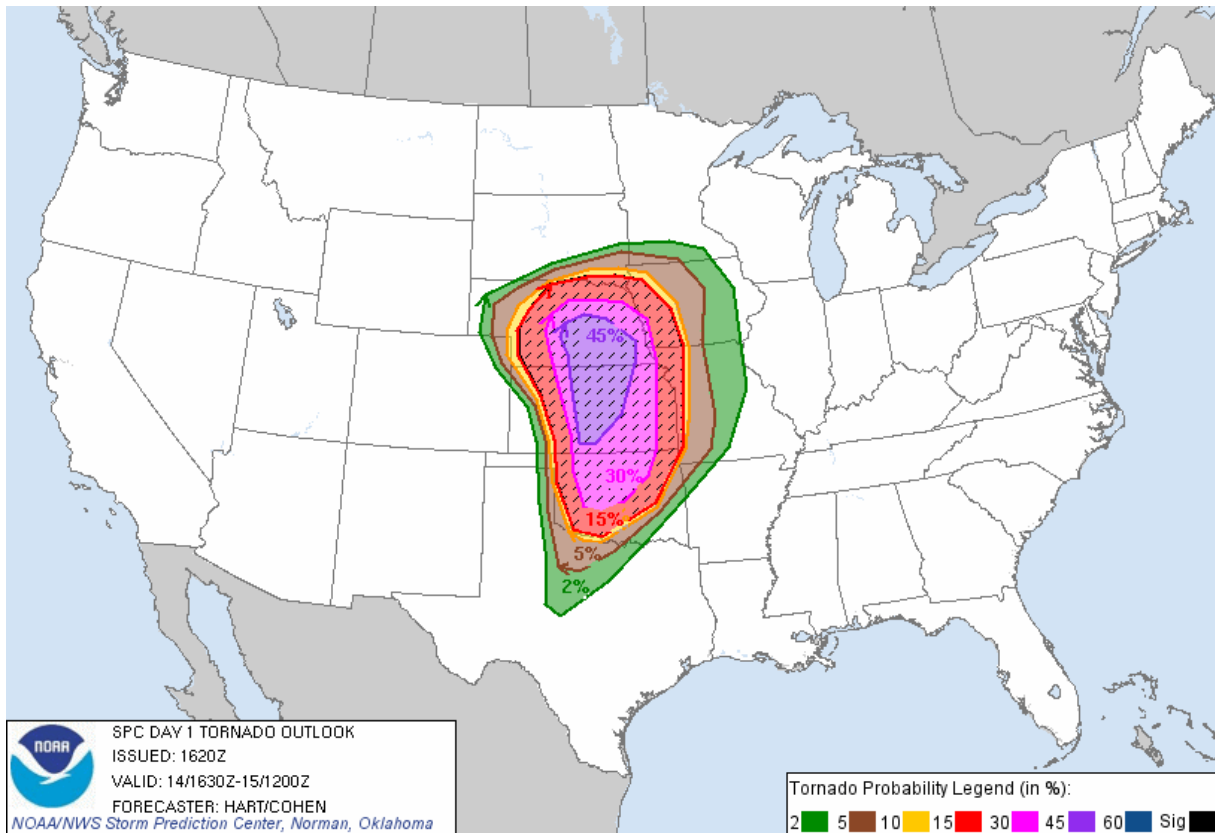
Table 4: Day 2 Probability to Categorical Outlook Conversion

**Day 3 Probability to Categorical Outlook Conversion**  
 (SIGNIFICANT SEVERE area needed where denoted by hatching-  
 otherwise default to next lower category)

Outlook Probability	Combined TORNADO, WIND, and HAIL
5%	SEE TEXT
15%	SLGT
30%	SLGT
45%	MDT

Table 5: Day 3 Probability to Categorical Outlook Conversion

3.3.4 Format.



**Figure 2: Day One Outlook -- Tornado Probabilities**

3.4 Updates, Amendments and Corrections. Updates are scheduled (see issuance times). SPC will amend when it is recognized that the current forecast does not or will not reflect the ongoing or future convective development.

4. **Day 4 - 8 Severe Thunderstorm Outlook.**

4.1 Mission Connection. SPC issues narrative and graphical Day 4-8 Severe Thunderstorm Outlook to provide CONUS Weather Forecast Offices (WFOs), the public, media and emergency managers with the potential for severe convection during the 4-8 Day period. This product will help its users to adequately prepare several days in advance of an expected severe weather episode.

4.2 Issuance Guidelines.

4.2.1 Creation Software. SPC will use the National Center’s AWIPS (NAWIPS) and/or the SPC Product Generator (PRODGEN) for these products.

4.2.2 Issuance Criteria. The Day 4-8 Convective Outlook is a scheduled product in UTC time and calendar day.

4.2.3 Issuance Time. Product is issued once daily at 1000 UTC during Standard time and 0900 UTC during Daylight Time. See Table 1.

4.2.4 Valid Time. Product is valid from 1200 UTC on Day 4 to 1200 UTC on Day 9.

4.2.5 Product Expiration Time. Product expiration time is 1200 UTC the next calendar day.

4.3 Technical Description. Day 4-8 outlooks should follow the format and content described in this section.

4.3.1 Mass News Disseminator Broadcast Line. None

4.3.2 Mass News Disseminator Header. The SWO MND header is “DAY 4-8 CONVECTIVE OUTLOOK”.

4.3.3 Content. The Day 4-8 Convective Outlook product will consist of one graphic with an area (s) where severe weather is anticipated during the period. The severe weather threat areas will be depicted with a closed line and a label indicating the day(s) (e.g. D4 for a day 4 threat, or D5-6 for a day 5 and 6 threat) of the expected threat where there is at least a 30% probability for severe thunderstorms during day 4-8 period. A concise text discussion is included daily with each Outlook issuance, even if a severe weather area is not included on the graphic. The Day 4-8 Severe Thunderstorm Outlook text will include a standardized headline (see Figure 3) to clearly highlight whenever a severe weather outbreak is forecast.

4.3.4 Format.

```

ACUS48 KWNS ddhhmm
SWOD48
SPC AC ddhhmm

DAY 4-8 CONVECTIVE OUTLOOK
NWS STORM PREDICTION CENTER NORMAN OK
time am/pm time_zone day mon dd yyyy

VALID DDHHMMZ - DDHHMMZ

...SEVERE WEATHER OUTBREAK POSSIBLE ON DX/day...
Used for whenever a severe weather outbreak is forecast, where X is the day
number and day is the three-letter abbreviation of the day of the week.
This can include multiple days when necessary.

...DISCUSSION...
A concise text discussion is included daily with each Outlook issuance,
even if a severe weather area is not included on the graphic.

..FORECASTER(S) NAME.. MM/DD/YYYY
    
```

**Figure 3: Day 4-8 Convective Outlook Text Product Format**



4.4 Updates, Amendments and Corrections. SPC will correct outlooks for format and grammatical errors. SPC will typically not amend the Day 4-8 Convective Outlook. However, in rare instances where the SPC forecast team, latest model guidance, NWS Partners and WFOs are in agreement that the ongoing forecast needs to be changed, an update can be made.

5. **SPC Points Product.**

5.1 Mission Connection. SPC issues the Points Product to provide CONUS WFOs, the public, media, and emergency managers with the latitude and longitude locations of the points that make up the SPC Categorical and Probabilistic Convective Outlook areas.

5.2 Issuance Guidelines.

5.2.1 Creation Software. SPC uses automated software.

5.2.2 Issuance Criteria. Points Products are scheduled products.

5.2.3 Issuance Time. See Table 3.

5.2.4 Valid Time. See Table 3.

5.2.5 Product Expiration Time. Product expiration time is 1200 UTC the next day.

## SPC POINTS FORECAST PRODUCTS

<i>Issuance Times (UTC)</i>	<i>Valid Times (UTC)</i>	<i>AWIPS ID</i>	<i>WMO Text Header</i>	<i>Product Description</i>
0600	1200 Day 1 to 1200 Day 2 (0-24 hour period)	PTSDY1	WUUS01 KWNS	Text provides latitude/longitude for each point creating the convective categorical and probabilistic graphics for Day 1...includes list of anchor points with range/azimuth in statute miles relative to a point
0600 (Daylight) 0700 (Standard)	1200 Day 2 to 1200 Day 3 (24-48 hour period)	PTSDY2	WUUS02 KWNS	Text provides latitude/longitude for each point creating the convective categorical and probabilistic graphics for Day 2...includes list of anchor points with range/azimuth in statute miles relative to a point
0730 (Daylight) 0830 (Standard)	1200 Day 3 to 1200 Day 4 (48-60 hour period)	PTSDY3	WUUS03 KWNS	Text provides latitude/longitude for each point creating the convective categorical and probabilistic graphics for Day 3...includes list of anchor points with range/azimuth in statute miles relative to a point
0900 (Daylight) 1000 (Standard)	1200 Day 4 to 1200 Day 9 (60-180 hour period)	PTSD48	WUUS48 KWNS	Text provides latitude/longitude for each point creating an area or areas as discussed in the day 4-8 Convective Outlook Product. Each day is listed separately or combined (multiple days are listed last). If the potential or predictability for severe thunderstorms is too low for a given day...no outline is listed for that day.
1300	1300 Day 1 to 1200 Day 2 (23 hour period)	PTSDY1	WUUS01 KWNS	Text provides latitude/longitude for each point creating the convective categorical and probabilistic graphics for Day 1...includes list of anchor points with range/azimuth in statute miles relative to a point
1630	1630 Day 1 to 1200 Day 2 (19.5 hour period)	PTSDY1	WUUS01 KWNS	Text provides latitude/longitude for each point creating the convective categorical and probabilistic graphics for Day 1...includes list of anchor points with range/azimuth in statute miles relative to a point
1730	1200 Day 2 to 1200 Day 3 (24-48 hour period)	PTSDY2	WUUS02 KWNS	Text provides latitude/longitude for each point creating the convective categorical and probabilistic graphics for Day 2...includes list of anchor points with range/azimuth in statute miles relative to a point
2000	2000 Day 1 to 1200 Day 2 (16 hour period)	PTSDY1	WUUS01 KWNS	Text provides latitude/longitude for each point creating the convective categorical and probabilistic graphics for Day 1...includes list of anchor points with range/azimuth in statute miles relative to a point
0100	0100 Day 1 to 1200 Day 2 (11 hour period)	PTSDY1	WUUS01 KWNS	Text provides latitude/longitude for each point creating the convective categorical and probabilistic graphics for Day 1...includes list of anchor points with range/azimuth in statute miles relative to a point

**Table 6: Issuance time, valid time, product ID and content of SPC Points Forecast products**

5.3 Technical Description. The SPC Points Product should follow the format and content described in this section.

5.3.1 Mass News Disseminator Broadcast Line. Not applicable.

5.3.2 Mass News Disseminator Header. DAY (1, 2, 3, or 4-8) CONVECTIVE OUTLOOK AREAL OUTLINE

5.3.3 Content. SPC will issue separate products for the Day 1, Day 2, Day 3, and Day 4-8 outlooks. The Day 1 product provides the points for the Probabilistic Outlooks for tornado, large hail and damaging winds, and the associated Categorical Outlook. The Day 2, 3, and 4-8 products list the points for the Probabilistic Outlook for all severe (tornadoes, large hail, and convective damaging winds combined) weather events and the associated Categorical Outlook. Points for areas of significant events (Day 1, 2 and 3) are also part of this product.

Possible values in the product include:

- Probability: 0.05, 0.15, 0.30, 0.45, 0.60, also 0.02 and 0.10 for tornado probability.
- Significant Severe: SIGN
- Categorical: TSTM, SLGT, MDT, HIGH

Lat/lon values themselves are in decimal degrees, for example: 29450281 is 29.45N and -102.81W. 99999999 is an indicator that the previous point connects to the following point. For example:

```

0.05 29450281 32590195 35550068 37480057 38290123 38480333
39070480 40250518 42580209 46060143 48050263 49150265
99999999 48729380 46749177 42609035 41508994 36608550
35208574 33688795 33509118 33249404 27990024
    
```

**0.05** is the 5% probability line, described by the following lat/lon points.  
**29450281** is 29.45N and -102.81W and is the first point in this line  
**49150265 99999999 48729380** is 49.15N -102.65W connects to 48.72N -93.80W  
**27990024** is 27.99N and -100.24W and is the last point in the series.

On the Day 4-8 Convective Outlook Areal Outline, each day is listed separately (D4, D5, etc.) and combined days are listed last. In the example below Day 8 is not listed since the potential or predictability for severe thunderstorms is too low on Day 8:

```

D6 43738110 41628135 39388310 38558585 38499110 39439365
40109439 41409470 43099400 45318996 46248525
D7 45377505 43397287 41357249 39727395 38537638 37688426
38198516 40098507 42068280 43278023
D4-5 47448528 43528843 42169294 42639686 44470047 45540446
46920612 49600691
    
```

5.3.4 Format.

```

WUUS01 KWNS ddhmm
PTSDY1

DAY 1 CONVECTIVE OUTLOOK AREAL OUTLINE
NWS STORM PREDICTION CENTER NORMAN OK
1155 PM CST THU FEB 09 2006

VALID TIME 101200Z - 111200Z

PROBABILISTIC OUTLOOK POINTS DAY 1

... TORNADO ...

0.02  27759671 28769742 29989747 30769656 31179488 30899293
      30499075 30768839 30988675 30898534 30498441 30038423
      29508444

&&

... HAIL ...

0.05  27569677 28369842 29679973 30579965 31199843 31609712
      31709456 31219192 31048953 31108586 30758471 30308430
      29338474

&&

... WIND ...

0.05  27919643 27739717 27699781 27939837 29029834 30319737
      31129489 31138492 30948436 30438396 29388456

&&

CATEGORICAL OUTLOOK POINTS DAY 1

... CATEGORICAL ...

TSTM  30850563 32240156 32799807 32859739 32889688 33289493
      34479311 34749227 35048999 34778763 34688679 34368518
      33608441 32768370 30828332 29368389

&&
GEN TSTMS ARE FCST TO THE RIGHT OF A LINE FROM 80 SE ELP BGS MWL FTW
DAL 40 SE PRX HOT LIT MEM MSL HSV RMG ATL MCN VLD 50 WSW CTY.

```

**Figure 4: Day 1 SPC Points Product Format**

5.4 Updates, Amendments and Corrections. Updates are scheduled (see issuance times). SPC will correct outlooks for format errors. SPC will amend when it is recognized that the current forecast does not or will not reflect the ongoing or future convective development.

6. SPC NDFD Forecast Products.

6.1 Mission Connection. SPC issues the NDFD Forecast Product to provide CONUS WFOs, partners, and users with the graphical display that make up the SPC Categorical and Probabilistic Convective Outlook areas.

6.2 Issuance Guidelines.

<b>SPC NDFD FORECAST PRODUCTS</b>			
<i>Issuance Times (UTC)</i>	<i>Valid Times (UTC)</i>	<i>WMO Header (grib2)</i>	<i>Product Description</i>
0600	1200 Day 1 to 1200 Day 2 (0-24 hour period)	LDIZ11 KWNS	Tornado Probabilities
		LDIZ12 KWNS	Hail Probabilities
		LDIZ13KWNS	Dmg Wind Probabilities
		LDIZ14KWNS	Sig Tor Probabilities
		LDIZ15 KWNS	Sig Hail Probabilities
		LDIZ16 KWNS	Sig Dmg Wind Probabilities
		LDIZ17 KWNS	Categorical Outlook
0600 (Daylight) 0700 (Standard)	1200 Day 2 to 1200 Day 3 (24-48 hour period)	LDIZ30 KWNS	Total Prob. of Severe Thunderstorms
		LDIZ31 KWNS	Total Prob. of Extreme Severe Thunderstorms
		LDIZ27 KWNS	Categorical Outlook
0730 (Daylight) 0830 (Standard)	1200 Day 3 to 1200 Day 4 (48-72 hour period)	LDIZ40 KWNS	Total Prob. of Severe Thunderstorms
		LDIZ41 KWNS	Total Prob. of Extreme Severe Thunderstorms
		LDIZ37 KWNS	Categorical Outlook
1300	1300 Day 1 to 1200 Day 2 (23 hour period )	LEU198 KWNS	Tornado Probabilities
		LFU198 KWNS	Hail Probabilities
		LGU198 KWNS	Dmg Wind Probabilities
		LHU198 KWNS	Sig Tor Probabilities
		LIU198 KWNS	Sig Hail Probabilities
		LJU198 KWNS	Sig Dmg Wind Probabilities
		LMU198 KWNS	Categorical Outlook
1630	1630 Day 1 to 1200 Day 2 (19.5 hour period)	LEU198 KWNS	Tornado Probabilities
		LFU198 KWNS	Hail Probabilities
		LGU198 KWNS	Dmg Wind Probabilities
		LHU198 KWNS	Sig Tor Probabilities
		LIU198 KWNS	Sig Hail Probabilities
		LJU198 KWNS	Sig Dmg Wind Probabilities
		LMU198 KWNS	Categorical Outlook
1730	1200 Day 2 to 1200 Day 3 (24-48 hour period)	LKU298 KWNS	Total Prob. of Severe Thunderstorms
		LLU298 KWNS	Total Prob. of Extreme Severe Thunderstorms
		LMU298 KWNS	Categorical Outlook
2000	2000 Day 1 to 1200 Day 2 (16 hour period)	LEU198 KWNS	Tornado Probabilities
		LFU198 KWNS	Hail Probabilities
		LGU198 KWNS	Dmg Wind Probabilities
		LHU198 KWNS	Sig Tor Probabilities
		LIU198 KWNS	Sig Hail Probabilities
		LJU198 KWNS	Sig Dmg Wind Probabilities
		LMU198 KWNS	Categorical Outlook
0100	0100 Day 1 to 1200 Day 2 (11 hour period)	LEU198 KWNS	Tornado Probabilities
		LFU198 KWNS	Hail Probabilities
		LGU198 KWNS	Dmg Wind Probabilities
		LHU198 KWNS	Sig Tor Probabilities
		LIU198 KWNS	Sig Hail Probabilities
		LJU198 KWNS	Sig Dmg Wind Probabilities
		LMU198 KWNS	Categorical Outlook

**Table 7: Issuance time, valid time, product ID and content of SPC NDFD Forecast products (only entire CONUS Grid (U) listed).**

6.2.1 Creation Software. SPC uses automated software.

6.2.2 Issuance Criteria. SPC NDFD Forecast Products are scheduled products.

6.2.3 Issuance Time. See Table 4.

6.2.4 Valid Time. See Table 4.

6.2.5 Product Expiration Time. Product expiration time is 1200 UTC the next day.

6.3 Technical Description.

6.3.1 Mass News Disseminator Broadcast Line. Not applicable.

6.3.2 Mass News Disseminator Header. Not applicable.

6.3.3 Content. SPC will issue three separate products for the Day 1, Day 2, and Day 3 outlooks. The Day 1 product provides the NDFD graphical products for the Probabilistic Outlooks for tornado, large hail and damaging winds, and the associated Categorical Outlook. The Day 2 and 3 products provide the NDFD graphical products for the Probabilistic Outlook for all severe (tornadoes, large hail, and convective damaging winds combined) weather events and the associated Categorical Outlook. NDFD graphics for areas of significant severe events are also part of this product.

6.4 Updates, Amendments and Corrections. Updates are scheduled (see issuance times). SPC will correct outlooks for format errors. SPC will amend when it is recognized that the current forecast does not or will not reflect the ongoing or future convective development.

## 7. **Public Severe Weather Outlook (WMO header WOUS40, AWIPS ID PWOSPC)**.

7.1 Mission Connection. Public Severe Weather Outlooks (PWOs) alert the CONUS WFOs, public, media, and emergency managers to a potentially significant or widespread severe weather outbreak. These outlooks also define the threat area and provide information on the timing of the outbreak.

7.2 Issuance Guidelines.

7.2.1 Creation Software. SPC will use the National Centers AWIPS (NAWIPS) and/or the SPC Product Generator (PRODGEN) for these products.

7.2.2 Issuance Criteria. When a potential exists for a significant or widespread convective outbreak, which is implied with tornado and/or damaging wind probabilities indicative of a High Risk or a Moderate Risk that contains at least a 15% probability of tornadoes or a 45% probability of damaging wind gusts, a PWO will be issued. Also, when a 10% (or greater) probability of significant tornadoes is expected to occur between 0300 and 1200 UTC, a PWO is issued following the issuance of a 2000 UTC and/or 0100 UTC Day 1 Outlook.

7.2.3 Issuance Time. The PWO is an event driven product (see 6.3.3 for more details). The PWO is issued between 1000 and 1100 UTC if the 0600 UTC Day 1 Outlook initiates a HIGH Risk or a MODERATE Risk that contains at least a 15% probability of tornadoes or a 45% probability of damaging wind gusts, and between 1300 and 1400 UTC if the 1300 UTC Day 1 Outlook initiates a HIGH Risk or a MODERATE Risk with the above criteria. The PWO is then updated between 1700 and 1800 UTC. The PWO may be written if the 2000 UTC Day 1 Outlook is upgraded to HIGH Risk. The PWO is issued between 2000 and 2100 UTC and/or 0100 and 0200 UTC for nighttime significant tornadoes as defined in section 7.2.2. The PWO is not issued for “hail only” MODERATE Risk.

7.2.4 Valid Time. The valid time is from the time of issuance to expiration.

7.2.5 Product Expiration Time. The product expiration time will be the time of the next PWO issuance or 0200 UTC if no other issuances are expected. A PWO issued at 01Z expires at 12Z.

7.3 Technical Description. Public Weather Outlooks should follow the format and content described in this section.

7.3.1 Mass News Disseminator Broadcast Line. None.

7.3.2 Mass News Disseminator Header. The PWO MND header is “PUBLIC SEVERE WEATHER OUTLOOK.”

7.3.3 Content. SPC will issue a Public Severe Weather Outlook when it forecasts any of the following conditions in the Day 1 Outlook:

- a. A High Risk of severe storms;
- b. A Moderate Risk of severe storms that contains at least a 15% probability of tornadoes, or a 45% probability of (convective) damaging winds.
- c. A 10% (or greater) probability of nighttime significant tornadoes

7.3.4 Format.

```

WOUS40 KWNS ddhmm
PWOSPC
STZ000>099-CWZ000>099-ddhmm-

PUBLIC SEVERE WEATHER OUTLOOK
NWS STORM PREDICTION CENTER NORMAN OK
time am/pm time_zone day mon dd yyyy

....HEADLINE OF PARTICULARLY DANGEROUS SITUATION (LOCATION AND TIMING)...

A NARRATIVE PLAIN LANGUAGE DISCUSSION OF THE PARTICULARLY DANGEROUS
CONVECTIVE THREAT. THE SPC FORECASTER SHOULD DEFINE THE LOCATION...TIMING
AND REASONING FOR THIS OUTLOOK IN TERMS THE PUBLIC WILL UNDERSTAND. INCLUDE
CALL TO ACTION STATEMENTS AS REQUIRED.

...FORECASTER NAME...
    
```

**Figure 5: Public Severe Weather Outlook Format**

7.4 Updates, Amendments and Corrections. Updates are scheduled (see issuance times). SPC will correct outlooks for format and grammatical errors. PWOs will not be amended.

8. **SPC Thunderstorm Outlook (Web-based Graphic).**

8.1 Mission Connection. Forecasts of thunderstorms are critical for the protection of life and property since every thunderstorm contains lightning that is a potential killer. The high 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 continental United States public.

8.2 Issuance Guidelines.

8.2.1 Creation Software. SPC will use the National Centers AWIPS (NAWIPS) and/or the SPC Product Generator (PRODGEN) for these products.

8.2.2 Issuance Criteria. SPC Thunderstorm Outlooks are scheduled products.

8.2.3 Issuance Time. See Table 5.

8.2.4 Valid Time. See Table 5.

<b>SPC Thunderstorm Outlooks</b>	
Issuance Time (UTC)	Valid Periods (UTC)
0600	1200-1600, 1600-2000, 2000-0000
1300	1600-2000, 2000-0000, 0000-0400
1700	2000-0000, 0000-0400, 0400-1200
2100	0000-0400, 0400-1200
0130	0400-1200

**Table 8: SPC Thunderstorm Outlooks Issuance Time and Valid Time**

8.2.5 Product Expiration Time. The product expiration time will be the time of the next Thunderstorm Outlook issuance.

8.3 Technical Description. The SPC Thunderstorm Outlook should follow the format and content described in this section.

8.3.1 Mass News Disseminator Broadcast Line. None

8.3.2 Mass News Disseminator Header. None

8.3.3 Content. The SPC Thunderstorm Outlook depicts the expected geographic areas of thunderstorms including 10, 40 and 70% probabilities 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% thunder probability area four times out of ten, or 40% of the time.

8.3.4 Format. The SPC Thunderstorm Outlook is a web-based graphic online at: <http://www.spc.noaa.gov/products/exper/enhstm/>

8.4 Updates, Amendments and Corrections. Updates are scheduled (see issuance times). SPC will correct outlooks for format errors. SPC Thunderstorm Outlooks will not be amended.

9. **Watch County List (WMO header NWUS64, AWIPS ID WCL [A-J])**.

9.1 Mission Connection. SPC issues Watch County Lists to collaborate with CONUS WFOs on proposed counties, parishes, independent cities and/or adjacent coastal water marine zones to be included in a convective watch. The AWIPS Message Handling System is used to keep the Watch County List product internal to the NWS.

9.2 Issuance Guidelines.

9.2.1 Creation Software. SPC will use the National Centers AWIPS (NAWIPS) and/or the SPC Product Generator (PRODGEN) for these products.

9.2.2 Issuance Criteria. SPC forecasts weather conditions expected to approach or exceed Severe Thunderstorm or Tornado Watch issuance criteria (see Sections 11.2.2).

9.2.3 Issuance Time. Watch County Lists are non-scheduled, event driven products.

9.2.4 Valid Time. Not applicable. Watch County Lists are an internal product.

9.2.5 Product Expiration Time. Not applicable.

9.3 Technical Description. Watch county lists will follow the format and content described in this section.

9.3.1 Mass News Disseminator Broadcast Line. Not applicable.

9.3.2 Mass News Disseminator Header. Not applicable.

9.3.3 Content. CONUS WFOs and SPC are partners in the convective watch process. In the spirit of partnership, WFOs and SPC work toward a consensus convective watch area and duration before, during and at the end of convective watches.

SPC uses the Watch County List (WCL) to alert affected WFOs to a proposed convective watch. WFOs may call the SPC and propose a new watch area. SPC will provide the watch type and proposed counties or parishes and independent cities segmented by state and adjacent coastal water marine zones and a proposed expiration time. Adjacent coastal water marine

zones refer to near shore responsibility (out to 20 nautical miles for oceans). All U.S. Great Lakes marine zones may be included in proposed convective watches.

SPC generates and sends the list through AWIPS to the affected WFOs. SPC will list WFOs in the proposed watch in the ATTN Line. AWIPS software decodes this list into a graphical display of counties and independent cities in each WFO’s county warning area. The list and graphical display on AWIPS serve as the basis for a mandatory collaboration conference call between SPC and the affected WFOs prior to a watch issuance. SPC will attempt to individually contact affected WFO(s) which were unable to participate in the collaboration conference call. The affected WFOs and SPC will collaborate on the watch type, the final list of proposed counties or parishes, independent cities and marine zones to be included in the initial convective watch area. If a consensus cannot be reached through collaboration or SPC is unable to contact an affected WFO(s) during the collaboration call or individually, SPC will decide on the final list of counties or parishes, independent cities and marine zones for all affected WFOs for the initial convective watch area.

9.3.4 Format.

```

NWUS64 KWNS ddhhmm
WCLx

.(TORNADO OR SEVERE THUNDERSTORM) WATCH x
COORDINATION COUNTY LIST FROM THE NWS STORM PREDICTION CENTER EFFECTIVE
UNTIL HHMM UTC.

STC001-003-ddhhmm-

ST
. STATE 1 COUNTIES INCLUDED ARE

LIST OF COUNTIES

STATE 1 INDEPENDENT CITIES INCLUDED ARE

LIST OF INDEPENDENT CITIES
$$

STC001-003-ddhhmm-

ST
. STATE 2 COUNTIES INCLUDED ARE

LIST OF COUNTIES

STATE 2 INDEPENDENT CITIES INCLUDED ARE

LIST OF INDEPENDENT CITIES
$$

CW
. ADJACENT COASTAL WATERS INCLUDED ARE

LIST OF MARINE ZONES
$$

ATTN...WFO...CCC...CCC...CCC... (WFOS AFFECTED BY THE PROPOSED WATCH) .

```

Figure 6: Watch County List Format

9.4 Updates, Amendments and Corrections. Updates are not applicable. SPC will correct lists for format errors. WCLs will not be amended.

10. **Watch Outline Update Message (WMO header WOUS64, AWIPS ID WOU#).**

10.1 Mission Connection. SPC issues Watch Outline Update Messages (WOU) to provide CONUS WFOs, emergency managers, the media and the general public with the names of all counties or parishes, independent cities and marine zones in a convective watch area. The WOU product defines the initial list of counties in a watch. The Aviation Watch Notification (SAW) and Public Watch Notification (SEL) products describe an approximation of the watch area via a parallelogram. The SAW and SEL refer to the WOU product for the watch area.

10.2 Issuance Guidelines.

10.2.1 Creation Software. SPC will use the National Centers AWIPS (NAWIPS) and/or the SPC Product Generator (PRODGEN) for these products.

10.2.2 Issuance Criteria. SPC will issue an initial WOU for every CONUS convective watch. SPC will issue updated WOUs as needed when changes are made to Watch County Notification (WCN) messages issued by WFOs to update counties within active convective watches. SPC will issue a final WOU to notify users that a watch has been cancelled or allowed to expire. The cancellation WOU message is issued when all WFOs in the affected watch issue WCNs that cancel the counties within their respective CWAs.

10.2.3 Issuance Time. SPC will issue initial WOUs at the same time the Aviation Watch Notification Message is issued. SPC will issue updated WOUs as needed for active convective watches when WCNs are received from WFOs. SPC will issue final WOUs at the watch expiration time, or when all counties are cleared through the WCN product issued by the WFOs.

10.2.4 Valid Time. WOUs are valid until the product is updated, cancelled or expires.

10.2.5 Product Expiration Time. The product expiration time is the watch expiration time.

10.3 Technical Description. WOUs will follow the format and content described in this section.

10.3.1 MND Broadcast Line. SPC will use “BULLETIN - IMMEDIATE BROADCAST REQUESTED” in WOUs only for the initial issuance of this watch product. The term “BULLETIN” is used when information is sufficiently urgent to warrant breaking into a normal broadcast.

10.3.2 MND Header. The WOU MND header is “TORNADO (or SEVERE THUNDERSTORM) WATCH OUTLINE UPDATE FOR W(S or T) nnnn” where “nnnn” is the watch number. The watch number will be a consecutive number beginning with number 1 at the start of each calendar year.

10.3.3 Content. SPC will issue WOUs for the time zone(s) in the defined watch area. WOUs will be segmented by states and associated marine areas. WOUs will include all counties or parishes, independent cities and adjacent coastal water marine zones in a watch area. Adjacent coastal water marine zones refer to near shore responsibility (out to 20 nautical miles for oceans). All Great Lakes marine zones within the United States will be included in convective watches. The initial WOU automatically generates the initial Watch County Notification Messages (WCN) for the affected WFOs. As a result of a collaboration call with those WFOs for which their County Warning Area (CWA) is included within a proposed convective watch, the counties or parishes, independent cities and marine zones listed in the initial WOU will match those listed in the initial WCNs issued by the affected WFOs.

The content of the WOU updates are collected from the latest WCNs issued by the WFOs and issued as needed. WOU updates will include all counties or parishes, independent cities and marine zones which remain in or have been added to the watch area since the initial issuance or update. SPC will issue a final WOU when all counties are cleared through a WFO WCN to inform national and regional partners and users that the convective watch is no longer in effect for any portion of the watch area. SPC and affected WFOs will collaborate when counties or parishes, independent cities, or marine zones are transferred from an existing convective watch to a new watch (e.g., watch replacement), or added to an ongoing watch. Per collaboration between the SPC and all WFOs within a watch, a watch can be extended in time and/or area. Watch extensions should generally be confined to those situations where another watch is not likely to be issued beyond the current issuance and the ongoing threat is best covered by a small extension in time (up to 2 hours) and/or area (typically less than 8000 square miles).

10.3.4 Format.

```

WOUS64 KWNS ddhhmm
WOU#
BULLETIN - IMMEDIATE BROADCAST REQUESTED (Initial Issuance Only)
TORNADO (or SEVERE THUNDERSTORM) WATCH OUTLINE UPDATE FOR W(S or T) nnnn
NWS STORM PREDICTION CENTER NORMAN OK
time am/pm time_zone day mon dd yyyy

TORNADO (or SEVERE THUNDERSTORM) WATCH nnnn IS IN (or REMAINS IN) EFFECT
UNTIL hhmm AM/PM XDT FOR THE FOLLOWING LOCATIONS:

STC001-003-ddhhmm-
/k.aaa.cccc.pp.s.####.yyymmddThhnnZB-yyymmddThhnnZE/

ST
. STATE 1 COUNTIES INCLUDED ARE

LIST OF COUNTIES

STATE 1 INDEPENDENT CITIES INCLUDED ARE

LIST OF CITIES
$$

nMZ001-003-ddhhmm-
/k.aaa.cccc.pp.s.####.yyymmddThhnnZB-yyymmddThhnnZE/

CW

```

```
. ADJACENT COASTAL WATERS INCLUDED ARE

LIST OF MARINE ZONES
$$
ATTN...WFO...CCC...CCC...CCC... (WFOS AFFECTED BY THE WATCH) .
```

**Figure 7: Watch Outline Update Message**

**(Watch No Longer in Effect- Final Update)**

```
WOUS64 KWNS ddhhmm
WOU n

TORNADO (or SEVERE THUNDERSTORM) WATCH OUTLINE UPDATE FOR W(S or T) nnnn
NWS STORM PREDICTION CENTER NORMAN OK
time am/pm time_zone day mon dd yyyy

TORNADO (or SEVERE THUNDERSTORM) WATCH nnnn IS NO LONGER IN EFFECT.

STZ000-nMZ000-ddhhmm-
/k.aaa.cccc.pp.s.####.yymmddThhnnZB-yymmddThhnnZE/

NO COUNTIES (OR PARISHES, INDEPENDENT CITIES) REMAIN IN THE WATCH.

NO MARINE ZONES REMAIN IN THE WATCH (if Marine Zones were in the original
watch area)
$$

ATTN...WFO...CCC...CCC...CCC... (ALARM/ALERT INFORMATION, WFOS ORIGINALLY
AFFECTED BY THE WATCH) .
```

**Figure 8: Example of an updated Watch Outline Update**

10.4 Updates, Amendments and Corrections. When appropriate, SPC may correct WOUs for areal omissions and expiration time. WOUs are updated at least at the top of each hour.

11. **Aviation Watch Notification Message (WMO header WWUS30, AWIPS ID SAW#)**

11.1 Mission Connection. SPC issues Aviation Watch Notification Messages to provide an area threat alert for the aviation meteorology community to forecast organized severe thunderstorms that may produce tornadoes, large hail and/or convective damaging winds as indicated in Public Watch Notification Messages. The SAW product is an approximation of the area in a watch, for the official area covered by a watch see the corresponding WOU product.

11.2 Issuance Guidelines.

11.2.1 Creation Software. SPC will use the National Centers AWIPS (NAWIPS) and/or the SPC Product Generator (PRODGEN) for these products.

11.2.2 Issuance Criteria. A convective watch is in effect.

11.2.3 Issuance Time. Aviation Watch Notification Messages are non-scheduled, event driven products.

11.2.4 Valid Time. The valid time is from the time of issuance to expiration or cancellation time.

11.2.5 Product Expiration Time. The expiration time is at the end of the watch valid time.

11.3 Technical Description. Aviation Watch Notification Messages will follow the format and content described in this section.

11.3.1 Mass News Disseminator Broadcast Line. Not applicable.

11.3.2 Mass News Disseminator Header. Not applicable.

11.3.3 Content. SPC will issue the SAW after the proposed convective watch area has been collaborated with the affected WFO CWAs defining the approximate areal outline of the watch. SPC forecasters may define the area as a rectangle or parallelogram (X miles either side of line from point A to point B), or (X miles north and south or east and west of line from point A to point B). Distances of the axis coordinates should be in statute miles. The aviation coordinates reference navigational aid VHF Omni-Directional Range (VOR) locations and state distances will be in nautical miles. SPC will provide valid times in UTC. The watch half width will be in statute miles. The Aviation Watch Notification Message will contain hail size in inches or half inches (forecaster discretion for tornado watches associated with hurricanes) surface and aloft, surface convective wind gusts in knots, maximum cloud tops, and the Mean Storm Motion Vector, and replacement information, if necessary.

11.3.4 Format.

```

WWUS30 KWNS ddhhmm
SAWn
SPC AWW ddhhmm
WWnnnn SEVERE TSTM ST LO DDHMMZ - DDHMMZ
AXIS...XX STATUTE MILES EITHER SIDE (or North and South, or East and West)
OF A LINE
XXDIR CCC/LOCATION ST/ - XXDIR CCC/LOCATION ST
..AVIATION COORD.. XX NM EITHER SIDE /XXDIR CCC - XXDIR CCC
HAIL SURFACE AND ALOFT..X X/X INCHES. WIND GUSTS..XX KNOTS.
MAX TOPS TO XXX. MEAN STORM MOTION VECTOR DIR/SPEED

LAT...LON

THIS IS AN APPROXIMATION TO THE WATCH AREA. FOR A COMPLETE DEPICTION OF
THE WATCH SEE WOUS64 KWNS FOR WOUn.
    
```

**Figure 9: Aviation Severe Weather Watch Notification Message Format**

11.4 Updates, Amendments and Corrections. Updates and amendments are not applicable. SPC will correct watches for format and grammatical errors.

12. **Public Severe Thunderstorm Watch Notification Message (WMO header WWUS20, AWIPS ID SEL#).**

12.1 **Mission Connection.** SPC issues Public Severe Thunderstorm Watch Notification Messages to alert CONUS WFOs, the public, media and emergency managers to organized thunderstorms forecast to produce six or more hail events of one inch (quarter-size) diameter and/or greater or convective damaging winds of 50 knots (58 mph) or greater. The SEL product is an approximation of the area in a watch, for the official area covered by a watch see the corresponding WOU product.

12.2 **Issuance Guidelines.**

12.2.1 **Creation Software.** SPC will use the National Centers AWIPS (NAWIPS) and/or the SPC Product Generator (PRODGEN) for these products.

12.2.2 **Issuance Criteria.** SPC should issue a Public Severe Thunderstorm Watch Notification Message when there is a forecast of six or more hail events of one inch (quarter-size) diameter or greater or convective damaging winds of 50 knots (58 mph) or greater. The forecast event minimum thresholds should be at least 2 hours over an area at least 8,000 square miles. Below these thresholds, SPC in collaboration with affected WFO CWAs may issue for smaller areas and for shorter periods of time when conditions warrant, and for convective watches along coastlines, and near the Canadian and Mexican borders.

12.2.3 **Issuance Time.** Public Severe Thunderstorm Watch Notification Messages are non-scheduled, event driven products.

12.2.4 **Valid Time.** The valid time is from the time of issuance to expiration or cancellation.

12.2.5 **Product Expiration Time.** The expiration time is the end of the watch valid time.

12.3 **Technical Description.** Public Severe Thunderstorm Watch Notification Messages will follow the format and content described in this section.

12.3.1 **Mass News Disseminator Broadcast Line.** Public Severe Thunderstorm Watch Notification Messages will include the broadcast line “URGENT – IMMEDIATE BROADCAST REQUESTED”. The term “URGENT” is used when the information may wait until a “stop-set” (break in the broadcast routine).

12.3.2 **Mass News Disseminator Header.** The Public Severe Thunderstorm Watch Notification Message MND header is “SEVERE THUNDERSTORM WATCH nnnn.”

12.3.3 **Content.** A Public Severe Thunderstorm Watch Notification Message will contain the approximate area description and axis, watch expiration time, a list of primary threats including hail size and thunderstorm wind gusts expected, the definition of a watch, a call to action statement, a list of other valid watches, a list of watches cancelled/replaced by a new watch, a brief discussion of meteorological reasoning, and a brief description of the severe weather threat to the aviation community.

SPC will include the term “coastal waters” when the watch affects coastal waters within 20 nm of the Pacific, Atlantic, or Gulf of Mexico coast. "Adjacent Coastal Waters" refers to a WFO’s marine zone responsibility (out to 20 nautical miles for oceans and Gulf of Mexico). If a Great Lake is included in a watch, then the Lake (such as, Northern Lake Michigan) is included in the listing of states or Great Lakes within the United States.

SPC will coordinate with affected WFOs to determine which counties or parishes, independent cities, and/or marine zones are in the initial watch and meteorological reasoning prior to a watch being issued. SPC will issue a watch cancellation message (under SEL, SAW and WOU products) when there are no counties or parishes, independent cities and/or marine zones remaining in the watch area prior to the expiration time, after WFOs have cleared all counties via WCNs. The text of the message will specify the number and area of the cancelled watch.

SPC will enhance a Public Severe Thunderstorm Watch Notification Message by using the words, “THIS IS A PARTICULARLY DANGEROUS SITUATION” when conditions are favorable for widespread significant non-tornadic severe weather events (convective winds greater than 75 mph). An example is a well defined large bow echo with destructive convective winds occurring at the surface, and downstream conditions suggest the bow echo will be maintained or intensify for the duration of the watch.

12.3.4 Format. The Public Severe Thunderstorm Watch Notification Message uses a bulleted format that includes primary threat information statements. There are three bullets; each preceded by a left justified asterisk and a single space. The bullets provide:

- Watch type and an area description
- Watch expiration time
- List of primary threats in order of importance

All other text in the bulleted area will be preceded by two spaces.

The Public Severe Thunderstorm Watch Notification Message includes "...THIS IS A PARTICULARLY DANGEROUS SITUATION..." between the second and third bullet when conditions are favorable for widespread significant non-tornadic severe weather events (convective winds greater than 75 mph) in a severe thunderstorm watch.

Following the three bullets will be a paragraph with a general area description including the axis of the watch.

Call-To-Action (CTA) statements are preceded by the marker “PRECAUTIONARY/PREPAREDNESS ACTIONS...” and end with the && character strings. The "PRECAUTIONARY/PREPAREDNESS ACTIONS..." and && character strings will be left justified with no other characters on the same line of text.

Following the CTA will be the following three sections:

- OTHER WATCH INFORMATION...
- DISCUSSION...
- AVIATION...



The watch will end with:  
 ...FORECASTER NAME

See Figure 10 for an example of the Public Severe Thunderstorm Watch Notification Message format.

```

WWUS20 KWNS ddhhmm
SELn
SPC WW ddhhmm
STZ000>099-CWZ000>099-ddhhmm-

URGENT - IMMEDIATE BROADCAST REQUESTED
SEVERE THUNDERSTORM WATCH NUMBER nnnn
NWS STORM PREDICTION CENTER NORMAN OK
time am/pm time_zone day mon dd yyyy

THE STORM PREDICTION CENTER HAS ISSUED A

* SEVERE THUNDERSTORM WATCH FOR PORTIONS OF
  PORTION OF STATE
  PORTION OF STATE
  AND ADJACENT COASTAL WATERS (IF REQUIRED)

* EFFECTIVE (TIME PERIOD) UNTIL hhmm am/pm time_zone.

...THIS IS A PARTICULARLY DANGEROUS SITUATION (IF NECESSARY)...

* PRIMARY THREATS INCLUDE...
  SEVERAL DAMAGING WIND GUSTS TO xx MPH POSSIBLE
  A FEW LARGE HAIL EVENTS TO x.x INCHES IN DIAMETER POSSIBLE

NARRATIVE DESCRIPTION OF APPROXIMATE WATCH AREA USING A LINE AND ANCHOR
POINTS. DISTANCES TO EITHER SIDE OF THE LINE WILL BE IN STATUTE MILES.
THIS SECTION INDICATES THE WATCH IS AREA IS AN APPROXIMATION AND "FOR A
COMPLETE DEPICTION OF THE WATCH SEE THE ASSOCIATED WATCH OUTLINE UPDATE
(WOUS64 KWNS WOUUn)."
```

PRECAUTIONARY/PREPAREDNESS ACTIONS...

CALL TO ACTION STATEMENTS

&&

OTHER WATCH INFORMATION...CONTINUE...WW nnnn...WW nnnn...

DISCUSSION...NARRATIVE DISCUSSION OF REASON FOR THE WATCH.

AVIATION...BRIEF DESCRIPTION OF SEVERE WEATHER THREAT TO THE AVIATION
COMMUNITY. HAIL SIZE WILL BE GIVEN IN INCHES AND WIND GUSTS IN KNOTS.
MAXIMUM STORM TOPS AND A MEAN STORM VECTOR WILL ALSO BE GIVEN.

...FORECASTER NAME

**Figure 10: Public Watch Notification Message Format (for Severe Thunderstorms)**

12.4 Updates, Amendments and Corrections. Updates are not applicable. SPC will correct watches for format and grammatical errors.

13. **Public Tornado Watch Notification Message (WMO header WWUS20, AWIPS ID SEL).**

13.1 Mission Connection. SPC issues Public Tornado Watch Notification Messages to alert CONUS WFOs, the public, media and emergency managers to organized thunderstorms forecast to produce two or more tornadoes or any tornado which could produce EF2 or greater damage. The SEL product is an approximation of the area in a watch, for the official area covered by a watch see the corresponding WOU product.

13.2 Issuance Guidelines.

13.2.1 Creation Software. SPC will use the National Centers AWIPS (NAWIPS) and/or the SPC Product Generator (PRODGEN) for these products.

13.2.2 Issuance Criteria. SPC should issue a Public Tornado Watch Notification Message when there is a forecast of multiple weak tornadoes or any tornado which could produce EF2 or greater damage. The forecast event minimum thresholds should be at least 2 hours over an area at least 8,000 square miles. Below these thresholds, SPC in collaboration with affected WFOs and their CWAs may issue for smaller areas and for shorter periods of time when conditions warrant, and for convective watches along coastlines, and near the Canadian and Mexican borders.

13.2.3 Issuance Time. Public Tornado Watch Notification Messages are non-scheduled, event driven products.

13.2.4 Valid Time. The valid time is from the time of issuance to expiration or cancellation time.

13.2.5 Product Expiration Time. The expiration time is the end of the watch valid time.

13.3 Technical Description. Public Tornado Watch Notification Messages will follow the format and content described in this section.

13.3.1 Mass News Disseminator Broadcast Line. Public Tornado Watch Notification Messages will include the broadcast line “URGENT - IMMEDIATE BROADCAST REQUESTED.” The term “URGENT” is used when the information may wait until a “stop-set” (break in the broadcast routine).

13.3.2 Mass News Disseminator Header. The Public Tornado Watch Notification Message MND header is “TORNADO WATCH nnnn.”

13.3.3 Content. A Public Tornado Watch Notification Message will contain the area description and axis, watch expiration time, a list of primary threats including the largest hail size and strongest thunderstorm wind gusts, the definition of a watch, a call to action statement,

a list of other valid watches, a list of watches cancelled or replaced by new watches, a brief discussion of meteorological reasoning, and a brief description of the severe weather threat to the aviation community (see example). Mention of hail size associated with tropical cyclones is optional.

SPC will include the term “coastal waters” when the watch affects coastal waters within 20 nm of the Pacific, Atlantic, or Gulf of Mexico coast. "Adjacent Coastal Waters" refers to a WFO’s marine responsibility (out to 20 nautical miles for oceans and Gulf of Mexico). If a Great Lake is included in a watch, the Lake (such as, Northern Lake Michigan) is included in the listing of states or Great Lakes within the United States.

SPC will coordinate with affected WFOs to determine which counties or parishes, independent cities and/or marine zones are in the initial watch and meteorological reasoning prior to a watch being issued. SPC will issue a watch cancellation message (under SEL, SAW and WOU products) whenever a watch is cancelled prior to the expiration time. The text of the message will specify the number and area of the cancelled watch. SPC may enhance a Public Tornado Watch Notification Message by using the words “THIS IS A PARTICULARLY DANGEROUS SITUATION” when there is a likelihood of multiple strong (damage of EF2 or EF3) or violent (damage of EF4 or EF5) tornadoes.

13.3.4 Format. The Public Tornado Watch Notification Message uses a bulleted format that includes primary threat information statements. There are three bullets; each preceded by a left justified asterisk and a single space. The bullets provide:

- Watch type and an area description
- Watch expiration time
- List of primary threats in order of importance

All other text in the bulleted area will be preceded by two spaces.

The Public Tornado Watch Notification Message includes "...THIS IS A PARTICULARLY DANGEROUS SITUATION..." between the second and third bullet when there is a likelihood of multiple strong or violent (EF2 - EF5) tornadoes in a tornado watch.

Following the three bullets will be a paragraph with a general area description including the axis of the watch.

Call-To-Action (CTA) statements are preceded by the marker “PRECAUTIONARY/PREPAREDNESS ACTIONS...” and end with the && character strings. The "PRECAUTIONARY/PREPAREDNESS ACTIONS..." and && character strings will be left justified with no other characters on the same line of text.

Following the CTA will be the following three sections:

- OTHER WATCH INFORMATION...
- DISCUSSION...
- AVIATION...

The watch will end with:  
...FORECASTER NAME

See Figure 11 for an example of the Public Tornado Watch Notification Message format.

```

WWUS20 KWNS ddhhmm
SELn
SPC WW ddhhmm
STZ000>099-CWZ000>099-ddhhmm-

URGENT - IMMEDIATE BROADCAST REQUESTED
TORNADO WATCH NUMBER nnnn
NWS STORM PREDICTION CENTER NORMAN OK
time am/pm time_zone day mon dd yyyy

THE STORM PREDICTION CENTER HAS ISSUED A

* TORNADO WATCH FOR PORTIONS OF
  PORTION OF STATE
  PORTION OF STATE
  AND ADJACENT COASTAL WATERS (IF REQUIRED)

* EFFECTIVE (TIME PERIOD) UNTIL hhmm am/pm time_zone.

...THIS IS A PARTICULARLY DANGEROUS SITUATION (IF NECESSARY)...

* PRIMARY THREATS INCLUDE...
  NUMEROUS INTENSE TORNADOES LIKELY
  NUMEROUS SIGNIFICANT DAMAGING WIND GUSTS TO xx MPH LIKELY
  NUMEROUS VERY LARGE HAIL EVENTS TO x.x INCHES IN DIAMETER LIKELY

NARRATIVE DESCRIPTION OF APPROXIMATE WATCH AREA USING A LINE AND ANCHOR
POINTS. DISTANCES TO EITHER SIDE OF THE LINE WILL BE IN STATUTE MILES.
THIS SECTION INDICATES THE WATCH IS AREA IS AN APPROXIMATION AND "FOR A
COMPLETE DEPICTION OF THE WATCH SEE THE ASSOCIATED WATCH OUTLINE UPDATE
(WOUS64 KWNS WOUUn)."
```

**Figure 11: Public Watch Notification Message Format (for Tornadoes)**

13.4 Updates, Amendments and Corrections. Updates are not applicable. SPC will correct Public Watch Notification Messages for format and grammatical errors.

14. **Watch Hazard Probabilities (WMO header WWUS40, AWIPS ID WWP).**

14.1 Mission Connection. SPC issues Watch Hazard Probabilities to provide affected users with probabilities of tornado and severe weather events for all active convective watches.

14.2 Issuance Guidelines.

14.2.1 Creation Software. SPC uses automated software.

14.2.2 Issuance Criteria. A convective watch is in effect.

14.2.3 Issuance Time. Watch Hazard Probabilities are non-scheduled, event driven products.

14.2.4 Valid Time. The valid time is listed in the products (WOU, SAW, or SEL).

14.2.5 Product Expiration Time. The expiration time is listed in the product (WOU, SAW, or SEL).

14.3 Technical Description. Watch Hazard Probabilities will follow the format and content described in this section.

14.3.1 Mass News Disseminator Broadcast Line. Not applicable.

14.3.2 Mass News Disseminator Header. Not applicable.

14.3.3 Content. SPC will issue Watch Hazard Probabilities to provide CONUS WFOs, the public, media and emergency managers with a set of seven severe weather probabilities for all issued convective watches.

The minimum tornado watch probability of two or more tornadoes is 30%. However, if a WFO requests a tornado watch issuance or the probability of one or more strong to violent (EF2-EF5) is 10% or greater, a 20% probability is permissible for the watch issuance.

The minimum severe thunderstorm watch probability of six or more severe weather events is 40%. However, if a WFO requests a severe thunderstorm watch, or if the probability of one or more wind events greater than or equal to 65 knots and/or the probability of one or more events of hail greater than two inches in diameter is 40% or greater, a 30% probability is permissible for watch issuance.

14.3.4 Format.

```

WWUS40 KWNS 101848
WWP0

TORNADO WATCH PROBABILITIES FOR WT 0090
NWS STORM PREDICTION CENTER NORMAN OK
0148 PM CDT WED APR 10 2013

WT 0090
PROBABILITY TABLE:
PROB OF 2 OR MORE TORNADOES : 70%
PROB OF 1 OR MORE STRONG /F2-F5/ TORNADOES : 40%
PROB OF 10 OR MORE SEVERE WIND EVENTS : 50%
PROB OF 1 OR MORE WIND EVENTS >= 65 KNOTS : 30%
PROB OF 10 OR MORE SEVERE HAIL EVENTS : 60%
PROB OF 1 OR MORE HAIL EVENTS >= 2 INCHES : 50%
PROB OF 6 OR MORE COMBINED SEVERE HAIL/WIND EVENTS : >95%

&&
ATTRIBUTE TABLE:
MAX HAIL /INCHES/ : 2.5
MAX WIND GUSTS SURFACE /KNOTS/ : 60
MAX TOPS /X 100 FEET/ : 550
MEAN STORM MOTION VECTOR /DEGREES AND KNOTS/ : 23040
PARTICULARLY DANGEROUS SITUATION : NO

&&
FOR A COMPLETE GEOGRAPHICAL DEPICTION OF THE WATCH AND
WATCH EXPIRATION INFORMATION SEE WOUS64 FOR WOU0.

$$

```

**Figure 12: Example Watch Hazards Probabilities Product**

14.4 Updates, Amendments and Corrections. Updates are not applicable. SPC will correct Public Watch Notification Messages for format and grammatical errors.

15. **Watch Corner Points Message (WMO header WWUS60, AWIPS ID SEVSPC).**

15.1 Mission Connection. SPC issues Watch Corner Points Messages to provide affected users with outline latitude/longitude coordinates of all active convective watches. The Watch Corner Point Message product is an approximation of the area in a watch, for the official area covered by a watch see the corresponding WOU product.

15.2 Issuance Guidelines.

15.2.1 Creation Software. SPC uses automated software.

15.2.2 Issuance Criteria. A convective watch is in effect.

15.2.3 Issuance Time. Watch Corner Points Messages are both event driven and scheduled products.

15.2.4 Valid Time. The valid time is until the issuance of the next scheduled update.

15.2.5 Product Expiration Time. The expiration time is at the end of the watch valid time.

15.3 Technical Description. Watch corner points messages will follow the format and content described in this section.

15.3.1 Mass News Disseminator Broadcast Line. Not applicable.

15.3.2 Mass News Disseminator Header. Not applicable.

15.3.3 Content. SPC will issue Watch Corner Points Messages to provide CONUS WFOs, the public, media and emergency managers with approximate outline latitude/longitude coordinates of all issued watches. These points are used for the radar summary chart that appears on AWIPS and web services when watches are valid or in effect. The county information listed in the initial WOU is considered the precise definition of the watch area.

15.3.4 Format.

(Watches in Effect)

```

WWUS60 KWNS ddhhmm
SEVSPC
FILE CREATED DD-MMM-YY AT HH:MM:SS UTC
SEVR 971126 1801 WT0792 2300
02903.09250 03135.09136 03135.08822 02903.08941 02903.08941;

SEVR 971126 1801 WT0793 0000
02957.08110 03248.08751 03248.08456 02957.08621 02903.08941 02903.08941;
    
```

(No Watch in Effect)

```

WWUS60 KWNS ddhhmm
SEVSPC
FILE CREATED DD-MMM-YY AT HH:MM:SS UTC
NO WATCHES CURRENTLY ACTIVE
    
```

**Figure 13: Watch Corner Points Message Example**

15.4 Updates, Amendments and Corrections. Updates are scheduled (see issuance times). SPC will correct messages for format errors.

16. **Watch Status Message (WMO header WOUS20, AWIPS ID WWASPC).**

16.1 Mission Connection. SPC issues Watch Status Messages to provide CONUS WFOs, media, emergency managers and the public with an assessment of the severe weather threat within each active convective watch area.

16.2 Issuance Guidelines.

16.2.1 Creation Software. SPC uses the National Centers AWIPS (NAWIPS) and/or the SPC Product Generator (PRODGEN) for these products.

16.2.2 Issuance Criteria. A convective watch is in effect.

16.2.3 Issuance Time. SPC should issue a Watch Status Message at approximately 30 minutes past the hour for each active convective watch area.

16.2.4 Valid Time. The status message is valid for one hour.

16.2.5 Product Expiration Time. The expiration time is one hour after the issuance time.

16.3 Technical Description. Watch status messages will follow the format and content described in this section.

16.3.1 Mass News Disseminator Broadcast Line. Not applicable.

16.3.2 Mass News Disseminator Header. Not applicable.

16.3.3 Content. SPC uses the Watch Status Message to help CONUS WFOs, media, emergency management, and the public determine portions of a convective watch where the threat of severe weather continues. This message will include a recommended list of what counties or parishes, independent cities and marine zones should remain in the watch area, and a geographical linear description of the continued severe weather hazard using known points. SPC should refer users to related mesoscale convective discussions (product SWOMCD) for additional information on mesoscale features related to the severe weather hazard, and local convective watch products for the official list of counties, parishes, independent cities and marine zones cleared from the watch area.

The second segment of the product, following the “&&” begins with: “STATUS REPORT W(S or T) #”, where # is the watch number (e.g. 1, 21, 321, 1021). The WS or WT depicts if the watch is a Severe Thunderstorm or Tornado watch respectively. The remainder of this product is formatted similar to the WOU product, i.e., UGC code for each state with a county listing segmented by “\$\$”, except for a lack of VTEC code. Marine zones will be included as applicable.



16.3.4 Format.

```

WOUS20 KWNS ddhhmm
WWASPC
SPC WW-A ddhhmm
STZ000-STZ000-STZ000-ddhhmm

STATUS REPORT ON WT (or WS) nnnn

SEVERE WEATHER THREAT CONTINUES TO THE RIGHT OF A LINE FROM XX DIR CCC...XX
DIR CCC...XX DIR CCC.

THE SEVERE WEATHER THREAT CONTINUES FOR THE FOLLOWING AREAS

&&

STC001-003-ddhhmm-

ST
.   STATE 1 COUNTIES INCLUDED ARE

LIST OF COUNTIES

STATE 1  INDEPENDENT CITIES INCLUDED ARE

LIST OF CITIES

$$

MZ001-003-ddhhmm-

CW
.   ADJACENT COASTAL WATERS INCLUDED ARE

LIST OF MARINE ZONES

$$

FOR ADDITIONAL INFORMATION...SEE MESOSCALE DISCUSSION XXX.

THE WATCH STATUS MESSAGE IS FOR GUIDANCE PURPOSES ONLY.  PLEASE REFER TO
LOCAL SPECIAL WEATHER STATEMENTS FOR OFFICIAL INFORMATION ON
COUNTIES...INDEPENDENT CITIES AND MARINE ZONES CLEARED FROM SEVERE
THUNDERSTORM AND TORNADO WATCHES.
$$

```

**Figure 14: Watch Status Message Format**

16.4 Updates, Amendments and Corrections. Updates should be issued approximately 30 minutes past the hour. When appropriate, SPC may correct messages for format and grammatical errors.

17. **Hourly Severe Weather Report Log (WMO headers NWUS22, PMNA00, AWIPS ID STAHR).**

17.1 Mission Connection. SPC issues Hourly Severe Weather Report Logs to provide WFOs, the public, media and emergency managers with hourly text and graphical reports of severe weather events within the CONUS.

17.2 Issuance Guidelines.

17.2.1 Creation Software. SPC uses automated software.

17.2.2 Issuance Criteria. WFOs issue new Preliminary Local Storm Reports (LSR) since the last hourly report.

17.2.3 Issuance Time. SPC will issue a report log each hour.

17.2.4 Valid Time. Report logs are valid upon issuance.

17.2.5 Product Expiration Time. Not applicable.

17.3 Technical Description. Hourly reports will follow the format and content described in this section.

17.3.1 Mass News Disseminator Broadcast Line. None.

17.3.2 Mass News Disseminator Header. The Hourly Report MND header is “SPC HOURLY TORNADO AND SEVERE THUNDERSTORM REPORTS.”

17.3.3 Content. SPC issues hourly report logs to inform the public, the media and emergency managers to severe weather events on a national scale. SPC updates this log on an hourly basis and lists all events since 1200 UTC. Severe weather events reported in Preliminary Storm Reports (LSR) are automatically included in hourly report logs. Events reported in other products as Severe Weather Statements (SVS) or other sources may be manually inserted into hourly report logs. These reports are considered preliminary information. Final severe weather event information is found in monthly Storm Data reports (see NWSI 10-1605 “Storm Data Preparation”) filed by each WFO and published by the National Climatic Data Center (NCDC).

17.3.4 Format.

```

NWUS22 KWNS 202206
STAHRV

                SPC TORNADO AND SEVERE THUNDERSTORM REPORTS
                UNOFFICIAL - FOR OFFICIAL REPORTS, SEE PUBLICATION 'STORM DATA'
                FOR 06CST WED JAN 20 2010 THRU 16CST WED JAN 20 2010

                EVENT      LOCATION                      REMARKS                      (CST) TIME
                .....TORNADO REPORTS.....TORNADO REPORTS.....TORNADO REPORTS.....

1  *TORN  1  NW VILLE PLATTE LA      (39 NNW LFT)                20/1455
                CARS BLOWN INTO A DITCH.                LCH/LSR  3070 9229

                .....LRG HAIL/STRONG WIND RPTS.....LRG HAIL/STRONG WIND RPTS.....

4  G 56   4  WSW BURLINGAME CA      (4 SW SFO)                20/1119
                OBSERVED AT SPRING VALLEY RAWLS. ELEVATION 1075 MTR/LSR  375612244
                FEET.

2  A175  INDEPENDENCE LA          (36 S MCB)                20/1540
                LIX/LSR  3064 9051

                .....OTHER SEVERE REPORTS.....OTHER SEVERE REPORTS.....

3  G 50   6  NNW MORRO BAY CA      (20 SW PRB)                20/0805
                58 MPH WIND GUST ASSOCIATED WITH A LINE OF THUNDERSTORMS
                LOX/LSR  354312088

```

Figure 15: Hourly Report Log Example

17.4 Updates, Amendments and Corrections. This product is issued hourly and is not updated. SPC will correct reports for format and grammatical errors.

18. **Daily Severe Weather Report Log (WMO headers NWUS20, PMNE00, AWIPS ID STADTS).**

18.1 Mission Connection. SPC issues Daily Severe Weather Report Logs to provide CONUS WFOs, the public, media and emergency managers with text and graphical reports of severe weather events on a national scale for the previous day.

18.2 Issuance Guidelines.

18.2.1 Creation Software. SPC uses automated software.

18.2.2 Issuance Criteria. SPC issues this report log daily at 1200 UTC.

18.2.3 Issuance Time. The issuance time will be 1200 UTC. SPC will issue an update at 1800 UTC.

18.2.4 Valid Time. Report logs are valid upon issuance.

18.2.5 Product Expiration Time. Not applicable.

18.3 Technical Description. Daily report logs will follow the format and content described in this section.

18.3.1 Mass News Disseminator Broadcast Line. None.

18.3.2 Mass News Disseminator Header. The Daily Report MND header is “SPC DAILY TORNADO AND SEVERE THUNDERSTORM REPORTS.”

18.3.3 Content. SPC issues daily report logs in a text and graphical format to display all severe weather reports across the CONUS for use by the media and emergency managers. These reports are considered preliminary information. Final severe weather event information is found in monthly Storm Data reports (see NWSI 10-1605 “Storm Data Preparation”) filed by each WFO and published by the National Climatic Data Center (NCDC).

18.3.4 Format.

```
NWUS20 KWNS 211215
STADTS

                SPC TORNADO AND SEVERE THUNDERSTORM REPORTS
                UNOFFICIAL - FOR OFFICIAL REPORTS, SEE PUBLICATION 'STORM DATA'
                FOR 06CST WED JAN 20 2010 THRU 06CST THU JAN 21 2010

EVENT      LOCATION                                REMARKS                                (CST) TIME
.....TORNADO REPORTS.....TORNADO REPORTS.....TORNADO REPORTS.....
1 *TORN    1 NW VILLE PLATTE LA      (39 NNW LFT)                            20/1455
           CARS BLOWN INTO A DITCH.                LCH/LSR    3070 9229
2 *TORN    10 SE AMITE LA            (38 S MCB)                               20/1615
           SHERIFFS DEPUTIES VISUALLY TRACKING A TORNADO LIX/LSR    3063 9039
           ON LA 1062 NEAR LORANG
3 *TORN    GENEVA TX                (50 ENE LFK)                             20/1626
           TREES DOWN ACROSS FM 330 THREE MILES FROM SHV/LSR    3147 9393
           HIGHWAY 21. MOBILE HOM
4 *TORN    2 N CANTON TX             (31 WNW TYR)                             20/1719
           POSSIBLE TORNADO TOUCHDOWN AT I-20 AND HWY 19 FWD/LSR    3258 9587
           NORTH OF CANTON. POWER
5 *TORN    WASKOM TX                (12 W SHV)                               20/1727
           TORNADO REPORTED ON GROUND. TREES DOWN ACROSS SHV/LSR    3248 9406
           INTERSTATE 20.
6 *TORN    2 W WASKOM TX            (14 W SHV)                               20/1734
           PEOPLE TRAPPED IN HOMES AND BUSINESSES SHV/LSR    3248 9410
           DESTROYED IN THE VICIN
7 *TORN    NATCHITOCHEES LA        (1 N IER)                                20/1755
           TREES REPORTED DOWN ON POSEY ROAD SHV/LSR    3176 9310
8 *TORN    2 WNW MINEOLA TX         (23 NNW TYR)                             20/1805
           TORNADO REPORTED ON HWY 1799 SHV/LSR    3268 9552
10 *TORN   2 S LARUE TX             (24 SW TYR)                              20/1820
           EM REPORTED A TORNADO HIT A HOUSE ON CR 2855 FWD/LSR    3209 9568
           SOUTH OF LARUE IN SE H
9 *TORN    2 WNW MINEOLA TX         (23 NNW TYR)                             20/1820
           TORNADO REPORTED ON HWY 1799 SHV/LSR    3268 9552
12 *TORN   4 NNW BULLARD TX        (10 SSE TYR)                             20/1856
           FM 2493 AND SOUTHERN TRACE CIRCLE...NUMEROUS SHV/LSR    3219 9535
           TREES SNAPPED...SHINGL
11 *TORN   ORE CITY TX            (28 N GGG)                               20/1856
```

NWSI 10-512 October 9, 2017

13	*TORN	ROOF BLOWN OFF OF A BANK AND GROCERY STORE HARLETON TX (20 NNE GGG)	SHV/LSR	3280 9472 20/1942
14	*TORN	DOWN LINES AND DAMAGE TO GROCERY STORE 3 SW GAARS MILL LA (38 NE IER)	SHV/LSR	3267 9457 20/1949
		TREES DOWN ON HWY 34	SHV/LSR	3209 9260
.....LRG HAIL/STRONG WIND RPTS.....LRG HAIL/STRONG WIND RPTS.....				
48	WNDG	6 SW BEVERLY HILLS CA (5 NW LAX)		20/0849
		2ND ST AT EL MORRO AV-LG TREE LIMB IN ROADWAY	LOX/LSR	340211848
50	WNDG	GAVIOTA CA (20 W SBA)		20/0851
		TREE DOWN RT LANE GAVIOTA TUNNEL US101	LOX/LSR	344712021
49	WNDG	1 N PISMO BEACH CA (19 NNW SMX)		20/0851
		AVILA BCH DR/SAN LUIS ST - TREE LIMB IN RDWAY	LOX/LSR	351512063
51	WNDG	ARROYO GRANDE CA (17 NNW SMX)		20/1025
		QUEMADO BRDG LG TREE BRANCH IN BLK RDWY	LOX/LSR	351312058
68	G 56	4 WSW BURLINGAME CA (4 SW SFO)		20/1119
		OBSERVED AT SPRING VALLEY RAWLS. ELEVATION 1075 FEET.	MTR/LSR	375612244
52	WNDG	1 S BURBANK CA (16 NNE LAX)		20/1123
		EL POMAR DR AT NEAL SPRINGS RD - POWER POLES LEANING TOWARDS RDWY	LOX/LSR	341811833
53	WNDG	3 SW OJAI CA (14 NNW OXR)		20/1126
		OAKVIEW HIGHLAND DR AT VENTURA AV - OAK TREE FALLING DOWN MAY FALL	LOX/LSR	344211928
54	WNDG	CAMBRIA CA (26 WSW PRB)		20/1140
		TREE FELL ON RES AND TREE AND LINES HANGING RDWY	LOX/LSR	355512108
55	WNDG	6 NW PASO ROBLES CA (5 WNW PRB)		20/1140
		ADELAIDA RD JWO NACIMIENTO LK DR - TREE ACROSS RDWAY, POWER LINE IN R	LOX/LSR	356912074
57	WNDG	4 NNE PISMO BEACH CA (21 NNW SMX)		20/1221
		CORBETT CANYON RD AT SR 227...LARGE TREE DOWN BLOCKING WEST BOUND LA	LOX/LSR	352012060
56	WNDG	CAMBRIA CA (26 WSW PRB)		20/1221
		INTERSECTION OF COVENTRY AND CROYDEN. POWER LINE DOWN.	LOX/LSR	355512108
58	WNDG	OXNARD CA (0 W OXR)		20/1236
		TREE AND LINE DOWN ACROSS RDWAY	LOX/LSR	342011921
15	A175	INDEPENDENCE LA (36 S MCB)		20/1540
			LIX/LSR	3064 9051
16	A175	TROUP TX (20 SE TYR)		20/1545
		MEDIA REPORTING 4 MINUES OF GOLFBALL HAIL AND MINUTES OF PEA SIZE HA	3SHV/LSR	3214 9512
18	A200	OVERTON TX (16 WSW GGG)		20/1617
		PUBLIC REPORTING HAIL UP TO 2 INCHES IN PORTIONS OF OVERTON.	SHV/LSR	3228 9497
19	A175	10 SE AMITE LA (38 S MCB)		20/1620
		OCCURRING WHILE TORNADO BEING VISUALLY TRACKED NEAR LORANGER.	LIX/LSR	3063 9039
21	A175	FORNEY TX (23 ESE DAL)		20/1645
		PUBLIC REPORT OF GOLFBALL HAIL IN FORNEY.	FWD/LSR	3275 9647
24	A125	7 WNW CANTON TX (36 WNW TYR)		20/1700
		HALF DOLLAR HAIL ON I-20 AT EXIT 519 JUST W OF CANTON.	FWD/LSR	3259 9598
59	WNDG	7 S GRAND SALINE TX (23 NW TYR)		20/1736
		SIGNIFICANT DAMAGE REPORTED AT 110 AND FM 1255. TREES AND POWER LINES	FWD/LSR	3257 9572
27	A175	SHREVEPORT LA (1 NE SHV)		20/1758
		REPORTED AT THE INTERSECTION OF HWY 1 AND HWY 71.	SHV/LSR	3247 9380
60	WNDG	4 ENE POCAHONTAS MS (13 NNW JAN)		20/1800
		ELECTRICITY OUT...METAL FLAG POLE BENT OVER	JAN/LSR	3250 9022

WITH ESTIAMTED 60-70MP					
61	WNDG	16 WSW FRANKSTON TX	(33 SW TYR)		20/1805
		LARGE TREES DOWN ON A HOUSE...A CAR...AND A		FWD/LSR	3196 9575
		TRACTOR IN CARROLL SPR			
62	WNDG	4 S BRASHEAR TX	(42 SSW PRX)		20/1825
		MOBILE HOME DAMAGED ON CR 1116		FWD/LSR	3306 9575
32	A275	GILMER TX	(27 NNW GGG)		20/1828
				SHV/LSR	3273 9495
63	WNDG	ATHENS TX	(27 WSW TYR)		20/1832
		WIND DAMAGE TO A HOME ON FM2588 IN SOUTHERN		FWD/LSR	3220 9585
		HENDERSON CO.			
64	WNDG	2 ESE SULPHUR SPRINGS TX	(35 S PRX)		20/1835
		TREES DOWN ON FM1870, CHIMNEY CAVED IN, AND		FWD/LSR	3312 9557
		TRAMPOLINE BLOWN INTO			
65	WNDG	5 E SULPHUR SPRINGS TX	(34 S PRX)		20/1905
		TWO TRACTOR TRAILERS OVERTURNED ON I-30 AT MILE		FWD/LSR	3313 9551
		MARKER 131.			
36	A425	DODSON LA	(34 NE IER)		20/1905
				SHV/LSR	3208 9266
38	A175	GILLHAM AR	(9 NNE DEQ)		20/1935
				SHV/LSR	3417 9431
39	A175	GRANNIS AR	(13 NNE DEQ)		20/1945
				LZK/LSR	3424 9432
42	A175	MONROE LA	(2 WSW MLU)		20/2010
		HAIL COVERING GROUND ON CYPRESS SCHOOL ROAD		SHV/LSR	3251 9208
47	A175	BOLTON MS	(21 W JAN)		20/2328
		NUMEROUS REPORTS OF GOLFBALL SIZED HAIL NEAR		JAN/LSR	3235 9046
		I-20			
66	WNDG	HAZLEHURST MS	(35 SSW JAN)		21/0050
		TREES DOWN ON JAMES RD. POWER IS OUT IN THE		JAN/LSR	3186 9039
		TOWN OF HAZELHURST...P			
.....OTHER SEVERE REPORTS.....OTHER SEVERE REPORTS.....					
67	G 50	6 NNW MORRO BAY CA	(20 SW PRB)		20/0805
		58 MPH WIND GUST ASSOCIATED WITH A LINE OF		LOX/LSR	354312088
		THUNDERSTORMS MOVING T			
17	A100	3 WNW RAYMOND MS	(21 W JAN)		20/1615
		HAIL COVERING THE GROUND. MAINLY PEA TO DIME		JAN/LSR	3228 9047
		SIZED BUT A FEW LARGER			
20	A100	1 WSW MORGAN HILL CA	(21 SE SJC)		20/1638
				MTR/LSR	371312165
22	A100	1 S HALLSVILLE TX	(10 NE GGG)		20/1655
				SHV/LSR	3249 9458
23	A100	QUINLAN TX	(41 E DAL)		20/1659
		QUARTER SIZE HAIL IN QUINLAN		FWD/LSR	3290 9613
25	A100	GRAND SALINE TX	(28 NW TYR)		20/1743
		1 INCH HAIL AT 125 E FRANK, GRAND SALINE, TX.		FWD/LSR	3267 9572
		COVERING GROUND DOWNTO			
26	A100	CROSSROADS TX	(24 E CRS)		20/1755
		QUARTER HAIL IN CROSSROADS.		FWD/LSR	3205 9597
28	A100	FLORA MS	(20 NW JAN)		20/1806
		QUARTER SIZED HAIL REPORTED		JAN/LSR	3255 9031
29	A100	BLANCHARD LA	(9 NNW SHV)		20/1807
		HAIL REPORTED AT NORTHWOOD HIGH SCHOOL.		SHV/LSR	3259 9389
30	A100	TIGERTOWN TX	(20 WNW PRX)		20/1815
		IN TIGERTOWN		FWD/LSR	3372 9580
31	A100	4 S BRASHEAR TX	(42 SSW PRX)		20/1825
		QUARTER SIZE HAIL REPORTED ON CR 1116 ABOUT 5		FWD/LSR	3306 9575
		MILES SOUTHWEST OF SUL			
33	A100	1 N MESSER OK	(32 N PRX)		20/1832
		HAIL WAS MOSTLY DIME SIZED WITH A FEW UP TO		TSA/LSR	3410 9547
		QUARTER SIZE.			

34	A100	WASHINGTON OK	(24 SSE OKC)		20/1852
				OUN/LSR	3506 9748
35	A100	7 N SWINK OK	(35 NNE PRX)		20/1853
		HEAVY AMOUNTS OF HAIL FALLING MOST OF IT		TSA/LSR	3412 9520
		QUARTER SIZED.			
37	A100	3 E CHILLICOTHE TX	(28 SSW LTS)		20/1920
				OUN/LSR	3426 9946
40	A100	VIXEN LA	(24 SW MLU)		20/1949
				SHV/LSR	3223 9227
41	A100	BURKBURNETT TX	(6 NNW SPS)		20/2000
				OUN/LSR	3408 9856
43	A100	2 E DENTVILLE MS	(35 SW JAN)		20/2012
		HAIL UP TO THE SIZE OF QUARTERS		JAN/LSR	3196 9052
44	A100	10 SE LINDEN TX	(39 NW SHV)		20/2020
				SHV/LSR	3291 9424
45	A100	KILGORE TX	(8 W GGG)		20/2021
				SHV/LSR	3239 9487
46	A100	DUNCAN OK	(25 ESE FSI)		20/2105
		REPORTED ON EAST SIDE OF TOWN		OUN/LSR	3452 9797

**Figure 16: Daily Report Log Example**

How to read an SPC report log:

Event Number: 40 (in chronological order, the 40th severe event received during this 24 hour period).

Event: "A100" One inch hail report.

Location: "VIXEN LA (24 SW MLU)" Event occurred in Vixen, Louisiana, or 24 statute miles southwest of Monroe, Louisiana (MLU).

Date/Time: 20/1949 Occurred on the 20th day of the month at 1949 CST.

Source: "SHV/LSR. Preliminary Local Storm Report issued by the National Weather Service office at Shreveport, Louisiana.

18.4 Updates, Amendments and Corrections. SPC issues a scheduled update at 1800 UTC. SPC will rerun the program, at times, to add additional data from late LSRs into this report.

## 19. Monthly Tornado Statistics (WMO header NWUS21, AWIPS ID STAMTS).

19.1 Mission Connection. SPC issues Monthly Tornado Summary to provide WFOs, the public, media and emergency managers with a preliminary number of tornado reports on a national scale.

### 19.2 Issuance Guidelines.

19.2.1 Creation Software. SPC will use the National Centers AWIPS (NAWIPS) and/or the SPC Product Generator (PRODGEN) for these products.

19.2.2 Issuance Criteria. This summary is a non-scheduled, event-driven product.

19.2.3 Issuance Time. SPC will issue this summary when tornado numbers are updated and confirmed.

19.2.4 Valid Time. Summaries are valid upon issuance.

19.2.5 Product Expiration Time. Not applicable.

19.3 Technical Description. Summaries will follow the format and content described in this section.

19.3.1 Mass News Disseminator Broadcast Line. None.

19.3.2 MND Header. The Monthly Summary MND header is “TORNADO TOTALS AND RELATED DEATHS”.

19.3.3 Content. This summary tabulates the preliminary number of tornado reports listed in WFO LSR(s) issued during the previous month. These numbers consist of reported and confirmed tornadoes. SPC will create the count of tornadoes when Storm Data is made available by the NWS Verification Branch. The National Verification Program, the National Climatic Data Center, and SPC will confirm the total number of tornadoes, and provide the final update to the monthly summary.

The monthly summary will include final data from each of the last three years, and a three year average. The summary will also include the number of killer tornadoes and number of deaths for the current year and average from the previous three years.



19.3.4 Format.

```
ZCZC STAMTS ALL
NWUS21 KWNS 181402

TORNADO TOTALS AND RELATED DEATHS...THROUGH WED APR 17 2013
NWS STORM PREDICTION CENTER NORMAN OK
0902 AM CDT THU APR 18 2013

    ...NUMBER OF TORNAOES...      NUMBER OF      KILLER
                                  TORNADO DEATHS  TORNAOES
                                  3YR              3YR
    ..2013.. 2012 2011 2010 3YR
    PREL ACT  ACT  ACT  ACT  AV 13 12 11 10  AV 13 12 11 10 AV
JAN  87   74  79   16  30  42  1  2  0  0  1  1  2  0  0  1
FEB  46   -  57   63   1  40  1 15  1  0  5  1  7  1  0  3
MAR  18   - 154   75   33  87  0 43  1  1 14  0 10  1  1  4
APR  43   - 206  758  139 368  1  6 363 11 127  1  1 43  2 15
MAY   -   - 121  326  304 250  -  0 178  7  62  -  0  9  4  4
JUN   -   - 111  160  324 198  -  4  3 12  6  -  2  1  6  3
JUL   -   -  37  103  146  95  -  0  0  2  1  -  0  0  1  0
AUG   -   -  38   57   55  50  -  0  2  1  1  -  0  2  1  1
SEP   -   -  39   51   57  49  -  0  0  2  1  -  0  0  2  1
OCT   -   -  37   23  108  56  -  0  0  0  0  -  0  0  0  0
NOV   -   -   7   44   53  35  -  0  5  0  2  -  0  2  0  1
DEC   -   -  53   15   32  33  -  0  0  9  3  -  0  0  4  1
---  ---  ---  ---  ---  ---  -  ---  ---  ---  ---  -  ---  ---  ---  ---
SUM 194   74 939 1691 1282 1303  3  70 553 45 222  3 22 59 21 34

COMPARISONS BETWEEN 2013 PRELIMINARY COUNTS AND ACTUAL COUNTS FROM
PRIOR YEARS SHOULD BE AVOIDED.

PREL = 2013 PRELIMINARY COUNT FROM ALL NWS LOCAL STORM REPORTS.
ACT  = ACTUAL TORNADO COUNT BASED ON NWS STORM DATA SUBMISSIONS.

SEE: HTTP://WWW.SPC.NOAA.GOV/WCM/2012/2012-NOAA-NWS-TORNADO-FACTS.PDF
(LOWER CASE) FOR A SUMMARY OF TORNAOES IN 2012.

..CARBIN..04/18/2013

$$
```

**Figure 17: Monthly Tornado Statistics Example**

The statistics are broken down by month and contain final data for the last three years. A "-" in a column means the data is missing or not yet available.

The SPC includes all reports of tornadoes, including “unconfirmed,” “possible,” “suspected” and duplicate reports from Local Storm Reports issued by WFOs. The "PREL" column lists the number of preliminary tornadoes from the Local Storm Reports.

When the digital Storm Data database arrives from the NWS Office of Climate, Water and Weather Services, the actual tornado counts are entered in the column labeled "ACT".

Along the bottom of the report are totals for the columns. In the example, there were 41 preliminary (PREL) tornadoes reported through this date in January, 2010, versus 6 actual January tornadoes in 2009.

19.4 Updates, Amendments and Corrections. SPC should update this report at least twice per month. SPC will correct reports for inaccurate statistical information, when possible.

20. **Killer Tornado Statistics (WMO header NWUS23, AWIPS ID STATIJ).**

20.1 Mission Connection. SPC issues Killer Tornado Statistics to provide WFOs, the public, media and emergency managers with a list of the dates, locations and number of deaths due to tornadoes since the start of the calendar year on a national scale.

20.2 Issuance Guidelines.

20.2.1 Creation Software. SPC will use the National Centers AWIPS (NAWIPS) and/or the SPC Product Generator (PRODGEN) for these products.

20.2.2 Issuance Criteria. SPC issues a new list of statistics following new killer tornado events.

20.2.3 Issuance Time. This list is non-scheduled, event driven.

20.2.4 Valid Time. Lists are valid upon issuance.

20.2.5 Product Expiration Time. Not applicable.

20.3 Technical Description. Lists will follow the format and content described in this section.

20.3.1 Mass News Disseminator Broadcast Line. None.

20.3.2 Mass News Disseminator Header. The Statistics MND header is “(YEAR) PRELIMINARY KILLER TORNADOES

20.3.3 Content. This summary will list the dates, times, locations, and number of deaths from killer tornadoes from Jan 1 of the current calendar to the time of the latest report, whether the deaths occurred in a tornado or severe thunderstorm watch, near a watch, or with no watch in effect, the watch number where the death occurred, and the EF-scale damage, if available. The summary should list the circumstances in which each death occurred. The summary will also list the number of tornado deaths by state.

20.3.4 Format.

```

ZCZC STATIJ ALL
NWUS23 KWNS 301839

2009 PRELIMINARY KILLER TORNADOES
NWS STORM PREDICTION CENTER NORMAN OK
1139 PM CST TUE JAN 12 2010

##          TIME
##  DATE    CST  LOCATION          DEATHS  A  B  C  D  WATCH  EF  CIRCUMSTANCE
--  - - - - -  - - -  - - - - -  - - - - -  -  -  -  -  -  - - - - -
01  FEB 10 1930  CARTER CO. OK          8      8  0  0  0  WT008  EF4  06M 01H 01V
02  FEB 18 2140  HANCOCK CO. GA          1      1  0  0  0  WT025  EF3  01M
03  APR 09 1910  POLK CO. AR             3      3  0  0  0  WT125  EF3  02H 01P
04  APR 10 1145  RUTHERFORD CO. TN       2      2  0  0  0  WT132  EF4  02H
05  APR 19 1835  MARSHALL CO. AL         1      0  1  0  0  WS174  EF1  01M
06  MAY 08 1504  MADISON CO. KY          2      0  2  0  0  WS268  EF3  02M
07  MAY 13 1630  SULLIVAN CO. MO         1      1  0  0  0  WT293  EF1  01M
08  MAY 13 1710  ADAIR CO. MO            2      2  0  0  0  WT293  EF2  02H
09  OCT 09 1045  WASHINGTON CO. MS        1      1  0  0  0  WT762  EF1  01M

TOTALS:                                21    18  3  0  0

FATALITIES BY STATE:
AL01 AR03 GA01 KY02 MO03 MS01 OK08 TN02

FATALITIES BY CIRCUMSTANCE:
07H 12M 01P 01V

A = IN TORNADO WATCH
B = IN SEVERE THUNDERSTORM WATCH
C = CLOSE TO THE WATCH /15 MINUTES OR 25 MILES/
D = NO WATCH IN EFFECT
H = HOUSE
M = MOBILE HOME
O = OUTDOORS
P = PERMANENT BUILDING/STRUCTURE
V = VEHICLE
? = UNKNOWN
WS = SEVERE THUNDERSTORM WATCH /NUMBER/
WT = TORNADO WATCH /NUMBER/
EF = ENHANCED FUJITA SCALE RATING

..CARBIN..12/30/2009

$$

```

Figure 18: Killer Tornado Statistics Example

The killer tornadoes are listed in the chronological order of occurrence, by DATE and CST TIME. LOCATION is the county or parish and state where the first tornado-related deaths occurred. Each event will be numbered according to the actual tornado rather than segment when crossing state borders. This list may be updated as Storm Data information is available

through the NCDC. "DEATHS" is the number of deaths in the whole tornado path -- not just the given location. The ABCD column letters represent the number of deaths:

- A = In tornado watch
- B = In severe thunderstorm watch
- C = "Close" to the watch (15 minutes or 25 miles)
- D = No watch in effect

If the tornado was in a watch, the watch type and number is given. For example, WT008 is Tornado Watch number 8. If known, the EF-scale damage rating of the tornado is listed; if not, a "?" mark is entered. The deaths are broken down by the following circumstances of the victims, if known:

- H = House (permanent foundation)
- M = Mobile home (a.k.a. "manufactured home")
- O = Outdoors (not inside any vehicle, mobile home or permanent building)
- P = Permanent structure (school, garage, factory, store, warehouse, etc.)
- V = Vehicle (includes parked RVs)
- ? = Unknown

Information for the killer tornadoes list comes from Preliminary Local Storm Reports or Public Information Statements (PNS) issued by WFOs, supplemented by NWS event memorandums and media accounts and monthly Storm Data Reports filed by the WFOs. Since killer tornado information, especially death counts, circumstances and EF scale, may not be completely known until many days after an event, these numbers are subject to change as more information becomes available.

20.4 Updates, Amendments and Corrections. SPC will update this report as the information becomes available and is deemed reliable. SPC may also verify the information as Storm Data is updated through the NCDC.

21. **Operations Administrative Message (WMO header NOUS74, AWIPS ID ADMSPC).**

21.1 Mission Connection. SPC issues Operations Administrative Messages to inform WFOs of changes in SPC operational status (going to or from backup operations) or communications issues (i.e. advance notice of upcoming test convective watches).

22. **Backup Operations.**

22.1 Backup. Storm Prediction Center emergency backup operations are supported by the Air Force Weather Agency as specified within a Memorandum of Understanding between the National Weather Service and the Air Force. When emergency backup operations are active, only select high priority products for protection of life and property are routinely disseminated. Transitions to (or from) emergency backup status or to a backup exercise are announced via an administrative message. Additional information on Storm Prediction Center backup can be found in NWSI 10-2201.

**APPENDIX A – Examples**

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- 1. **Introduction.** This appendix provides WFOs and the public with examples of national severe weather products.
- 2. **Categorical Convective Outlook (Graphic).**

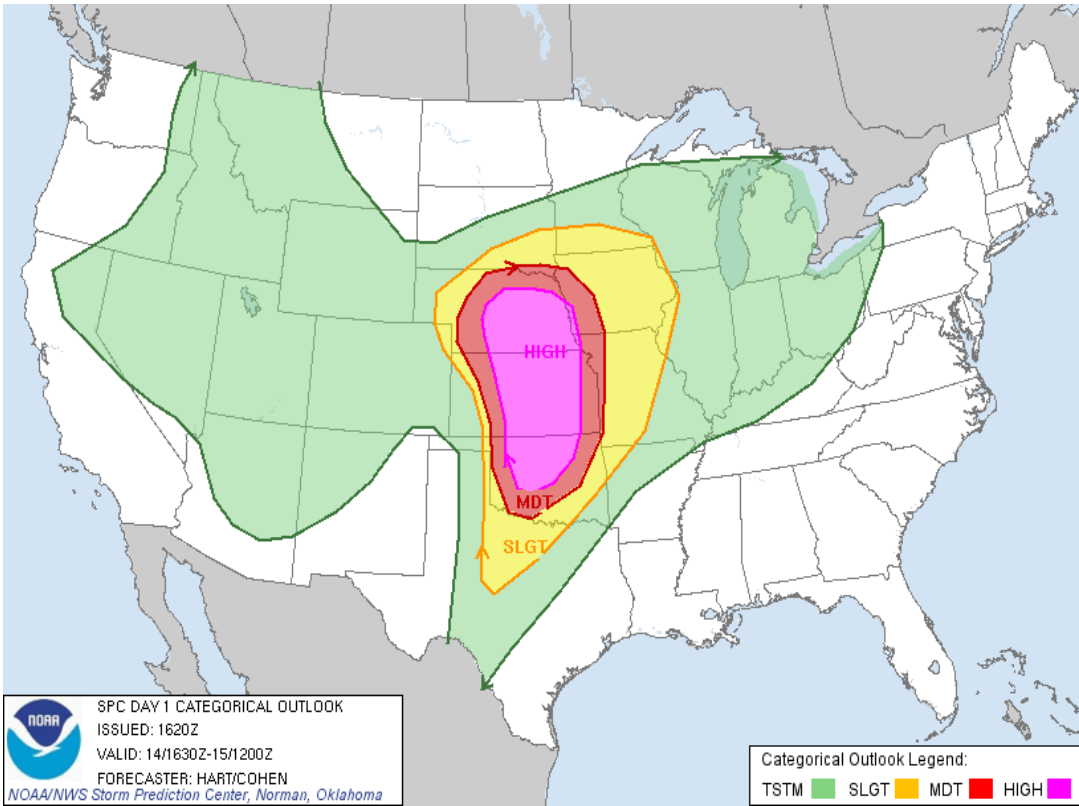


Figure 19: Day One Outlook – Categorical Graphic

3. **Categorical Convective Outlook (Narrative).**

SPC AC 141620

DAY 1 CONVECTIVE OUTLOOK  
NWS STORM PREDICTION CENTER NORMAN OK  
1120 AM CDT SAT APR 14 2012

VALID 141630Z - 151200Z

...THERE IS A HIGH RISK OF SVR TSTMS ACROSS PORTIONS OF NEBRASKA...KANSAS...AND OKLAHOMA...

...THERE IS A MDT RISK OF SVR TSTMS OVER PARTS OF NEBRASKA...WESTERN IOWA...KANSAS...WESTERN MISSOURI...AND OKLAHOMA...

...THERE IS A SLGT RISK OF SVR TSTMS ACROSS MUCH OF THE CENTRAL/SOUTHERN PLAINS...

...A SIGNIFICANT TORNADO OUTBREAK IS EXPECTED LATER TODAY AND

TONIGHT ACROSS PORTIONS OF NEBRASKA...KANSAS...AND OKLAHOMA...

A LARGE UPPER TROUGH REMAINS PLACED OVER THE WESTERN UNITED STATES TODAY...WITH A STRONG MID/UPPER LEVEL JET EXTENDING FROM THE SOUTHWEST STATES INTO THE CENTRAL PLAINS. WATER VAPOR IMAGERY AND MORNING MODEL SOLUTIONS SUGGEST SEVERAL SUBTLE SHORTWAVE TROUGHS EMBEDDED IN THE FASTER FLOW. THIS WILL RESULT IN THE POTENTIAL FOR MULTIPLE ROUNDS OF SEVERE WEATHER OVER THE CENTRAL PLAINS TODAY.

THE FIRST CLUSTER OF SEVERE STORMS HAS NOW FORMED OVER SOUTHWEST KS AND WILL LIKELY SPREAD NORTHEASTWARD INTO NEB THIS AFTERNOON AND EVENING. THESE STORMS WILL BE IN AN INCREASINGLY VOLATILE AIR MASS AS DAYTIME HEATING AND LOW LEVEL MOISTURE ADVECTION DESTABILIZE THE REGION. LARGE HAIL AND DAMAGING WINDS ARE THE EARLY THREATS...BUT AN INCREASING RISK OF SURFACE-BASED SUPERCELLS WILL POSE A THREAT OF TORNADOES BY EARLY AFTERNOON. AS THE ACTIVITY MOVES INTO SOUTHERN NEB...EVEN STRONGER LOW LEVEL SHEAR SUGGESTS THAT THE POTENTIAL FOR STRONG TORNADOES WILL BE ENHANCED.

STRONG HEATING IS EXPECTED TO OCCUR ALONG THE DRYLINE LATER THIS AFTERNOON AND EARLY EVENING OVER WESTERN KS INTO WESTERN OK. MODEL SOLUTIONS SUGGEST THE CAP WILL BE WEAK BUT CONSIDERABLE UNCERTAINTY REMAINS REGARDING THE EXTENT OF LARGE SCALE FORCING THIS EVENING. AREAL COVERAGE OF STORMS COULD BE WIDELY SPACED. HOWEVER... PARAMETERS TO THE EAST OF THE DRYLINE WILL BE EXTREMELY FAVORABLE FOR TORNADIC SUPERCELLS CAPABLE OF LONG-TRACK... DAMAGING/VIOLENT TORNADOES /4000 J/KG MLCAPE...50-60 KNOTS OF EFFECTIVE SHEAR...AND 0-3KM SRH VALUES OF 300-500 M2/S2/. THOSE STORMS THAT FORM MAY PERSIST FOR SEVERAL HOURS AND TRACK ACROSS CENTRAL KS/OK AND INTO SOUTHERN NEB.

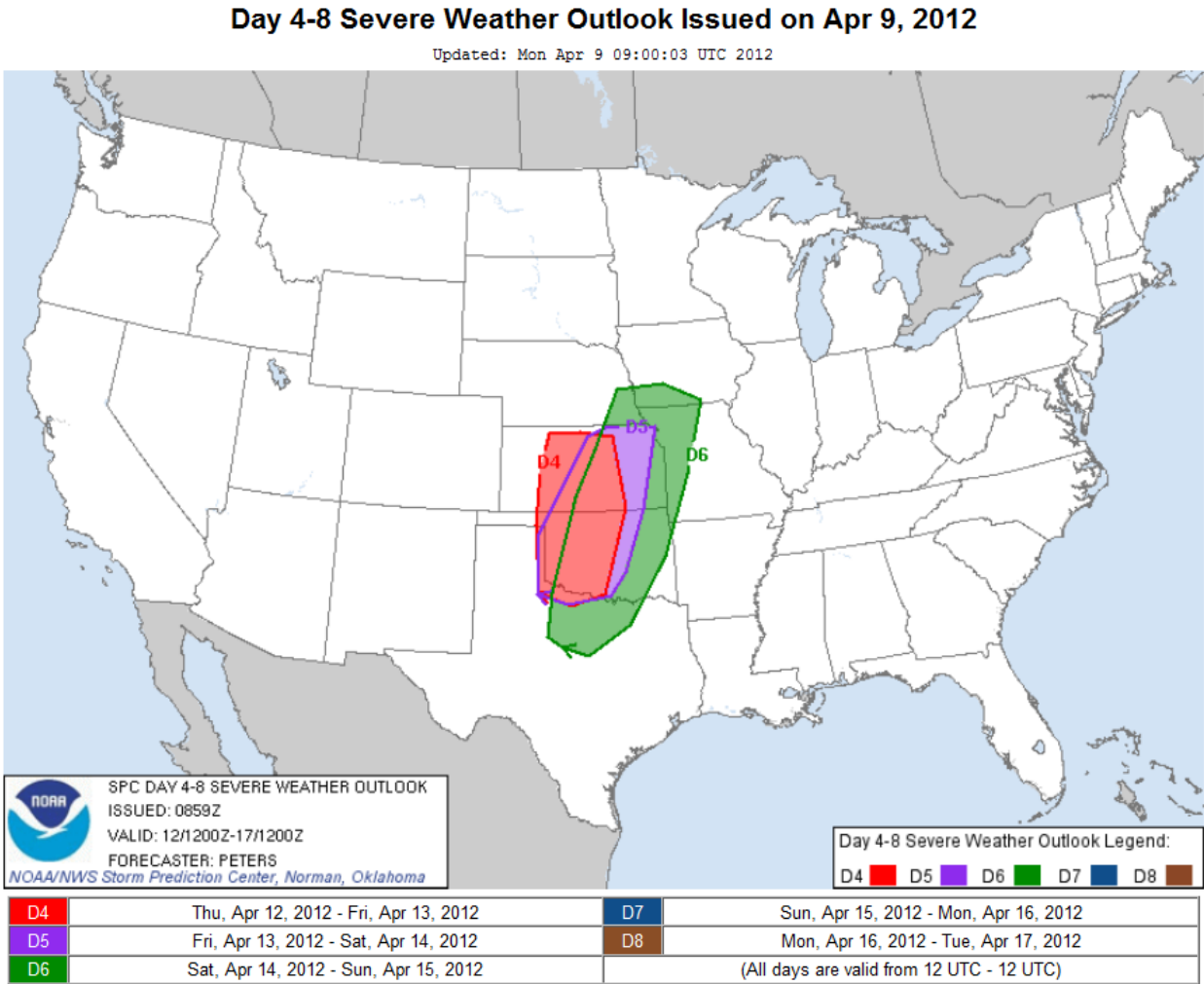
FARTHER SOUTH...CONVECTIVE INITIATION BECOMES INCREASINGLY UNCERTAIN. HOWEVER...WEAK CONVERGENCE ALONG THE DRYLINE COUPLED WITH A WEAK CAP AND STEEP LOW LEVEL LAPSE RATES SUGGEST SOME THREAT OF ISOLATED SEVERE STORMS ACROSS PARTS OF WESTERN NORTH TX.

..HART/COHEN.. 04/14/2012

CLICK TO GET WUUS01 PTSDY1 PRODUCT

NOTE: THE NEXT DAY 1 OUTLOOK IS SCHEDULED BY 2000Z

4. **Day 4-8 Convective Outlook (Graphic).**



**Figure 20: Day 4-8 Convective Outlook Graphic**

5. **Day 4-8 Convective Outlook (Narrative).**

ZCZC SPCSWOD48 ALL  
ACUS48 KWNS 090859  
SPC AC 090859

DAY 4-8 CONVECTIVE OUTLOOK  
NWS STORM PREDICTION CENTER NORMAN OK  
0359 AM CDT MON APR 09 2012

VALID 121200Z - 171200Z

...DISCUSSION...

MEDIUM RANGE MODELS CONTINUE TO INDICATE A PATTERN CHANGE...WHICH EXPECTED TO START ON D3/WED...WILL PROGRESS THROUGH MUCH OF THE EXTENDED FORECAST PERIOD. THIS WILL RESULT IN THE DEVELOPMENT OF SWLY MID-UPPER LEVEL FLOW FROM THE SWRN STATES THROUGH OK AND CENTRAL PLAINS TO THE UPPER MS VALLEY/GREAT LAKES REGION AS A DEEP



LONGWAVE TROUGH EVOLVES IN THE WEST.

MODELS REMAIN CONSISTENT IN FORECASTING AN INCREASE IN SEVERE WEATHER ACROSS PARTS OF THE SRN AND CENTRAL PLAINS DURING D4/THU THROUGH D6/SAT. SLY LOW LEVEL WINDS TO THE EAST OF A SURFACE LOW DEVELOPING OVER WRN KS WILL RESULT IN RICH MOISTURE RETURN INTO OK/KS ON D4/D5 AND THEN EXTENDING INTO PARTS OF THE MID/UPPER MS VALLEY ON D6. THIS COMBINED WITH ENEWD EXTENSION OF STEEP MIDLEVEL LAPSE RATES WILL RESULT IN MODERATE TO STRONG INSTABILITY DEVELOPING THROUGH D6. SWLY MIDLEVEL WINDS WILL STRENGTHEN FROM MID TO LATE THIS WEEK ACROSS THE REGIONAL SEVERE WEATHER THREAT AREAS SUCH THAT ORGANIZED STORMS INCLUDING SUPERCELLS CAN BE EXPECTED DURING D4...D5...AND D6. THE STRONGEST BULK SHEAR IS EXPECTED ON D6/SAT WITH THE SEVERE WEATHER THREAT AREA ALSO EXPANDING SWD SOME INTO N TX AND NEWD INTO SWRN IA.

BEYOND D6...THE SEVERE WEATHER THREAT MAY CONTINUE ACROSS THE SRN PLAINS...BUT MODEL UNCERTAINTIES PRECLUDE THE INCLUSION OF ANY ADDITIONAL REGIONAL SEVERE WEATHER THREAT AREAS.

..PETERS... 04/09/2012

6. SPC Points Products.

WUUS01 KWNS 141721  
PTSDY1

DAY 1 CONVECTIVE OUTLOOK AREAL OUTLINE  
NWS STORM PREDICTION CENTER NORMAN OK  
1121 AM CDT SAT APR 14 2012

VALID TIME 141630Z - 151200Z

PROBABILISTIC OUTLOOK POINTS DAY 1

... TORNADO ...

0.02	42430324	43590015	44219693	44259446	43909285	42469157
	38949139	36949244	35239451	33789628	32549783	31399979
	31790040	33200035	35250069	37420080	38620121	39900266
	41150351	42430324				
0.05	33089985	34920027	37440041	38670088	40090241	41110294
	42130282	42750174	43390004	43959677	43609406	42499291
	40739326	38079291	36949323	34899554	33589746	32909899
	33089985					
0.10	34249942	35990012	37460028	38880084	40370219	41310219
	42110171	42960030	43359838	43409696	43179566	42119433
	40579386	38399401	37009434	35079569	33889808	34009886
	34249942					
0.15	42870017	43099846	43129721	42929586	41939457	40559412
	37079444	35219572	34079807	34339920	35939988	37450002
	38960062	40380164	41240175	41990125	42870017	
0.30	41800019	42309939	42279753	42179678	41589577	40039533
	36989559	36169600	35299704	34969801	35129874	36319921
	37699930	38869970	40540026	41230043	41800019	
0.45	41519958	41799865	41649760	40839624	40049639	38319707

SIGN 37309827 37379894 39169922 40419943 41059973 41519958  
 42870024 43099859 43149712 42929584 41919457 40609415  
 38349428 37059447 35209572 34079805 34339920 35969991  
 37470003 39000064 40380161 41260171 41980121 42870024

&&

... HAIL ...

0.05 30420063 33240061 37060083 38630139 39830270 41040326  
 42070343 42590331 44150026 44849736 45229571 45029272  
 44479017 43718960 42068937 38989050 37129120 34549470  
 32659645 30599792 29969960 30040054 30420063  
 0.15 31810039 33000038 34900029 37400041 38640088 40030231  
 41030297 42140286 43670015 44399729 44519418 44259286  
 43879129 43089085 41709015 39499105 36989244 35279449  
 33789627 32599779 31389981 31810039  
 0.30 42880034 43139853 43139705 42949584 42009456 40639412  
 39549412 37019450 35189574 34659651 34079734 34049806  
 34389920 36069998 37420004 38960062 40420171 41390172  
 41920136 42880034  
 0.45 42070063 42539978 42569809 42159665 41779608 40779575  
 38999607 37849650 36639762 36449882 36759928 37629939  
 39250004 40890099 41550098 42070063  
 SIGN 41760209 42850038 43149869 43159709 42939586 42009457  
 40599412 39619414 36999450 35189574 34099728 33239821  
 33339976 34629981 35920007 37430013 38670064 39510112  
 40290200 41010211 41760209

&&

... WIND ...

0.05 30590062 31160059 31950057 33110052 34900039 37460056  
 38650101 40180274 41070328 42200285 43640013 44069638  
 43479284 42369162 40359132 36949244 32689645 30629795  
 29969948 30070054 30590062  
 0.15 43419836 43639659 43339519 42779316 42199280 40629260  
 39019288 36519365 33739636 32569784 31379982 31900037  
 33070029 34859973 35889988 37540007 38960060 40430164  
 41240175 42010124 42870020 43419836  
 0.30 33649952 34479921 37469791 41119610 41259498 40599409  
 38879423 36839456 35209572 33559800 33459922 33649952  
 0.45 38089720 40309597 40309503 39959466 38879468 36259592  
 35329689 35019796 35139856 35829840 38089720

&&

CATEGORICAL OUTLOOK POINTS DAY 1

... CATEGORICAL ...

HIGH 36389924 37629930 39149976 40550031 41200045 41730027  
 42309934 42289755 42169676 41579575 40139537 38679542  
 37019559 36149602 35289700 34979803 35149873 36389924  
 MDT 43099856 43149730 42939587 41979461 40559411 39079419  
 36999451 35179575 34059811 34339918 35889989 37520005  
 38950060 40410171 41290171 42010125 42860024 43099856  
 SLGT 33060041 34900029 37420043 38660089 40100238 41060293  
 42130282 43739997 44389745 44499410 43859124 41649012  
 39599104 36939243 34789505 33729635 32579782 31399983

31830040 33060041  
TSTM 29600189 33270151 36350152 37260279 37240385 36490469  
35250576 34080724 33030922 32751066 33161202 33971300  
35851407 36611536 36971657 37631838 39232184 40742288  
42981965 45141821 47331828 48251815 49221753 99999999  
49281017 47890957 46290812 43950469 43910304 44890019  
45479732 46459156 46208594 45958353 99999999 42987907  
42847895 42027915 39338151 37788403 36778690 36288965  
34839309 31389693 29469901 28010040

&&

THERE IS A HIGH RISK OF SVR TSTMS TO THE RIGHT OF A LINE FROM 30 ENE GAG 40 ESE DDC 15 SSE HLC 30 NNE MCK 15 ENE LBF 40 WNW BBW 35 WSW ONL 20 NNW OFK 25 SW SUX 20 NNE OMA 15 ENE FNB 30 SSE TOP 30 NE BVO 10 WSW TUL 30 SSW CQB 10 SSW CHK 30 ESE CSM 30 ENE GAG.

THERE IS A MDT RISK OF SVR TSTMS TO THE RIGHT OF A LINE FROM 45 N ONL 15 NNE YKN 40 NW SLB 40 E DNS 10 WSW LWD 20 E MKC 10 S JLN 20 N MLC 25 ENE SPS 25 SSE LTS 30 SSW GAG 20 SSW DDC 50 SW HLC 10 SSW IML 55 N IML 10 WSW MHN 15 E VTN 45 N ONL.

THERE IS A SLGT RISK OF SVR TSTMS TO THE RIGHT OF A LINE FROM 60 NW ABI 30 N CDS 35 SW DDC 50 N GCK 45 E AKO SNY AIA 35 W 9V9 30 W BKX 20 NNW MKT LSE 25 ENE MLI 25 SSE UIN 35 WNW UNO 30 SW RKR 15 S DUA 20 SE MWL 40 E SJT 30 N SJT 60 NW ABI.

GEN TSTMS ARE FCST TO THE RIGHT OF A LINE FROM 35 SSE 6R6 35 SSE LBB 25 S GUY 10 W SPD 25 E TAD 20 SW RTN 30 SE SAF 20 WNW ONM 25 ENE SAD 50 NNE TUS 20 S PHX 55 SW PRC 40 N IGM 35 E DRA 40 WNW DRA 20 N BIH 50 NNW SAC 50 SW MHS 55 SW BNO 30 NW BKE 40 WSW GEG 50 NNW GEG 105 ENE OMK ...CONT... 55 NNW HVR 45 SSE HVR 40 NNE BIL 50 ESE GCC 10 S RAP 35 N PIR 40 NNW ATY 30 WSW ASX 65 ENE ESC 55 SE ANJ ...CONT... 15 WNW BUF 15 WSW BUF 10 SSE JHW PKB 35 ESE LEX 30 WSW BWG 25 NW DYP 25 N HOT 25 SE ACT 10 NE HDO 65 WNW LRD.

(Day 4-8 Point Product)

WUUS48 KWNS 090859  
PTSD48

DAY 4-8 CONVECTIVE OUTLOOK AREAL OUTLINE  
NWS STORM PREDICTION CENTER NORMAN OK  
0359 AM CDT MON APR 09 2012

VALID TIME 121200Z - 171200Z

SEVERE WEATHER OUTLOOK POINTS DAY 4-8

... ANY SEVERE ...

D4 34150028 36510041 38510025 39749983 39789839 39589696  
37089648 34069749 33699891 34150028  
D5 34080036 36210026 39609806 39939724 39879496 37039565  
34849659 34029721 33729903 34080036  
D6 32249933 32629990 34179975 37519868 39159778 41269662  
41409450 40719274 38159361 35329482 32989644 31909821  
32249933

&&

7. **Public Severe Weather Outlook.**

ZCZC SPCPWOSPC ALL  
WOUS40 KWNS 141625  
KSZ000-NEZ000-OKZ000-150200-

PUBLIC SEVERE WEATHER OUTLOOK  
NWS STORM PREDICTION CENTER NORMAN OK  
1125 AM CDT SAT APR 14 2012

...A SIGNIFICANT OUTBREAK OF STRONG TO VIOLENT TORNADOES IS EXPECTED OVER PARTS OF THE CENTRAL AND SOUTHERN PLAINS THIS AFTERNOON AND TONIGHT...

THE NWS STORM PREDICTION CENTER IN NORMAN OK IS FORECASTING THE DEVELOPMENT OF SEVERAL STRONG TO VIOLENT...LONG-TRACK TORNADOES OVER PARTS OF THE CENTRAL AND SOUTHERN PLAINS THIS AFTERNOON AND TONIGHT.

THE AREAS MOST LIKELY TO EXPERIENCE THIS ACTIVITY INCLUDE

CENTRAL AND EASTERN KANSAS  
CENTRAL AND EASTERN NEBRASKA  
CENTRAL AND NORTH CENTRAL OKLAHOMA

ELSEWHERE...SEVERE STORMS ARE ALSO POSSIBLE FROM...NORTH TEXAS TO IOWA AND SOUTHEAST SOUTH DAKOTA/SOUTHERN MINNESOTA.

A WARM AND HUMID AIR MASS WILL EXPAND NORTHWARD FROM OKLAHOMA TO KANSAS AND NEBRASKA TODAY IN ADVANCE OF A POTENT STORM SYSTEM. MULTIPLE ROUNDS OF DANGEROUS SEVERE THUNDERSTORMS ARE EXPECTED TO IMPACT THE CENTRAL AND SOUTHERN PLAINS THIS AFTERNOON INTO TONIGHT. THUNDERSTORMS...OVER PARTS OF WESTERN KANSAS INTO NEBRASKA LATE THIS MORNING...ARE EXPECTED TO INTENSIFY THROUGH THIS AFTERNOON AS THEY MOVE NORTHEASTWARD/EASTWARD. ADDITIONAL INTENSE STORMS ARE EXPECTED TO DEVELOP NEAR A SURFACE LOW IN CENTRAL NEBRASKA THIS AFTERNOON...AND SOUTHWARD ALONG THE WEST EDGE OF THE HUMID AIR MASS INTO CENTRAL KANSAS AND WESTERN/CENTRAL OKLAHOMA. STRONG WINDS THROUGHOUT THE ATMOSPHERE WILL BE VERY FAVORABLE FOR POWERFUL SUPERCELL THUNDERSTORMS CAPABLE OF PRODUCING STRONG TO VIOLENT TORNADOES...AS WELL AS VERY LARGE HAIL OVER LONG PATHS FROM THIS AFTERNOON UNTIL AT LEAST MIDNIGHT. FAST-MOVING TORNADOES CONTINUING AFTER DARK WILL HEIGHTEN THE RISK TO LIFE AND PROPERTY. SOME OF THE LARGER CITIES THAT MAY BE AFFECTED INCLUDE OMAHA AND LINCOLN NEBRASKA...TOPEKA AND WICHITA KANSAS...AS WELL AS OKLAHOMA CITY AND TULSA OKLAHOMA.

STATE AND LOCAL EMERGENCY MANAGERS ARE MONITORING THIS POTENTIALLY VERY DANGEROUS SITUATION. THOSE IN THE THREATENED AREA ARE URGED TO REVIEW SEVERE WEATHER SAFETY RULES AND TO LISTEN TO RADIO...TELEVISION...AND NOAA WEATHER RADIO FOR POSSIBLE WATCHES...WARNINGS...AND STATEMENTS LATER TODAY.

..COHEN.. 04/14/2012

\$\$

8. Watch County List.

NWUS64 KWNS 271551  
WCLA

.TORNADO WATCH A  
COORDINATION COUNTY LIST FROM THE NWS STORM PREDICTION CENTER  
EFFECTIVE UNTIL 0000 UTC.

LAC025-029-041-065-107-280000-

LA  
. LOUISIANA PARISHES INCLUDED ARE

CATAHOULA                      CONCORDIA                      FRANKLIN  
MADISON                          TENSAS  
\$\$

MSC001-003-007-009-013-015-017-019-021-023-025-029-031-035-037-  
043-049-051-053-055-057-061-063-065-067-069-071-073-075-077-079-  
081-083-085-087-089-091-093-095-097-099-101-103-105-107-115-117-  
119-121-123-125-127-129-133-135-139-141-145-149-151-155-159-161-  
163-280000-

MS  
. MISSISSIPPI COUNTIES INCLUDED ARE

ADAMS                              ALCORN                              ATTALA  
BENTON                              CALHOUN                              CARROLL  
CHICKASAW                              CHOCTAW                              CLAIBORNE  
CLARKE                              CLAY                              COPIAH  
COVINGTON                              FORREST                              FRANKLIN  
GRENADA                              HINDS                              HOLMES  
HUMPHREYS                              ISSAQUENA                              ITAWAMBA  
JASPER                              JEFFERSON                              JEFFERSON DAVIS  
JONES                              KEMPER                              LAFAYETTE  
LAMAR                              LAUDERDALE                              LAWRENCE  
LEAKE                              LEE                              LEFLORE  
LINCOLN                              LOWNDES                              MADISON  
MARION                              MARSHALL                              MONROE  
MONTGOMERY                              NESHOBA                              NEWTON  
NOXUBEE                              OKTIBBEHA                              PANOLA  
PONTOTOC                              PRENTISS                              QUITMAN  
RANKIN                              SCOTT                              SHARKEY  
SIMPSON                              SMITH                              SUNFLOWER  
TALLAHATCHIE                              TIPPAAH                              TISHOMINGO  
UNION                              WARREN                              WASHINGTON  
WEBSTER                              WINSTON                              YALOBUSHA  
YAZOO  
\$\$

ATTN...WFO...JAN...MEG...

9. **Watch Outline Update Message.**

(Initial Issuance)

WOUS64 KWNS 271559  
WOU2

BULLETIN - IMMEDIATE BROADCAST REQUESTED  
TORNADO WATCH OUTLINE UPDATE FOR WT 232  
NWS STORM PREDICTION CENTER NORMAN OK  
1105 AM CDT WED APR 27 2011

TORNADO WATCH 232 IS IN EFFECT UNTIL 700 PM CDT FOR THE  
FOLLOWING LOCATIONS

ARC003-017-280000-  
/O.NEW.KWNS.TO.A.0232.110427T1605Z-110428T0000Z/

AR

. ARKANSAS COUNTIES INCLUDED ARE

ASHLEY                      CHICOT  
\$\$

LAC025-029-035-041-065-067-083-107-123-280000-  
/O.NEW.KWNS.TO.A.0232.110427T1605Z-110428T0000Z/

LA

. LOUISIANA PARISHES INCLUDED ARE

CATAHOULA                      CONCORDIA                      EAST CARROLL  
FRANKLIN                      MADISON                      MOREHOUSE  
RICHLAND                      TENSAS                      WEST CARROLL  
\$\$

MSC001-003-007-009-011-013-015-017-019-021-023-025-027-029-031-  
033-035-037-043-049-051-053-055-057-061-063-065-067-069-071-073-  
075-077-079-081-083-085-087-089-091-093-095-097-099-101-103-105-  
107-115-117-119-121-123-125-127-129-133-135-137-139-141-143-145-  
149-151-155-159-161-163-280000-  
/O.NEW.KWNS.TO.A.0232.110427T1605Z-110428T0000Z/

MS

. MISSISSIPPI COUNTIES INCLUDED ARE

ADAMS                      ALCORN                      ATTALA  
BENTON                      BOLIVAR                      CALHOUN  
CARROLL                      CHICKASAW                      CHOCTAW  
CLAIBORNE                      CLARKE                      CLAY  
COAHOMA                      COPIAH                      COVINGTON  
DESOTO                      FORREST                      FRANKLIN  
GRENADA                      HINDS                      HOLMES  
HUMPHREYS                      ISSAQUENA                      ITAWAMBA  
JASPER                      JEFFERSON                      JEFFERSON DAVIS  
JONES                      KEMPER                      LAFAYETTE  
LAMAR                      LAUDERDALE                      LAWRENCE  
LEAKE                      LEE                      LEFLORE

LINCOLN	LOWNDES	MADISON
MARION	MARSHALL	MONROE
MONTGOMERY	NESHOBA	NEWTON
NOXUBEE	OKTIBBEHA	PANOLA
PONTOTOC	PRENTISS	QUITMAN
RANKIN	SCOTT	SHARKEY
SIMPSON	SMITH	SUNFLOWER
TALLAHATCHIE	TATE	TIPPAH
TISHOMINGO	TUNICA	UNION
WARREN	WASHINGTON	WEBSTER
WINSTON	YALOBUSHA	YAZOO

\$\$

ATTN...WFO...JAN...MEG...

(Hourly Update)

WOUS64 KWNS 272203  
WOU2

TORNADO WATCH OUTLINE UPDATE FOR WT 232  
NWS STORM PREDICTION CENTER NORMAN OK  
503 PM CDT WED APR 27 2011

TORNADO WATCH 232 REMAINS IN EFFECT UNTIL 700 PM CDT FOR THE  
FOLLOWING LOCATIONS

MSC003-007-009-013-015-017-019-023-025-027-029-031-033-035-037-  
043-049-051-057-061-065-067-069-071-073-075-077-079-081-083-085-  
087-089-091-093-095-097-099-101-103-105-107-115-117-119-121-123-  
127-129-135-137-139-141-143-145-155-159-161-163-280000-  
/O.CON.KWNS.TO.A.0232.000000T0000Z-110428T0000Z/

MS

. MISSISSIPPI COUNTIES INCLUDED ARE

ALCORN	ATTALA	BENTON
CALHOUN	CARROLL	CHICKASAW
CHOCTAW	CLARKE	CLAY
COAHOMA	COPIAH	COVINGTON
DESOTO	FORREST	FRANKLIN
GRENADA	HINDS	HOLMES
ITAWAMBA	JASPER	JEFFERSON DAVIS
JONES	KEMPER	LAFAYETTE
LAMAR	LAUDERDALE	LAWRENCE
LEAKE	LEE	LEFLORE
LINCOLN	LOWNDES	MADISON
MARION	MARSHALL	MONROE
MONTGOMERY	NESHOBA	NEWTON
NOXUBEE	OKTIBBEHA	PANOLA
PONTOTOC	PRENTISS	QUITMAN
RANKIN	SCOTT	SIMPSON
SMITH	TALLAHATCHIE	TATE
TIPPAH	TISHOMINGO	TUNICA
UNION	WEBSTER	WINSTON
YALOBUSHA	YAZOO	

\$\$

ATTN...WFO...MEG...JAN...

(Final)

WOUS64 KWNS 280003  
WOU2

TORNADO WATCH OUTLINE UPDATE FOR WT 232  
NWS STORM PREDICTION CENTER NORMAN OK  
703 PM CDT WED APR 27 2011

TORNADO WATCH 232 IS NO LONGER IN EFFECT.

ARZ000-LAZ000-MSZ000-280000-  
/O.EXP.KWNS.TO.A.0232.000000T0000Z-110428T0000Z/

NO COUNTIES OR PARISHES REMAIN IN THE WATCH.

\$\$

ATTN...WFO...JAN...MEG...

**10. Aviation Watch Notification Message.**

WWUS30 KWNS 271559  
SAW2

SPC AWW 271559  
WW 232 TORNADO AR LA MS 271605Z - 280000Z  
AXIS..65 STATUTE MILES EAST AND WEST OF LINE..  
45ESE HEZ/NATCHEZ MS/ - 50N TUP/TUPELO MS/  
..AVIATION COORDS.. 55NM E/W /18WNW MCB - 60E MEM/  
HAIL SURFACE AND ALOFT..4 INCHES. WIND GUSTS..70 KNOTS.  
MAX TOPS TO 550. MEAN STORM MOTION VECTOR 25040.

LAT...LON 31369169 34998991 34998762 31368948

THIS IS AN APPROXIMATION TO THE WATCH AREA. FOR A  
COMPLETE DEPICTION OF THE WATCH SEE WOUS64 KWNS  
FOR WOU2.

**11. Public Watch Notification Message (Tornado and Severe Thunderstorm).**

WWUS20 KWNS 271605  
SEL2  
^^SPC WW 271605  
ARZ000-LAZ000-MSZ000-280000-

URGENT - IMMEDIATE BROADCAST REQUESTED  
TORNADO WATCH NUMBER 232  
NWS STORM PREDICTION CENTER NORMAN OK  
1105 AM CDT WED APR 27 2011

THE NWS STORM PREDICTION CENTER HAS ISSUED A

\* TORNADO WATCH FOR PORTIONS OF...  
EXTREME SOUTHEAST ARKANSAS  
NORTHEAST LOUISIANA  
MUCH OF MISSISSIPPI



\* EFFECTIVE THIS WEDNESDAY MORNING AND EVENING FROM 1105 AM UNTIL  
700 PM CDT.

...THIS IS A PARTICULARLY DANGEROUS SITUATION...

\* PRIMARY THREATS INCLUDE...  
NUMEROUS INTENSE TORNADOES LIKELY  
NUMEROUS SIGNIFICANT DAMAGING WIND GUSTS TO 80 MPH LIKELY  
NUMEROUS VERY LARGE HAIL EVENTS TO 4 INCHES IN DIAMETER LIKELY

THE TORNADO WATCH AREA IS APPROXIMATELY ALONG AND 65 STATUTE  
MILES EAST AND WEST OF A LINE FROM 45 MILES EAST SOUTHEAST OF  
NATCHEZ MISSISSIPPI TO 50 MILES NORTH OF TUPELO MISSISSIPPI. FOR  
A COMPLETE DEPICTION OF THE WATCH SEE THE ASSOCIATED WATCH  
OUTLINE UPDATE (WOUS64 KWNS WOU2).

PRECAUTIONARY/PREPAREDNESS ACTIONS...

REMEMBER...A TORNADO WATCH MEANS CONDITIONS ARE FAVORABLE FOR  
TORNADOES AND SEVERE THUNDERSTORMS IN AND CLOSE TO THE WATCH  
AREA. PERSONS IN THESE AREAS SHOULD BE ON THE LOOKOUT FOR  
THREATENING WEATHER CONDITIONS AND LISTEN FOR LATER STATEMENTS  
AND POSSIBLE WARNINGS.

&&

OTHER WATCH INFORMATION...CONTINUE...WW 229...WW 230...WW 231...

DISCUSSION...A VERY VOLATILE SETUP IS DEVELOPING FOR PORTIONS OF  
MS LATER TODAY AS A MOIST AND VERY UNSTABLE AIR MASS RETURNS INTO  
AN AREA WITH IMPRESSIVE LOW LEVEL AND DEEP LAYER VERTICAL SHEAR  
PROFILES. ACTIVITY IS CURRENTLY DEVELOPING OVER SOUTHEAST  
AR/NORTHEAST LA. HOWEVER...IT APPEARS THE PRIMARY CONCERN WILL  
START BY EARLY AFTERNOON OVER CENTRAL/NORTHERN MS WHERE DISCRETE  
TORNADIC SUPERCELLS ARE LIKELY. ALL PARAMETERS SUGGEST THAT  
STRONG/VIOLENT AND LONG-TRACK TORNADOES ARE POSSIBLE.

AVIATION...TORNADOES AND A FEW SEVERE THUNDERSTORMS WITH HAIL  
SURFACE AND ALOFT TO 4 INCHES. EXTREME TURBULENCE AND SURFACE  
WIND GUSTS TO 70 KNOTS. A FEW CUMULONIMBI WITH MAXIMUM TOPS TO  
550. MEAN STORM MOTION VECTOR 25040.

...HART

12. Watch Status Message.

SPC WW-A 272235  
ARZ000-LAZ000-MSZ000-272340-

STATUS REPORT #6 ON WW 232

VALID 272235Z - 272340Z

SEVERE WEATHER THREAT CONTINUES RIGHT OF A LINE FROM 35 S HEZ TO  
40 NW JAN TO 25 N GWO TO 35 S MKL.

..BROYLES..04/27/11

ATTN...WFO...JAN...MEG...

&&

STATUS REPORT FOR WT 232

SEVERE WEATHER THREAT CONTINUES FOR THE FOLLOWING AREAS

MSC003-007-013-015-017-019-023-025-029-031-035-037-043-049-051-  
057-061-065-067-069-073-075-077-079-081-083-085-087-089-091-095-  
097-099-101-103-105-115-117-121-123-127-129-139-141-145-155-159-  
163-272340-

MS

. MISSISSIPPI COUNTIES INCLUDED ARE

ALCORN	ATTALA	CALHOUN
CARROLL	CHICKASAW	CHOCTAW
CLARKE	CLAY	COPIAH
COVINGTON	FORREST	FRANKLIN
GRENADA	HINDS	HOLMES
ITAWAMBA	JASPER	JEFFERSON DAVIS
JONES	KEMPER	LAMAR
LAUDERDALE	LAWRENCE	LEAKE
LEE	LEFLORE	LINCOLN
LOWNDES	MADISON	MARION
MONROE	MONTGOMERY	NESHOBA
NEWTON	NOXUBEE	OKTIBBEHA
PONTOTOC	PRENTISS	RANKIN
SCOTT	SIMPSON	SMITH
TIPPAH	TISHOMINGO	UNION
WEBSTER	WINSTON	YAZOO

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THE WATCH STATUS MESSAGE IS FOR GUIDANCE PURPOSES ONLY. PLEASE  
REFER TO WATCH COUNTY NOTIFICATION STATEMENTS FOR OFFICIAL  
INFORMATION ON COUNTIES...INDEPENDENT CITIES AND MARINE ZONES  
CLEARED FROM SEVERE THUNDERSTORM AND TORNADO WATCHES.  
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