

Factual Report – Attachment 10

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NTSB, AS-30*

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Operations and Services

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WFO SEVERE WEATHER PRODUCTS SPECIFICATION

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

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Signed _____
Andrew D. Stern
Director
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9/25/2017
Date

WFO Severe Weather Products Specification

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1. **Introduction.** This procedural instruction describes the severe weather products issued by Weather Forecast Offices (WFO), provides guidelines associated with these products, specifies detailed content as needed, and outlines a generic format for each product type.
2. **Severe Thunderstorm Warning (product category SVR).**
 - 2.1 **Mission Connection.** Severe Thunderstorm Warnings (SVRs) are issued to protect lives and property. WFO forecasters issue SVRs to provide the public and emergency managers with advance notice of damaging wind gusts and large hail.
 - 2.2 **Issuance Guidelines.**
 - 2.2.1 **Creation Software.** WFOs will use WarnGen to issue SVRs.
 - 2.2.2 **Issuance Criteria.** WFOs should issue SVRs when there is radar or satellite indication and/or reliable reports of wind gusts equal to or in excess of 50 knots (58 miles per hour (mph)) and/or hail size of one inch (U.S. quarter-size) diameter or larger. WFOs may issue SVRs for a convective squall with little or no lightning that otherwise meet or exceed hail or wind warning criterion.
 - 2.2.3 **Issuance Time.** SVRs are non-scheduled, event-driven products.
 - 2.2.4 **Valid Time.** Valid times should be within 30 to 60 minutes of issuance. For thunderstorms that are expected to remain severe beyond the valid time of the original warning, WFOs should issue a new warning.
 - 2.2.5 **Product Expiration Time.** The product expiration time is the end of warning valid time.
 - 2.3 **Technical Description.** SVRs will follow the format and content described in this section.
 - 2.3.1 **Universal Geographic Code (UGC) Type.** County (Zone for Alaska and parts of Pacific Region).
 - 2.3.2 **Mass News Disseminator (MND) Broadcast Line.** For states that require Emergency Alert System (EAS) activation, SVRs should include the broadcast line: “BULLETIN - EAS ACTIVATION REQUESTED.” If a state does not require EAS activation for SVRs, the broadcast line will read: “BULLETIN - IMMEDIATE BROADCAST REQUESTED.” The term “BULLETIN” is used when information is sufficiently urgent to warrant breaking into a normal broadcast.
 - 2.3.3 **MND Header.** The SVR MND header is “SEVERE THUNDERSTORM WARNING.”
 - 2.3.4 **Content.** The following guidelines apply to the issuance of SVRs by WFOs:

- a. Writing Style:
 - 1) SVRs will follow a standard bullet style format.
 - 2) Bullets should be brief.
 - 3) Locations used to identify the threatened areas should be larger towns and other familiar landmarks.
 - 4) Names of states and counties (or parts of counties) should be spelled out.
 - 5) Call-to-Action (CTA) statements should be included.
 - 6) The WFO Shift Leader on duty may discontinue call-to-action statements in warnings during widespread severe weather outbreaks.
 - 7) Mileage markers may be used as reference points when a storm is occurring or forecast to move over a major highway.
 - 8) Basis (3rd bullet) of SVRs should be written in past tense.

- b. Inclusion of Tornado Possibility or Reports of Severe Events or Damage:
 - 1) SVRs will include the possibility of tornadoes if a Tornado Watch is in effect.
 - 2) Recent credible reports of severe hail, winds gusts, or damage due to hail or wind should be included.

- c. Pathcasts:
 - 1) In general, warnings should not contain 'pathcasts' (specific forecasts of location and arrival time) unless the forecaster has very high confidence in the movement (direction and speed) of the hazardous weather.
 - 2) Any 'pathcast' issued will use terms of uncertainty appropriate to the state of the science (e.g. 'the severe thunderstorm will be near [location] around [time]').
 - 3) No 'pathcast' will be issued using specific location forecasts (e.g. '3 miles northwest of Riverside').
 - 4) Warnings that contain pathcast information should be followed by frequent (approximately every 15 minutes) Severe Weather Statements.

- d. Number and Divisions of Counties/Parishes:
 - 1) WFOs should limit the number of counties/parishes in a SVR to 12 or less.
 - 2) If separating a county/parish into divisions, WFOs should use no more than a nine part division (i.e. northeast, east central, etc.) in coordination with state and local emergency managers and other partners.

- e. Severe Thunderstorm Moves Over Water:
 - 1) If a severe thunderstorm moves over coastal waters, a Special Marine Warning will be issued (see NWSI 10-313 for details on Special Marine Warnings).
 - 2) Note that the hail criterion for Special Marine Warnings is 3/4 inch (U.S. penny-size).

- f. Combining Warnings:
 - 1) WFOs should keep Severe Thunderstorm and Flash Flood Warnings separate.

2.3.5 Format. The SVR format will contain this information in the following order (see Figure 1):

First Bullet - Type of warning; and warning location(s);

Second Bullet - Expiration time of warning;

Third Bullet - Time, basis for warning (including recent credible reports); forecast impacts including hail sizes and wind gusts; storm motion. If edits of more than 10 mph or more than 45 degrees are required, the forecaster should restart WarnGen rather than manually edit the text to keep in agreement with TIME...MOT...LOC line.

Fourth Bullet - Locations to be impacted during the warning (see Figure 1);

PRECAUTIONARY/PREPAREDNESS ACTIONS - One or two short, concise, action-oriented CTA statements should be included. If CTAs are included under the PRECAUTIONARY/PREPAREDNESS ACTIONS, then two ampersands (&&) are required as a dissemination marker after the last CTA (see NWSI 10-1701, Section 5.5 for details on CTAs and markers). Credible reports of hail size and wind gusts should go in the basis statement (third bullet) instead of the precautionary/preparedness actions.

LAT...LON - The warning area polygon as described by a series of latitude/longitude coordinates in decimal degrees with precision to hundredths (2 decimal places). The polygon will contain as few as three and as many as 20 vertices.

TIME...MOT...LOC - The tracking information gives the location and movement of the event being tracked. Examples of such events could include the leading edge of a gust front or the leading edge of a hail core. The format (see Figure 1) includes the time of the observed event in Coordinated Universal Time (UTC), followed by a three digit direction of movement in degrees (direction the event is moving from), followed by speed of movement in knots, and finally the location of the event as a single latitude/longitude coordinate, or in the case of a line, two or more latitude/longitude coordinates.

```

WUaa5i cccc ddhhmm
SVRccc
STC001-002-ddhhmm-
/k.aaa.cccc.pp.s.####.yyymmddThhnnZB-yyymmddThhnnZE/

BULLETIN - EAS ACTIVATION (or IMMEDIATE BROADCAST) REQUESTED
SEVERE THUNDERSTORM WARNING (...CORRECTED as required)
NATIONAL WEATHER SERVICE CITY STATE
time am/pm time_zone day mon dd yyyy

THE NATIONAL WEATHER SERVICE IN CITY HAS ISSUED A

* SEVERE THUNDERSTORM WARNING FOR...
  PORTION COUNTY ONE IN SECTION STATE... (List warned counties)
  PORTION COUNTY TWO IN SECTION STATE... (Number of counties will
match number of counties in UGC Line)

* UNTIL hhmm AM/PM time_zone (Expiration time of warning)

* AT hhmm am/pm time_zone... (Warning basis statement)
  (List impacts, including hail size(s) and wind gusts)

* LOCATIONS IN THE WARNING INCLUDE...
  LOCATION #1...LOCATION #2...LOCATION #3...

PRECAUTIONARY/PREPAREDNESS ACTIONS...

(Call-to-Action statements)

&&

LAT...LON (Mandatory list of latitude/longitude coordinates
outlining the forecaster-drawn warning area)
TIME...MOT...LOC hhnnZ xxxDEG xxKT xxxx xxxx (lat/lon couplet(s))

$$
FORECASTER NAME/NUMBER (OPTIONAL)

```

Figure 1. Severe Thunderstorm Warning Format

2.4 Updates, Amendments and Corrections. Updates and amendments are not applicable. WFOs will correct SVRs for significant grammatical errors, format or dissemination code errors. Corrected warnings will have the same time in the MND Header and the same Event Tracking Number (ETN) in the Valid Time Event Code (VTEC) line as the original warning. WFOs should issue Severe Weather Statements to inform users of erroneous counties removed from original warnings (either in the Federal Information Processing Standards (FIPS)/Zone UGC code or in the body of the warning).

3. **Tornado Warning (product category TOR).**

3.1 Mission Connection. Tornado Warnings (TORs) are issued to protect lives and property. WFO forecasters issue TORs to provide the public and emergency managers with advance notice of tornadoes.

3.2 Issuance Guidelines.

3.2.1 Creation Software. WFOs will use WarnGen to issue TORs.

3.2.2 Issuance Criteria. WFOs should issue TORs when there is radar indication and/or reliable reports of a tornado or developing tornado.

3.2.3 Issuance Time. TORs are non-scheduled, event-driven products.

3.2.4 Valid Time. Valid times should be 15 to 45 minutes from issuance. For a tornado expected to continue beyond the valid time of the original warning, WFOs should issue a new warning.

3.2.5 Product Expiration Time. The product expiration time is the end of warning valid time.

3.3 Technical Description. TORs will follow the format and content described in this section.

3.3.1 UGC Type. County (Zone for Alaska Region and parts of Pacific Region).

3.3.2 MND Broadcast Line. TORs will include the broadcast line “BULLETIN - EAS ACTIVATION REQUESTED.” The term “BULLETIN” is used when information is sufficiently urgent to warrant breaking into a normal broadcast.

3.3.3 MND Header. The TOR MND header is “TORNADO WARNING.”

3.3.4 Content. The following guidelines apply to the issuance of TORs by WFOs:

a. Writing Style:

- 1) TORs will follow a standard bullet style format.
- 2) Bullets should be brief.
- 3) Locations used to identify the threatened areas should be larger towns and other familiar landmarks.
- 4) Names of states and counties (or parts of counties) should be spelled out.
- 5) CTA statements should be included.
- 6) The WFO Shift Leader on duty may discontinue CTA statements in warnings during widespread severe weather outbreaks.
- 7) Mileage markers may be used as reference points when a storm is occurring or forecast to move over a major highway.
- 8) Basis (3rd bullet) of TORs should be written in past tense.

- b. Inclusion of Tornado or Tornado Damage Reports (3rd bullet):
 - 1) Recent credible reports of a tornado should be included.
 - 2) Recent credible reports of damage from a tornado should be included.
- c. Pathcasts:
 - 1) In general, warnings should not contain 'pathcasts' (specific forecasts of location and arrival time) unless the forecaster has very high confidence in the movement (direction and speed) of the hazardous weather.
 - 2) Any 'pathcast' issued will use terms of uncertainty appropriate to the state of the science (e.g., 'the severe thunderstorm will be near [location] around [time]').
 - 3) No 'pathcast' will be issued using specific location forecasts (e.g. '3 miles northwest of Riverside').
 - 4) Warnings that contain 'pathcast' information should be followed by frequent (approximately every 15 minutes) Severe Weather Statements.
- d. Number and Divisions of Counties/Parishes:
 - 5) WFOs should limit the number of counties/parishes in a TOR to 12 or less.
 - 6) If separating a county/parish into divisions, WFOs should use no more than a nine part division (i.e. northeast, east central, etc.) in coordination with state and local emergency managers and other partners.
- e. Tornado Moves Over Water
 - 7) If a tornado moves over coastal waters, a Special Marine Warning will be issued (see NWSI 10-313 for details on Special Marine Warnings).
 - 8) Note that the hail criterion for Special Marine Warnings is 3/4 inch (U.S. penny-size).
- f. Combining Warnings
 - 9) WFOs should keep Tornado and Flash Flood Warnings separate.

3.3.4.1 Tornado Emergency. In exceedingly rare situations, WFOs have the option to add a headline in a Tornado Warning (TOR) that includes the terminology "...TORNADO EMERGENCY FOR [IMPACTED LOCATIONS]...". The headline will be on its own line directly following the date/time line in the MND Header, and before the first line that begins "THE NATIONAL WEATHER SERVICE IN XXX HAS ISSUED A", where "XXX" is the WFO location. The headline will be preceded and followed by a three dot ellipsis. "TORNADO EMERGENCY FOR [IMPACTED LOCATIONS]" is duplicated without ellipses in the last line of the third bullet, i.e., the basis statement of the warning. The "IMPACTED LOCATIONS" should be cities, towns or well-known landmarks, and may include "AND SURROUNDING AREAS".

Use of "TORNADO EMERGENCY" terminology is appropriate for the tornadic situation if all of the following criteria are met:

- a. Severe threat to human life is imminent or ongoing
- b. Catastrophic damage is imminent or ongoing
- c. Reliable sources confirm tornado (either 1 or 2)

- (1) Visual
- (2) Radar imagery strongly suggests the existence of a damaging tornado (e.g., debris ball signature).

3.3.5 Format. The TOR format will contain this information in the following order (see Figure 2):

First Bullet - Type of warning; warning location(s);

Second Bullet - Expiration time of warning;

Third Bullet - Time, basis for warning, forecast impacts, storm motion. If edits of more than 10 mph or more than 45 degrees are required, the forecaster should restart WarnGen rather than manually edit the text to keep in agreement with TIME...MOT...LOC line.

Fourth Bullet - Locations to be impacted during the warning (see Figure 2);

PRECAUTIONARY/PREPAREDNESS ACTIONS - One or two short, concise, action-oriented CTA statements should be included. If CTAs are included under the PRECAUTIONARY/PREPAREDNESS ACTIONS, then two ampersands (&&) are required as a dissemination marker after the last CTA (see NWSI 10-1701, Section 5.5 for details on CTAs and markers). Credible reports of tornadoes and associated damage should go in the basis statement (third bullet) instead of the precautionary/preparedness actions.

LAT...LON - The warning area polygon as described by a series of latitude/longitude coordinates in decimal degrees with precision to hundredths (2 decimal places). The polygon will contain as few as three, and as many as 20 vertices.

TIME...MOT...LOC - The tracking information gives the location and movement of the event being tracked. Examples of such events could include the low-level mesocyclone, or a report of the tornado location. The format includes the time of the observed event in UTC, followed by a three digit direction of movement in degrees (direction the event is moving from), followed by speed of movement in knots, and finally the location of the event as a single latitude/longitude coordinate.

```

WFaa5i cccc ddhhmm
TORccc
STC001-002-ddhhmm-
/k.aaa.cccc.pp.s.####.yyymmddThhnnZB-yyymmddThhnnZE/

BULLETIN - EAS ACTIVATION REQUESTED
TORNADO WARNING (... CORRECTED as required)
NATIONAL WEATHER SERVICE CITY STATE
time am/pm time_zone day mon dd yyyy

THE NATIONAL WEATHER SERVICE IN CITY HAS ISSUED A

* TORNADO WARNING FOR...
  PORTION COUNTY ONE IN SECTION STATE...(List warned counties)
  PORTION COUNTY TWO IN SECTION STATE... (Number of Counties will
match number of counties in UGC Line)

* UNTIL hhmm AM/PM time_zone (Expiration time of warning)

* AT hhmm am/pm time_zone...(Warning basis statement including recent
credible reports and forecast impacts)

* LOCATIONS IN THE WARNING INCLUDE...
  LOCATION #1...LOCATION #2...
(Impact Locations are mandatory)

PRECAUTIONARY/PREPAREDNESS ACTIONS...

(Call-to-Action statements)

&&

LAT...LON (Mandatory list of latitude/longitude coordinates outlining
the forecaster-drawn warning area)
TIME...MOT...LOC hhnnZ xxxDEG xxKT xxxx xxxx (lat/lon couplet(s))

$$
FORECASTER NAME/NUMBER (OPTIONAL)

```

Figure 2. Tornado Warning Format

3.4 Updates, Amendments and Corrections. Updates and amendments are not applicable. WFOs will correct TORs for significant grammatical errors, format or dissemination code errors. Corrected warnings will have the same time in the MND Header and the same ETN in the VTEC line as the original warning. WFOs should issue Severe Weather Statements (SVSs) to inform users of erroneous counties removed from original warnings (either in the FIPS/Zone UGC code or in the body of the warning).

4. **Severe Weather Statement (product category SVS).**

4.1 Mission Connection. Severe Weather Statements (SVSs) provide the public and emergency managers with updated information for specific Severe Thunderstorm and Tornado Warnings. Updated information includes reports of observed severe weather. They also inform the public and emergency managers when all or portions of a warning have been canceled or have expired.

4.2 Issuance Guidelines.

4.2.1 Creation Software. WFOs will use WarnGen to issue SVSs.

4.2.2 Issuance Criteria. The following guidelines apply to the issuance of SVSs by WFOs:

- a. Cancellations - WFOs should issue a SVS to provide notice a SVR or TOR has been canceled for all or portions of the warning polygon.
- b. Updates - WFOs should issue SVSs at least once during the valid time of a SVR or TOR. During significant severe thunderstorm and tornado events WFOs should issue more frequent SVS updates to keep the public informed of the progression of dangerous storms.
- c. Corrections - WFOs should issue a SVS to notify users of erroneous counties included in the original SVR or TOR (either in the FIPS/Zone UGC code or in the body of the warning) have been removed.
- d. Expirations - WFOs may issue a SVS to provide notice that a SVR or TOR has expired.

4.2.3 Issuance Time. SVSs are non-scheduled, event-driven products.

4.2.4 Valid Time. The valid time will be from the time of issuance to the warning expiration or cancellation time.

4.2.5 Product Expiration Time. The product expiration time is no more than 15 minutes after the warning expiration or cancellation time.

4.3 Technical Description. SVSs will follow the format and content described in this section.

4.3.1 UGC Type. County (Zone for Alaska Region and parts of Pacific Region).

4.3.2 MND Broadcast Line. None.

4.3.3 MND Header. The SVS MND header is “SEVERE WEATHER STATEMENT.”

4.3.4 Content. The following Guidelines apply to the issuance of SVSs by WFOs.

a. Purpose:

- 1) WFOs should issue SVSs to address the status of severe weather warnings.
- 2) WFOs will not use SVSs to expand in area or extend the valid time of TORs and SVRs.
- 3) If the threat of severe weather clears a significant portion of the SVR or TOR during the warning period, forecasters should update the latitude and longitude pairs of the polygon within the warned county or counties.

b. Writing Style:

- 1) Format of the SVS will be free text.
- 2) Names of states and counties (or parts of counties) should be spelled out.
- 3) Concise call-to-action statements should be included.
- 4) The WFO Shift Leader on duty may discontinue call-to-action statements in warnings during widespread severe weather outbreaks.
- 5) Mileage markers may be used as reference points when a storm is occurring or forecast to move over a major highway.
- 6) Basis of SVSs should be written in past tense.

c. Reports of Severe Events or Damage:

- 1) Recent credible reports of a tornado, hail or damaging wind should be included.
- 2) Recent credible reports of damage from tornadoes, hail or damaging wind should be included.

d. Pathcasts:

- 1) In general, the SVS should not contain 'pathcasts' unless the forecaster has very high confidence in the direction and speed of the movement of the hazardous weather.
- 2) Any 'pathcast' issued will use terms of uncertainty appropriate to the state of the science (e.g., 'the tornadic storm will be near [location] around [time]').
- 3) No 'pathcast' will be issued using specific location forecasts (e.g., '3 miles northwest of Riverside').
- 4) In addition, SVSs with 'pathcast' information should be frequently updated (approximately every 15 minutes). This ensures that users receive the best possible information concerning the location and movement of the hazardous weather.

4.3.4.1 Tornado Emergency. In exceedingly rare situations, when a severe threat to human life and catastrophic damage from a tornado is imminent or ongoing, the forecaster may insert the headline "...TORNADO EMERGENCY FOR [IMPACTED LOCATIONS]...". The "IMPACTED LOCATIONS" should be cities, towns or well-known landmarks, and may include "AND SURROUNDING AREAS"; additionally, this terminology may also be used within the body of the SVS to further describe the severity of the tornadic event.

Use of “TORNADO EMERGENCY” terminology is appropriate for the tornadic situation if all of the following criteria are met:

- a. Severe threat to human life is imminent or ongoing.
- b. Catastrophic damage is imminent or ongoing.
- c. Reliable sources confirm tornado (either 1 or 2):
 - (1) Visual
 - (2) Radar imagery strongly suggests the existence of a damaging tornado (e.g., debris ball signature).

4.3.5 Format. (See Figure 3).

```

WWUS5i cccc ddhhmm
SVSccc

SEVERE WEATHER STATEMENT
NATIONAL WEATHER SERVICE CITY STATE
time am/pm time_zone day mon dd yyyy

STC001-ddhhmm-
/k.CAN.cccc.pp.s.####.yymmddThhnnZB-yymmddThhnnZE/
COUNTY A -
time am/pm time_zone day mon dd yyyy

...SEVERE THUNDERSTORM (or TORNADO) WARNING HAS BEEN CANCELLED FOR
PORTION COUNTY A...

LAT...LON (Mandatory list of latitude/longitude points outlining the
warning area - modified to remove those areas no longer threatened)
TIME...MOT...LOC hhnnZ xxxDEG xxKT xxxx xxxx (lat/lon coordinate(s))

$$

STC003-ddhhmm-
/k.CON.cccc.pp.s.####.yymmddThhnnZB-yymmddThhnnZE/
COUNTY B -
time am/pm time zone day mon dd yyyy

...SEVERE THUNDERSTORM (or TORNADO) WARNING REMAINS IN EFFECT UNTIL
hhmm am/pm time_zone FOR COUNTY B...

AT time am/pm time_zone...UPDATED LOCATION AND MOVEMENT OF SEVERE
THUNDERSTORMS. SPOTTER REPORTS OF SEVERE WEATHER. LOCATIONS TO BE
AFFECTED BY SEVERE THUNDERSTORMS IN THE NEAR TERM (VALID TIME OF THE
WARNING) .

LOCATIONS IN THE WARNING INCLUDE...
LOCATION #1...LOCATION #2...

PRECAUTIONARY/PREPAREDNESS ACTIONS...
(Call-to-Action statements)

```

```

&&
LAT...LON (Mandatory list of latitude/longitude points outlining the
warning area - modified to remove those areas no longer threatened)
TIME...MOT...LOC hhnnZ xxxDEG xxKT xxxx xxxx (lat/lon couplet(s))
$$
FORECASTER NAME/NUMBER (OPTIONAL)

```

Figure 3. Severe Weather Statement (SVS) Format

4.3.5.1 Event Tracking Number (ETN). The VTEC ETN (#####) in the SVS will match the corresponding active SVR or TOR for updates and cancellations (See Figure 3).

4.4 Updates, Amendments and Corrections. Updates and amendments to the corresponding warning polygon should be provided as necessary through subsequent SVSs. WFOs will correct statements for format and grammatical errors as required.

5. Watch County Notification Message (product category WCN).

5.1 Mission Connection. WFOs will issue Watch County Notification Messages (WCN) to provide NOAA/NWS' Storm Prediction Center (SPC), emergency managers, the media and the general public with a list of counties, parishes, independent cities and marine zones in a convective watch area within their geographic area of responsibility.

5.2 Issuance Guidelines.

5.2.1 Creation Software. WFOs should use the Graphical Hazards Generation Editor (GHG) software to create WCNs.

5.2.2 Issuance Criteria. Affected contiguous United States (CONUS) WFOs will issue initial WCNs after SPC issues the initial Watch Outline Update Message (WOU). WFOs in tropical areas outside the CONUS (OCONUS) will issue WCNs without a WOU from SPC and based on the potential of damaging winds, severe hail, and/or tornadoes. WFOs will issue updated WCNs to cancel, extend the valid time, or extend in area portions of one or more convective watches in their geographic area of responsibility.

5.2.3 Issuance Time. WCNs are non-scheduled, event-driven products.

5.2.4 Valid Time. WCNs are valid until the watch expiration time.

5.2.5 Product Expiration Time. The expiration time is the same as the convective watch end time found in the initial WOU. WFOs may extend the convective watch expiration time in a WCN update after collaboration with SPC and the other WFOs in the watch area. Timely collaboration on a watch extended in time is particularly important so other WFOs in the watch area have the opportunity to cancel the watch from their counties.

5.3 Technical Description. WCNs will follow the format and content described in this section.

5.3.1 UGC Type. County.

5.3.2 MND Header. The WCN MND header is “WATCH COUNTY NOTIFICATION FOR WATCH nnnn”, where “nnnn” is the watch number. The watch number will be for the watch with the earliest issuance time if more than one watch is in effect for a WFO’s geographical area of responsibility.

5.3.3 Content. 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. This partnership is defined as collaboration. OCONUS WFOs are not required to collaborate with SPC.

The list of counties, parishes, independent cities and marine zones in the initial WCN within CONUS will match the list of counties, parishes, independent cities, and marine zones in the initial WOU issued by SPC for their geographic area of responsibility. The marine zones refer to adjacent coastal waters out to 20 nautical miles for the Atlantic and Pacific Oceans, and Gulf of Mexico. All marine zones are included in convective watches for the Great Lakes.

- a. Active Watches - WFOs will issue updated WCNs to continue, cancel or extend in time or area portions of one or more active convective watches in their geographic area of responsibility.
- b. New Watches - WFOs will also issue updated WCNs to include new watches issued within their geographic area of responsibility while existing watches remain in effect.
- c. Watch Extensions - CONUS WFOs will collaborate with SPC and affected WFOs on counties, parishes, independent cities or marine zones added to the initial watch area, or extensions to the expiration time of the initial convective watch area.
- d. Watch Replacements - CONUS WFOs will collaborate with SPC and adjacent WFOs when counties, parishes, independent cities or marine zones are transferred from an existing convective watch to a new convective watch (e.g. watch replacement).
- e. Watch Editing Consistency - WFOs should ensure modifications to the convective watch area are consistent with modifications made by adjacent WFOs.
- f. WCN Issuance Times - WCNs should be issued by H+55 so that changes will be reflected in the WOU issued by SPC after the top of the hour.
- g. Watch Cancellation/Expiration - The final WCN for a particular convective watch will cancel or allow expiration of all remaining counties, parishes, independent cities and/or marine zones in the watch for their geographic area of responsibility.

5.3.4 Format. (See Figure 4)

WWUS6i cccc ddhhmm
WCNccc

WATCH COUNTY NOTIFICATION FOR WATCH nnnn (*or nnnn/nnnn if more than one watch is in effect*)

NATIONAL WEATHER SERVICE CITY STATE
time am/pm time_zone day mon dd yyyy

STC001-003-ddhhmm-
/k.aaa.cccc.pp.s.####.yyymmddThhnnZ_B-yyymmddThhnnZ_E/

THE NATIONAL WEATHER SERVICE HAS CANCELLED SEVERE THUNDERSTORM (OR TORNADO WATCH) nnnn FOR THE FOLLOWING AREAS (*If Cancellation Segment*)

THE NATIONAL WEATHER SERVICE HAS ISSUED SEVERE THUNDERSTORM (OR TORNADO) WATCH nnnn UNTIL time am/pm time_zone WHICH REPLACES A PORTION OF SEVERE THUNDERSTORM (OR TORNADO) WATCH nnnn. THE NEW WATCH IS VALID FOR THE FOLLOWING AREAS (*If Replacement Segment*)

THE NATIONAL WEATHER SERVICE HAS ISSUED SEVERE THUNDERSTORM (OR TORNADO) WATCH nnnn UNTIL time am/pm time_zone. SEVERE THUNDERSTORM (OR TORNADO) WATCH nnnn WILL BE ALLOWED TO EXPIRE (OR HAS EXPIRED). THE NEW WATCH IS VALID FOR THE FOLLOWING AREAS (*If Replacement for Expired Segment*)

THE NATIONAL WEATHER SERVICE HAS ISSUED SEVERE THUNDERSTORM (OR TORNADO) WATCH nnnn IN EFFECT UNTIL time am/pm time_zone FOR THE FOLLOWING AREAS (*If New Segment*)

THE NATIONAL WEATHER SERVICE HAS EXTENDED SEVERE THUNDERSTORM (OR TORNADO) WATCH nnnn TO INCLUDE THE FOLLOWING AREAS UNTIL time am/pm time_zone (*If Extension in Area Segment*)

SEVERE THUNDERSTORM (OR TORNADO) WATCH NUMBER nnnn...PREVIOUSLY IN EFFECT UNTIL time am/pm time_zone...IS NOW IN EFFECT UNTIL time am/pm time_zone FOR THE FOLLOWING AREAS (*If Extension in Time Segment*)

SEVERE THUNDERSTORM (OR TORNADO) WATCH nnnn REMAINS VALID UNTIL time am/pm time_zone FOR THE FOLLOWING AREAS (*If Continuation Segment*)

THE NATIONAL WEATHER SERVICE WILL ALLOW SEVERE THUNDERSTORM (OR TORNADO) WATCH nnnn TO EXPIRE AT time am/pm time_zone FOR THE FOLLOWING AREAS (*If Expiration Segment-issued prior to watch end time*)

THE NATIONAL WEATHER SERVICE HAS ALLOWED SEVERE THUNDERSTORM (OR TORNADO) WATCH nnnn TO EXPIRE FOR THE FOLLOWING AREAS. (*If Expiration Segment - issued after the watch end time*)

SEVERE THUNDERSTORM (OR TORNADO) WATCH nnnn WILL BE ALLOWED TO EXPIRE

(OR HAS EXPIRED). THE NEW WATCH IS VALID FOR THE FOLLOWING AREAS
(If Replacement for Expired Segment)

IN STATE 1 THIS WATCH INCLUDES (or CANCELS or ALLOWS TO EXPIRE) n
COUNTIES

LIST OF COUNTIES IN STATE 1 (OR PORTION OF STATE 1)

IN STATE 1 THIS WATCH INCLUDES (or CANCELS or ALLOWS TO EXPIRE) n
INDEPENDENT CITIES

LIST OF INDEPENDENT CITIES IN STATE 1

THIS WATCH INCLUDES (or THIS CANCELS or ALLOWS TO EXPIRE) THE
FOLLOWING ADJACENT COASTAL WATERS

LIST OF MARINE ZONES

OTHER CITIES IN STATES 1 (OPTIONAL)

\$\$ (END OF SEGMENT)

Figure 4. Watch County Notification (WCN) Message Format

5.3.4.1 Event Tracking Number. The VTEC ETN (####) will match the SPC watch number designated in the WOU, except for WCNs issued by WFOs in Pacific Region and Puerto Rico.

5.4 Updates, Amendments and Corrections. WFOs will update WCNs when counties, parishes, independent cities, or marine zones are canceled or added from the watch or the watch valid time is extended. WFOs will correct WCNs for format and grammatical errors.

APPENDIX A - Examples

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1. **Introduction.** This appendix provides the public with examples of severe weather products issued by WFOs.
2. **Severe Thunderstorm Warning (SVR).**

WUUS54 KAMA 302351
SVRAMA
TXC087-129-010045-
/O.NEW.KAMA.SV.W.0093.120430T2351Z-120501T0045Z/

BULLETIN - EAS ACTIVATION REQUESTED
SEVERE THUNDERSTORM WARNING
NATIONAL WEATHER SERVICE AMARILLO TX
651 PM CDT MON APR 30 2012

THE NATIONAL WEATHER SERVICE IN AMARILLO HAS ISSUED A

* SEVERE THUNDERSTORM WARNING FOR...
EXTREME WEST CENTRAL COLLINGSWORTH COUNTY IN THE PANHANDLE OF TEXAS
CENTRAL DONLEY COUNTY IN THE PANHANDLE OF TEXAS

* UNTIL 745 PM CDT

* AT 649 PM CDT...LOCAL LAW ENFORCEMENT REPORTED A SEVERE
THUNDERSTORM THAT HAD PRODUCED LARGE DAMAGING HAIL UP TO GOLF BALL
SIZE. THIS STORM WAS LOCATED NEAR CLARENDON...MOVING EAST AT 20
MPH.

* LOCATIONS IMPACTED INCLUDE...
CLARENDON...
LELIA LAKE...
HEDLEY...

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A TORNADO WATCH REMAINS IN EFFECT FOR THE WARNED AREA. REMEMBER...
SEVERE THUNDERSTORMS CAN AND OCCASIONALLY DO PRODUCE TORNADOES WITH
LITTLE OR NO ADVANCED WARNING. IF A TORNADO IS SPOTTED...ACT QUICKLY
AND MOVE TO A PLACE OF SAFETY IN A STURDY STRUCTURE...SUCH AS A
BASEMENT OR SMALL INTERIOR ROOM.

&&

LAT...LON 3511 10054 3490 10053 3479 10093 3498 10101
TIME...MOT...LOC 2351Z 248DEG 16KT 3490 10091

\$\$

3. **Tornado Warning (TOR).**

WFUS53 KLMK 022006
TORLMK
INC019-077-143-175-KYC223-022045-
/O.NEW.KLMK.TO.W.0045.120302T2006Z-120302T2045Z/

BULLETIN - EAS ACTIVATION REQUESTED
TORNADO WARNING
NATIONAL WEATHER SERVICE LOUISVILLE KY
306 PM EST FRI MAR 2 2012

THE NATIONAL WEATHER SERVICE IN LOUISVILLE HAS ISSUED A

- * TORNADO WARNING FOR...
TRIMBLE COUNTY IN NORTH CENTRAL KENTUCKY...
NORTHERN CLARK COUNTY IN SOUTH CENTRAL INDIANA...
JEFFERSON COUNTY IN SOUTH CENTRAL INDIANA...
SCOTT COUNTY IN SOUTH CENTRAL INDIANA...
EASTERN WASHINGTON COUNTY IN SOUTH CENTRAL INDIANA...
- * UNTIL 345 PM EST
- * AT 305 PM EST...TRAINED WEATHER SPOTTERS REPORTED A TORNADO NEAR
BUNKER HILL...MOVING NORTHEAST AT 70 MPH.
- * LOCATIONS IN THE WARNING INCLUDE...
BEDFORD...
SCOTTSBURG...
MADISON...
UNDERWOOD AND VIENNA...
LEXINGTON AND NABB...
SWANVILLE AND CHELSEA...
HANOVER BEACH AND HANOVER...

PRECAUTIONARY/PREPAREDNESS ACTIONS...

TO REPEAT...A TORNADO IS ON THE GROUND. TAKE COVER NOW. MOVE TO AN
INTERIOR ROOM ON THE LOWEST FLOOR OF A STURDY BUILDING. AVOID
WINDOWS. IF IN A VEHICLE OR OUTDOORS...MOVE TO THE CLOSEST
SUBSTANTIAL SHELTER AND PROTECT YOURSELF FROM FLYING DEBRIS.

&&

LAT...LON 3874 8529 3874 8532 3872 8532 3866 8526
3861 8523 3840 8591 3863 8591 3891 8538
TIME...MOT...LOC 2007Z 242DEG 62KT 3853 8588

\$\$

Tornado Emergency

WFUS54 KBMX 280017
TORBMX
ALC015-019-055-280100-
/O.NEW.KBMX.TO.W.0124.110428T0017Z-110428T0100Z/

BULLETIN - EAS ACTIVATION REQUESTED
TORNADO WARNING
NATIONAL WEATHER SERVICE BIRMINGHAM AL
717 PM CDT WED APR 27 2011

...TORNADO EMERGENCY FOR COBB CITY...REAVES...ELLISVILLE AND SPRING
GARDEN...

THE NATIONAL WEATHER SERVICE IN BIRMINGHAM HAS ISSUED A

* TORNADO WARNING FOR...
NORTHEASTERN CALHOUN COUNTY IN EAST CENTRAL ALABAMA...
CHEROKEE COUNTY IN NORTHEAST ALABAMA...
SOUTHEASTERN ETOWAH COUNTY IN NORTHEAST ALABAMA...

* UNTIL 800 PM CDT

* AT 713 PM CDT...THE NATIONAL WEATHER SERVICE WAS TRACKING A
CONFIRMED LARGE AND EXTREMELY DANGEROUS TORNADO NEAR GLENCOE...
OR 6 MILES EAST OF MARKTON. DOPPLER RADAR SHOWED THIS TORNADO
MOVING EAST AT 60 MPH.

THIS IS A TORNADO EMERGENCY FOR COBB CITY...REAVES...ELLISVILLE
AND SPRING GARDEN. TAKE COVER NOW.

* THE TORNADO WILL BE NEAR...
PIEDMONT AROUND 730 PM CDT.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

TO REPEAT...A LARGE...EXTREMELY DANGEROUS...AND POTENTIALLY DEADLY
TORNADO IS ON THE GROUND. TO PROTECT YOUR LIFE...TAKE COVER NOW.
MOVE TO AN INTERIOR ROOM ON THE LOWEST FLOOR OF A STURDY BUILDING.
AVOID WINDOWS. IF IN A MOBILE HOME...A VEHICLE OR OUTDOORS...MOVE
TO THE CLOSEST SUBSTANTIAL SHELTER AND PROTECT YOURSELF FROM FLYING
DEBRIS.

&&

LAT...LON 3410 8541 3398 8539 3387 8579 3422 8585
3436 8547
TIME...MOT...LOC 0017Z 248DEG 53KT 3392 8583

\$\$

4. **Severe Weather Statement (SVS).**

WWUS55 KPSR 092342
SVSPSR

SEVERE WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
442 PM MST WED MAY 9 2012

AZC013-021-100000-
/O.CON.KPSR.SV.W.0001.000000T0000Z-120510T0000Z/
PINAL AZ-MARICOPA AZ-
442 PM MST WED MAY 9 2012

...A SEVERE THUNDERSTORM WARNING REMAINS IN EFFECT UNTIL 500 PM MST
FOR CENTRAL MARICOPA AND NORTH CENTRAL PINAL COUNTIES...

AT 438 PM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS CONTINUED TO
DETECT A LINE OF SEVERE THUNDERSTORMS CAPABLE OF PRODUCING NICKEL
SIZE HAIL...AND DAMAGING WINDS IN EXCESS OF 60 MPH. THESE STORMS
WERE LOCATED ALONG A LINE EXTENDING FROM GUADALUPE TO CHANDLER
HEIGHTS...MOVING SOUTHWEST AT 20 MPH.

THESE STORMS WILL PRODUCE PERIODS OF HEAVY RAINFALL AND LOCALIZED
FLOODING.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

HEAVY RAINS MAY FLOOD LOW LYING AREAS SUCH AS DITCHES AND
UNDERPASSES. AVOID THESE AREAS AND DO NOT CROSS FLOODED ROADS AS THEY
MAY BE WASHED OUT. WATER LEVELS OF SMALL STREAMS AND RIVERS MAY ALSO
RISE.

&&

LAT...LON 3363 11177 3349 11146 3320 11168 3339 11202
TIME...MOT...LOC 2340Z 030DEG 33KT 3329 11199 3321 11169

\$\$

Partial Cancellation

WWUS53 KLMK 022105
SVSLMK

SEVERE WEATHER STATEMENT
NATIONAL WEATHER SERVICE LOUISVILLE KY
405 PM EST FRI MAR 2 2012

KYC027-022114-
/O.CAN.KLMK.TO.W.0052.000000T0000Z-120302T2115Z/

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BRECKINRIDGE KY-
305 PM CST FRI MAR 2 2012

...THE TORNADO WARNING FOR NORTHEASTERN BRECKINRIDGE COUNTY IS
CANCELLED...

THE STORM THAT PROMPTED THE WARNING MOVED OUT OF BRECKINRIDGE COUNTY.

A TORNADO WATCH REMAINS IN EFFECT.

LAT...LON 3800 8631 3809 8591 3803 8592 3800 8595
3800 8594 3803 8590 3804 8587 3791 8581
3783 8619 3791 8629 3794 8631
TIME...MOT...LOC 2104Z 259DEG 67KT 3793 8617

\$\$

INC061-KYC029-093-163-022115-
/O.CON.KLMK.TO.W.0052.000000T0000Z-120302T2115Z/
HARRISON IN-MEADE KY-BULLITT KY-HARDIN KY-
405 PM EST FRI MAR 2 2012

...A TORNADO WARNING REMAINS IN EFFECT UNTIL 415 PM EST FOR NORTHERN
HARDIN...WESTERN BULLITT...CENTRAL MEADE AND SOUTHEASTERN HARRISON
COUNTIES...

AT 401 PM EST...WEATHER SERVICE DOPPLER RADAR CONTINUED TO INDICATE A
SEVERE THUNDERSTORM WITH STRONG ROTATION. THIS DANGEROUS STORM WAS
LOCATED NEAR HAYSVILLE...MOVING EAST AT 75 MPH.

* THIS DANGEROUS STORM WILL ALSO IMPACT...
FORT KNOX...
BRANDENBURG...
ROCK HAVEN AND MULDRAUGH...
HOWARD AND WEST POINT...

PRECAUTIONARY/PREPAREDNESS ACTIONS...

THIS IS AN EXTREMELY DANGEROUS AND LIFE THREATENING SITUATION. THIS
STORM IS CAPABLE OF PRODUCING A LARGE DAMAGING TORNADO. IF YOU ARE IN
THE PATH OF THIS TORNADO...TAKE COVER IMMEDIATELY.

&&

LAT...LON 3800 8631 3809 8591 3803 8592 3800 8595
3800 8594 3803 8590 3804 8587 3791 8581
3783 8619 3791 8629 3794 8631
TIME...MOT...LOC 2104Z 259DEG 67KT 3793 8617

\$\$

Tornado Emergency

WWUS54 KFWD 031816
SVSFWD

SEVERE WEATHER STATEMENT
NATIONAL WEATHER SERVICE FORT WORTH TX
116 PM CDT TUE APR 3 2012

TXC113-031845-
/O.CON.KFWD.TO.W.0003.000000T0000Z-120403T1845Z/
DALLAS TX-
116 PM CDT TUE APR 3 2012

...A TORNADO WARNING REMAINS IN EFFECT UNTIL 145 PM CDT FOR SOUTHERN
DALLAS COUNTY...

AT 116 PM CDT...NATIONAL WEATHER SERVICE METEOROLOGISTS CONFIRMED A
LARGE AND EXTREMELY DANGEROUS TORNADO. THIS TORNADO WAS LOCATED NEAR
LANCASTER...MOVING NORTH AT 20 MPH.

THIS IS A TORNADO EMERGENCY FOR SOUTHERN PORTIONS OF THE CITY OF
DALLAS AND THE CITY OF LANCASTER. SEEK SHELTER NOW.

THE TORNADO WILL BE NEAR...
LANCASTER AROUND 125 PM CDT...

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A TORNADO HAS BEEN CONFIRMED. THIS IS AN EXTREMELY DANGEROUS AND LIFE
THREATENING SITUATION. IF YOU ARE IN THE PATH OF THIS DESTRUCTIVE
TORNADO...TAKE COVER IMMEDIATELY.

A TORNADO WATCH REMAINS IN EFFECT UNTIL 800 PM CDT TUESDAY EVENING
FOR EASTERN TEXAS.

&&

LAT...LON 3276 9659 3275 9658 3255 9668 3255 9688
3256 9689 3277 9688
TIME...MOT...LOC 1816Z 202DEG 17KT 3258 9680

\$\$

Clearing Counties - One Watch in Effect

WWUS64 KSJT 050133
WCNSJT

WATCH COUNTY NOTIFICATION FOR WATCH 240
NATIONAL WEATHER SERVICE SAN ANGELO TX
833 PM CDT FRI MAY 4 2012

TXC059-081-083-095-105-151-207-235-253-267-307-319-327-353-399-
411-413-417-431-435-441-447-451-050245-
/O.CAN.KSJT.SV.A.0240.000000T0000Z-120505T0400Z/

THE NATIONAL WEATHER SERVICE HAS CANCELLED SEVERE THUNDERSTORM
WATCH 240 FOR THE FOLLOWING AREAS

IN TEXAS THIS CANCELS 23 COUNTIES

IN WEST CENTRAL TEXAS

CALLAHAN	COKE	COLEMAN
CONCHO	CROCKETT	FISHER
HASKELL	IRION	JONES
KIMBLE	MASON	MCCULLOCH
MENARD	NOLAN	RUNNELS
SAN SABA	SCHLEICHER	SHACKELFORD
STERLING	SUTTON	TAYLOR
THROCKMORTON	TOM GREEN	

THIS INCLUDES THE CITIES OF...ABILENE...ALBANY...ANSON...BAIRD...
BALLINGER...BRADY...BRONTE...COLEMAN...CROSS PLAINS...EDEN...
ELDORADO...HAMLIN...HASKELL...JUNCTION...MASON...MENARD...
MERTZON...OZONA...PAINT ROCK...ROBERT LEE...ROBY...ROTAN...
SAN ANGELO...SAN SABA...SONORA...STAMFORD...STERLING CITY...
SWEETWATER...THROCKMORTON...WINTERS AND WOODSON.

\$\$

TXC049-050400-
/O.CON.KSJT.SV.A.0240.000000T0000Z-120505T0400Z/

SEVERE THUNDERSTORM WATCH 240 REMAINS VALID UNTIL 11 PM CDT THIS
EVENING FOR THE FOLLOWING AREAS

IN TEXAS THIS WATCH INCLUDES 1 COUNTY

IN WEST CENTRAL TEXAS

BROWN

THIS INCLUDES THE CITIES OF...BROWNWOOD.

Second Watch Issued While First Watch Remains in Effect

WWUS63 KEAX 062049
WCNEAX

WATCH COUNTY NOTIFICATION FOR WATCHES 258/259
NATIONAL WEATHER SERVICE KANSAS CITY/PLEASANT HILL MO
349 PM CDT SUN MAY 6 2012

KSC005-043-091-103-107-121-209-MOC003-013-021-037-047-049-063-095-
165-070400-
/O.NEW.KEAX.SV.A.0259.120506T2049Z-120507T0400Z/

THE NATIONAL WEATHER SERVICE HAS ISSUED SEVERE THUNDERSTORM WATCH
259 IN EFFECT UNTIL 11 PM CDT THIS EVENING FOR THE FOLLOWING
AREAS

IN KANSAS THIS WATCH INCLUDES 7 COUNTIES

IN EAST CENTRAL KANSAS

JOHNSON KS LINN KS MIAMI

IN NORTHEAST KANSAS

ATCHISON KS DONIPHAN LEAVENWORTH
WYANDOTTE

IN MISSOURI THIS WATCH INCLUDES 9 COUNTIES

IN NORTHWEST MISSOURI

ANDREW BUCHANAN CLINTON
DEKALB

IN WEST CENTRAL MISSOURI

BATES CASS CLAY
JACKSON PLATTE

THIS INCLUDES THE CITIES OF...ATCHISON...BUTLER...CAMERON...
EXCELSIOR SPRINGS...HARRISONVILLE...INDEPENDENCE...KANSAS CITY...
KANSAS CITY...LEAVENWORTH...LIBERTY...MOUND CITY...OLATHE...
OVERLAND PARK...PAOLA...PARKVILLE...PLATTE CITY...PLATTSBURG...
SAVANNAH...ST. JOSEPH AND TROY.

\$\$

MOC001-025-033-041-053-061-079-083-089-101-107-115-117-121-159-
175-177-195-211-070200-
/O.CON.KEAX.SV.A.0258.000000T0000Z-120507T0200Z/

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SEVERE THUNDERSTORM WATCH 258 REMAINS VALID UNTIL 9 PM CDT THIS EVENING FOR THE FOLLOWING AREAS

IN MISSOURI THIS WATCH INCLUDES 19 COUNTIES

IN CENTRAL MISSOURI

COOPER	HOWARD	PETTIS
SALINE		

IN NORTH CENTRAL MISSOURI

CALDWELL	CARROLL	CHARITON
DAVISS	GRUNDY	LINN MO
LIVINGSTON	MACON	RANDOLPH
SULLIVAN		

IN NORTHEAST MISSOURI

ADAIR

IN WEST CENTRAL MISSOURI

HENRY	JOHNSON MO	LAFAYETTE
RAY		

THIS INCLUDES THE CITIES OF...BOONVILLE...BROOKFIELD...
CARROLLTON...CHILlicoTHE...CLINTON...CONCORDIA...FAYETTE...
GALLATIN...KEYTESVILLE...KINGSTON...KIRKSVILLE...LA PLATA...
LEXINGTON...MACON...MARSHALL...MILAN...MOBERLY...NEW FRANKLIN...
RICHMOND...SEDALIA...TRENTON...WARRENSBURG AND WINDSOR.

\$\$

New Watch Issued Which Replaces An Old Watch and Partial Cancellation of a Second Old Watch

WWUS63 KDVN 040557
WCNDVN

WATCH COUNTY NOTIFICATION FOR WATCHES 234/235/236
NATIONAL WEATHER SERVICE QUAD CITIES IA IL
1257 AM CDT FRI MAY 4 2012

IAC057-087-101-111-177-MOC045-199-041000-
/O.CAN.KDVN.TO.A.0234.000000T0000Z-120504T0600Z/
/O.NEW.KDVN.SV.A.0236.120504T0557Z-120504T1000Z/

THE NATIONAL WEATHER SERVICE HAS ISSUED SEVERE THUNDERSTORM WATCH 236 UNTIL 5 AM CDT EARLY THIS MORNING WHICH REPLACES A PORTION OF

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TORNADO WATCH 234. THE NEW WATCH IS VALID FOR THE FOLLOWING AREAS

IN IOWA THE NEW WATCH INCLUDES 5 COUNTIES

IN SOUTHEAST IOWA

DES MOINES HENRY IA JEFFERSON
LEE VAN BUREN

IN MISSOURI THE NEW WATCH INCLUDES 2 COUNTIES

IN NORTHEAST MISSOURI

CLARK SCOTLAND

THIS INCLUDES THE CITIES OF...BURLINGTON...FAIRFIELD...
FORT MADISON...KAHOKA...KEOSAUQUA...MEMPHIS AND MOUNT PLEASANT.

\$\$

ILC011-073-155-040700-
/O.CAN.KDVN.SV.A.0235.000000T0000Z-120504T1000Z/

THE NATIONAL WEATHER SERVICE HAS CANCELLED SEVERE THUNDERSTORM
WATCH 235 FOR THE FOLLOWING AREAS

IN ILLINOIS THIS CANCELS 3 COUNTIES

IN NORTH CENTRAL ILLINOIS

BUREAU PUTNAM

IN NORTHWEST ILLINOIS

HENRY IL

THIS INCLUDES THE CITIES OF...HENNEPIN...KEWANEE AND PRINCETON.

\$\$

IAC107-115-183-040700-
/O.EXP.KDVN.TO.A.0234.000000T0000Z-120504T0600Z/

THE NATIONAL WEATHER SERVICE WILL ALLOW TORNADO WATCH 234 TO
EXPIRE AT 1 AM CDT EARLY THIS MORNING FOR THE FOLLOWING AREAS

IN IOWA THIS ALLOWS TO EXPIRE 3 COUNTIES

IN SOUTHEAST IOWA

KEOKUK LOUISA WASHINGTON

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185-020100-
/O.CON.KRAH.SV.A.0219.000000T0000Z-120502T0100Z/

SEVERE THUNDERSTORM WATCH 219 REMAINS VALID UNTIL 9 PM EDT THIS
EVENING FOR THE FOLLOWING AREAS

IN NORTH CAROLINA THIS WATCH INCLUDES 16 COUNTIES

IN CENTRAL NORTH CAROLINA

ALAMANCE	CHATHAM	DAVIDSON
DURHAM	FORSYTH	FRANKLIN
GRANVILLE	GUILFORD	HALIFAX
NASH	ORANGE	PERSON
RANDOLPH	VANCE	WAKE
WARREN		

THIS INCLUDES THE CITIES OF...ASHEBORO...BURLINGTON...
CHAPEL HILL...DURHAM...GREENSBORO...HENDERSON...HIGH POINT...
LEXINGTON...LOUISBURG...NASHVILLE...OXFORD...PITTSBORO...
RALEIGH...ROANOKE RAPIDS...ROXBORO...WARRENTON AND WINSTON-SALEM.

\$\$

Partial Cancellation, Extension in Expiration Time and Expansion in Area

WWUS64 KBRO 110751
WCNBRO

WATCH COUNTY NOTIFICATION FOR WATCH 273
NATIONAL WEATHER SERVICE BROWNSVILLE TX
251 AM CDT FRI MAY 11 2012

TXC047-247-427-505-110900-
/O.CAN.KBRO.TO.A.0273.000000T0000Z-120511T0800Z/

THE NATIONAL WEATHER SERVICE HAS CANCELLED TORNADO WATCH 273 FOR
THE FOLLOWING AREAS

IN TEXAS THIS CANCELS 4 COUNTIES

IN DEEP SOUTH TEXAS

BROOKS	JIM HOGG	STARR
ZAPATA		

THIS INCLUDES THE CITIES OF...FALFURRIAS...HEBBRONVILLE...
RIO GRANDE CITY...ROMA AND ZAPATA.

\$\$

