

NATIONAL WEATHER SERVICE INSTRUCTION 10-517
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Operations and Services
Public Weather Services, NWSPD 10-5

MULTI-PURPOSE WEATHER PRODUCTS SPECIFICATION

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

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Certified by: W/AFS21 (R. Heffernan)

SUMMARY OF REVISIONS: This directive supersedes NWSI 10-517, “*Multi-Purpose Weather Products Specification*”, dated October 9, 2017. The following changes were made to this instruction:

- 1) Refined Short-Term Forecast (NOW) issuance criteria in Section 2.2.2.
- 2) Added issuance bases of the Special Weather Statement (SPS) to include instances of non-life threatening landspouts and waterspouts that occur over inland lakes/wide river bodies (Section 3.2.2. b).
- 3) Modified sub-severe SPS product formatting into the impact-based format (Section 3.3.4).
- 4) Minor edits in the Hazardous Weather Outlook (HWO) section, including some modifications of certain text into mixed-case format.
- 5) All new and updated examples for all products in Appendix A.
- 6) Adjusted some of the Preliminary Local Storm Report (LSR) Event Source and Event Types in Appendix B. Added in approved sources (911 Call Center and CoCoRaHS) and types (Coastal Flood, Debris Flow, Lakeshore Flood, Sneaker Wave, Tsunami, and Volcanic Ashfall) that were not included into the previous version of this Specification. Adjusted some Event Types for proper characterization of required magnitudes.

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July 18, 2022
Date

Multi-Purpose Weather Products Specification

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1. Introduction

This procedural directive provides detailed information on routine short-term forecast products issued by National Weather Service (NWS) Weather Forecast Offices (WFO) and multi-purpose products issued for convective, fire, marine, tropical, winter and/or non-precipitation weather, and flooding hazards issued by WFOs and the NWS' Storm Prediction Center (SPC).

2. Short Term Forecast (product category NOW)

2.1 Mission Connection

Short Term Forecasts provide the public with detailed weather information occurring within 6 hours of product issuance.

2.2 Issuance Guidelines

2.2.1 Creation Software

WFOs should use the Graphical Hazards Generation Editor (GHG) to issue Short Term Forecasts. The Warning Generation (WarnGen) application may be used for low- or minimal-impact non-convective weather events that may be better geographically represented through a polygon-based area than county/zone selections.

2.2.2 Issuance Criteria

WFOs may issue Short Term Forecasts to discuss the evolution of convective and stratiform precipitation, winter weather, sea breezes, marine weather, fog, winds, and temperatures within their geographic area of responsibility. The NOW should not contain information about convective storm threats or hazards that meet the criteria of "sub-severe" thunderstorms in the Special Weather Statement (SPS) (see Section 3.2.2 b.). The NOW will not duplicate or contradict information contained in the SPS or other watch, warning, or advisory text products. At regional discretion, offices may issue graphical short-term forecasts via WFO Internet pages that compliment or replace the NOW. If an office issues both a NOW and a graphical short-term forecast, the forecasts will be consistent.

2.2.3 Issuance Time

Short Term Forecasts are non-scheduled, event-driven products.

2.2.4 Valid Time

Short Term Forecasts are valid from the time of issuance until the expiration time.

2.2.5 Product Expiration Time

The product expiration time is not more than 6 hours after the time of issuance.

2.3 Technical Description

Short Term Forecasts will follow the format and content described in this section.

2.3.1 UGC Type

NOWs will use the Zone (Z) code of the UGC for GHG issuances and the County (C) type for WarnGen issuances.

2.3.2 Mass News Disseminator Header

The Short Term Forecast MND header is “Short Term Forecast.”

2.3.3 Content

WFOs will write Short Term Forecasts in non-technical terms. WFOs should write Short Term Forecasts in future tense, focusing on forecast precipitation location, movement, intensity, amounts, and duration. Short Term Forecasts should be concise. If generated in GHG, WFOs should segment Short Term Forecast into separate zone groupings based on common weather conditions and forecast trends. If either GHG or WarnGen are used to describe a short-term thunderstorm forecast, only general mentions of thunderstorm coverage and movement are allowed with no specific mentions of wind or hail values or potential impacts. WFOs may include additional information as time permits.

2.3.4 Format

```
FPaaii cccc ddhhmm
NOWccc
```

```
Short Term Forecast
National Weather Service City State
time am/pm time_zone day mon dd yyyy
```

```
STZ001-002-003-ddhhmm-
ZONE 1-ZONE 2-ZONE 3-
Including the cities of...Town A...Town B...Town C
time am/pm time_zone day mon dd yyyy
```

```
.NOW...
...Optional Headline...
```

This section contains a concise non-technical free text paragraph describing non-hazardous weather timing, duration, and forecast conditions.

```
$$
```

```
STZ004-005-006-ddhhmm-
ZONE 4-ZONE 5-ZONE 6-
Including the cities of...Town D...Town E...Town F
time am/pm time_zone day mon dd yyyy
```

Optional additional segment with same format as the first segment.

```
$$
```

Forecaster Name/Number (OPTIONAL)

Figure 1. Short Term Forecast Format

2.4 Updates, Amendments and Corrections

Short Term Forecasts are not updated or amended. WFOs will correct Short Term Forecasts for format and grammatical errors.

3. Special Weather Statement (product category SPS)

3.1 Mission Connection

Special Weather Statements (SPS) provide the public with information concerning ongoing or imminent weather hazards, which require a heightened level of awareness or action. Although typically used for hazards within 6 hours of product issuance, the SPS may also be used to heighten the awareness of a major event forecast to occur beyond 6 hours.

3.2 Issuance Guidelines

3.2.1 Creation Software

WFOs should use GHG or WarnGen to issue SPSs.

3.2.2 Issuance Criteria

The criteria are dependent on the situation for which the SPS is issued. Issuance criteria guidelines by weather hazard are as follows:

- a. Developing Hazardous Convective Weather. WFOs may issue SPSs to heighten public awareness about ongoing or imminent hazardous convective weather expected to continue/dissipate, or expand/decrease in geographical coverage within the next hour or two.
- b. Sub-Severe Thunderstorms. WFOs should issue an SPS for strong thunderstorms that approach, or are expected to approach, severe convective criteria (see NWSI 10-511 Section 2.2.2). General criteria for a strong thunderstorm is considered to be one or a combination of the following events:
 - (1) sustained winds or wind gusts of 40 to 57 mph (lower values may be used at forecaster's discretion)
 - (2) hail less than 1 inch in diameter
 - (3) frequent to continuous lightning
 - (4) landspouts that are not anticipated to threaten lives and/or property
 - (5) funnel clouds not expected to become a tornado threat
 - (6) waterspouts that occur exclusively over an inland body of water (i.e. lake, river) and are not expected to reach/threaten the shoreline

- c. Other Short-term Hazards. WFOs may issue SPSs for high-impact events to supplement information contained in other hazardous weather products, providing high-resolution details when possible. Examples include but are not limited to:
 - (1) “black ice”
 - (2) short-duration heavy snow bands below warnig criteria (see NWSI 10-513)
 - (3) lake-effect snow bands that briefly reduce visibility
 - (4) heavy rainfall that is not expected to cause flooding
 - (5) heat indices or wind chill near “advisory” level for an hour or two
 - (6) local areas of blowing dust below advisory criteria

- d. Major Events Forecast to Occur Beyond 6 Hours. WFOs may issue SPSs to heighten awareness of major events forecast to occur beyond 6 hours. Priority should be given to ongoing or imminent events such as those listed above.

3.2.3 Issuance Time

SPSs are non-scheduled, event-driven products.

3.2.4 Valid Time

SPSs are valid from time of issuance until the expiration or update time.

3.2.5 Product Expiration Time

The product expiration time is not more than 6 hours after the time of issuance, except for an SPS covering an event forecast to occur beyond 12 hours, for which the product expiration time is not more than 12 hours after the time of issuance.

3.3 Technical Description

SPSs will follow the format and content described in this section.

3.3.1 UGC Type

SPSs will use the Zone (Z) code of the UGC for GHG issuances and the County (C) type for WarnGen issuances. For zone-based SPSs, Public Zones will be used, not Fire Weather Zones.

3.3.2 Mass News Disseminator Header

The SPS MND header is “Special Weather Statement.”

3.3.3 Content

The SPS will be consistent with other hazardous weather products. WFOs should describe weather hazards in concise, non-technical terms.

3.3.4 Format

Depending on the hazard(s) and issuance criteria from Section 3.2.2, WFOs should use the following format specifications.

3.3.4.1 Generic Format

This SPS format will be used for situations that are not convective in nature detailed in Sections 3.2.2 a, c, and d. Latitude/longitude polygon delineation of the threat area may be included for those hazardous events where observational and model data support sub-County Warning Area (CWA) scale specificity (e.g., bands of heavy snow, areas of brief, torrential rain, etc.). SPS for events with more indefinite areal bounds, or CWA-wide events (e.g., general change to unseasonably cold weather, or “heads up” to a long-term winter storm threat), do not need to include a polygon segment.

```

WWaa8i cccc ddhhmm
SPSccc

Special Weather Statement
National Weather Service City State
time am/pm time_zone day mon dd yyyy

STZ001-002-003-ddhhmm-
ZONE 1-ZONE 2-ZONE 3-
Including the cities of Town A, Town B, Town C
time am/pm time zone day mon dd yyyy

...Optional Headline...

Concise forecast of hazardous weather conditions within the valid
period of the statement.

$$

STZ004-005-006-ddhhmm-
ZONE 4-ZONE 5-ZONE 6-
Including the cities of Town D, Town E, Town F
time am/pm time zone day mon dd yyyy

...Optional Headline...

Optional second segment with the same format as the first segment.

$$

Forecaster Name/Number (OPTIONAL)

```

Figure 2. Special Weather Statement Generic Format.

3.3.4.2 Impact-Based Format for Sub-Severe Thunderstorms

The SPS format will contain this information in the following order:

Basis Statement – Time; notation of “strong thunderstorm(s)” and the physical distance (in miles) from the closest location; storm motion. If edits of more than 10 mph or more

than 45 degrees are required for the storm motion, the forecaster should adjust the track in WarnGen, rather than manually edit the text, in order to keep in agreement with TIME...MOT...LOC line.

HAZARD (Sub-Section 1)...Basis for issuance (including recent credible reports if available); forecast or observed thunderstorm wind gusts and maximum hail sizes.

SOURCE (Sub-Section 2)...Select one of these accepted source types (radar, trained weather spotters, law enforcement, emergency management, broadcast media, or public). If a qualifying report of sub-severe weather occurs from the storm within valid threat area and time, it should be added in a separate sentence in this section, after the source type (e.g. “At 8:10 pm EDT, nickel size hail was reported 5 miles south of Petersburg.”).

IMPACT (Sub-Section 3)...This section contains predetermined statements that are based on the selected wind speed and/or hail size attribute. Default impact statements are as follows in Table 1:

Table 1: Impact Statements for the Sub-Severe Thunderstorm SPS

Sub-Severe Thunderstorm Attribute	Impact Statement(s) [1) Sentence 1. 2) Sentence 2. ... n) Sentence n. n = last sentence] Use all numbered statements in the order they appear.
Wind (40 – 57 mph)	1) Gusty winds could knock down tree limbs and blow around unsecured objects.
Hail (less than 1.00” diameter)	1) Minor damage possible to outdoor objects is possible.
Landspout(s)	1) Minor damage possible to outdoor objects is possible.
Waterspout(s) over an inland body of water	1) Waterspouts can easily overturn boats and create locally hazardous waters.

* Alternative statements may be used at Regional discretion

Locations Impacted Section. Inclusion of locations to be impacted in the threat area (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 (first sub-section “HAZARD”, under the third bullet) instead of the precautionary/preparedness actions. If a Severe Thunderstorm or a Tornado Watch is in effect for the impacted area, there should be an option to include those specifics in a statement in this section.

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 twenty 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.

Impact-Based Coded Tag Lines – This section details the required and optional coded tag lines according to each hazard type. These outputs are linked to options made within the WarnGen product generation application and are not editable in the warning text. All tag lines and information wording will be in Uppercase. The specifications for coded tag choices are as follows:

LANDSPOUT...POSSIBLE/OBSERVED

(Optional;

WATERSPOUT...POSSIBLE/OBSERVED

(Optional;

MAX HAIL SIZE...X.XX IN

(Required; X.XX IN = value of maximum expected/reported hail size, in inches, from above in the “HAZARD” warning basis section; can be 0.00 IN if no hail is expected or a maximum value of 0.88 IN.

MAX WIND GUST...XX MPH

(Required; XX MPH = value of maximum wind speed, in miles per hour (mph), from above in the “HAZARD” warning basis section, to the nearest 10 mph, with 40 MPH and 50 MPH as the standard two options; can be <40 MPH if winds are known to be or forecasted be less than 40 mph as long as there is hail (less than 1 inch in diameter) present.

Note: Impact-Based Coded Tag Order. The hail will appear first, then the wind tag. If either the landspout or waterspout tag are invoked, then they will appear first.

```
WUaa5i cccc ddhhmm
SPSccc
STC001-002-ddhhmm-
/k.aaa.cccc.pp.s.####.yymmddThhnnZB-yymmddThhnnZE/
```

```
Special Weather Statement (...Corrected as required)
National Weather Service City State
time am/pm time_zone day mon dd yyyy
```

```
...A strong thunderstorm(s)/A line of strong thunderstorms will
impact (portion of) County one in section State, (portion of) County
two in section State... (Number of counties will match number of
counties in UGC Line) through hhmm AM/PM time_zone (Expiration time
of statement)
```

```

At hhmm am/pm time_zone, basis, forward speed and direction.

HAZARD...Statement basis element(s) (wind speed and/or hail size,
landspout, waterspout over named Lake/River).

SOURCE...(Choose one) Radar indicated, Trained weather spotters,
Law enforcement, Emergency management, Broadcast media, or Public.

IMPACT...Statements will populate based on the selected hazards in
Table 1.

* Locations impacted include...
Location #1, Location #2, Location #n. (n = variable number of
locations).

PRECAUTIONARY/PREPAREDNESS ACTIONS...

(Call-to-Action statements).

(Tornado/Severe Thunderstorm Watch information, if valid for the
warned area). (Optional)

&&

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

(Impact-Based "coded tag" section)
LANDSPOUT...POSSIBLE/OBSERVED (Optional)
WATERSPOUT...POSSIBLE/OBSERVED (Optional)
MAX HAIL SIZE...X.XX IN (X.XX = value of maximum expected hail size,
in diameter, from the "HAZARD" basis section)
MAX WIND GUST...XX MPH (XX = value of maximum expected wind speed
from the "HAZARD" basis section to the nearest 10mph)

$$
FORECASTER NAME/NUMBER (OPTIONAL)

```

Figure 3. Special Weather Statement format for Sub-Severe Thunderstorms, where AAaa indicated latitude in decimal degrees north to two decimal places (without the decimal point), and BBBbb indicated longitude in decimal degrees west to two decimal places (without the decimal point and with no leading zero).

3.4 Updates, Amendments and Corrections

SPSs should be updated as needed. WFOs will correct SPSs for format and grammatical errors.

4. Hazardous Weather Outlook (product category HWO)

4.1 Mission Connection

WFOs issue Hazardous Weather Outlooks (HWO) to provide the public, media, and emergency managers with a single source of information regarding expected hazardous weather through the seven-day forecast period. The HWO is a brief description of the potential for hazardous weather. The HWO provides (but is not limited to) outlooks of hazardous winter weather, fire weather, non-precipitation, convective weather, tropical, marine, and/or flooding (see Section 4.3.3.d for content guidelines by weather hazard).

4.2 Issuance Guidelines

4.2.1 Creation Software

WFOs should use GHG to issue HWOs.

4.2.2 Issuance Criteria

The issuance criteria for the HWO varies by WFO and region. The HWO may be issued 1) as a daily routine product, 2) on an event-driven basis, or 3) not at all. The decision on which one of these three criteria WFOs use should be made in coordination with primary users and their regional office to best meet the local needs. If a WFO uses the product either on a daily routine basis or an event-driven basis, it should be updated whenever necessary to always depict the latest expected weather hazards for the seven-day forecast period.

4.2.3 Issuance Time

WFOs should issue HWOs between 5 and 7 am local time, except where local users request a different issuance time. WFOs may issue between 4 and 7 am with Regional concurrence.

4.2.4 Valid Time

An outlook is valid from the time of issuance until the next scheduled issuance or update, unless the HWO is issued on an event-driven basis.

4.2.5 Product Expiration Time

The product expiration time is 24 hours from the routine issuance time, including updated or corrected HWOs, unless issued on an event-driven basis.

4.3 Technical Description

HWOs will follow the format and content described in this section.

4.3.1 UGC Type

HWOs will use the Zone (Z) code of the UGC.

4.3.2 Mass News Disseminator Header

The HWO MND header is “Hazardous Weather Outlook.”

4.3.3 Content

HWOs will describe in concise non-technical terms the specific weather hazards of concern for the first and second forecast period. HWOs should also briefly discuss in non-technical terms any weather hazards in the Day Two through Seven time period. A weather hazard is considered to be any weather phenomenon that may require the issuance of a watch, warning, or advisory. WFOs should include a general time and location for the hazardous weather event, possible impact, and degree of uncertainty. The HWO will not be updated to address specific short-fuse warning and advisory products (Tornado Warning, Severe Thunderstorm Warning, Flash Flood Warning, Special Marine Warning, etc.). The HWO may refer readers to other long-fuse WFO watches, warnings, or advisory products rather than duplicating the information therein.

- a. Headlines. WFOs may include headlines for watches, warnings, advisories, and significant weather hazards. (Note: Headlines are mandatory for tropical cyclone watches and warnings – see Section 4.3.3.d(7)). If the HWO includes headlines, the WFO should issue an update to the HWO any time those headlines change.
- b. Geographic Locations. The HWO should include a short description of the geographical area covered. HWOs may be written to include the entirety of any WFO’s geographic area of responsibility in one or more segments to cover specific weather hazards and/or geographic areas. If the HWO contains more than one segment, these segments should add up to cover all of a WFO’s geographic area of responsibility each time the outlook is issued.
- c. Days of Week. WFOs may include actual days of the week such as “Today” after “.DAY ONE...” and “Saturday through Thursday” after “.DAYS TWO THROUGH SEVEN...”
- d. Content Guidelines By Weather Hazard.
 - (1) Convective Weather. WFOs will discuss convective weather hazards such as large hail, damaging winds, and tornadoes for all or portions of their geographic area of responsibility. WFOs should include Storm Prediction Center Categorical Convective Outlook information for Day 1, Day 2, and Day 3 Risks (Marginal, Slight, Enhanced, Moderate, and High) of organized severe convective weather. WFOs may include information on strong (less than severe) convection. WFOs may mention severe thunderstorm potential when they are included in SPC’s Days 4-8 convective outlook
 - (2) Winter Weather. WFOs will discuss winter weather hazards such as wind chill, freezing fog, significant snow, freezing rain, sleet, or a mixture of these weather phenomena for all or portions of their geographic area of responsibility. WFOs should mention winter weather hazards in the Day 3 through Day 7 time period when there is a 30 percent or greater chance of these types of weather events meeting or exceeding local warning or advisory criteria. WFOs should mention active winter weather watches, warnings, and advisories for Days 1 and 2 in the HWO.

- (3) Non Precipitation. WFOs will discuss non-precipitation weather hazards such as strong winds, excessive heat, extreme cold, blowing dust/sand, freezing temperatures during the growing season, and dense fog for all or portions of their geographic area of responsibility. WFOs should mention active non-precipitation watches, warnings, and advisories for Days 1 and 2 in the HWO. WFOs should mention non-precipitation weather hazards in the Day 3 through Day 7 time period when there is a 30 percent or greater chance of these types of weather events meeting or exceeding local warning or advisory criteria.
- (4) Fire Weather. WFOs will discuss fire weather hazards such as extremely dry conditions, strong gusty winds, and/or dry thunderstorms for all or portions of their geographic area of responsibility. WFOs should mention active Fire Weather Watches and Red Flag Warnings for Days 1 and 2 in the HWO. WFOs may include SPC Fire Weather Outlook (Day 1 and Day 2) information in the HWO. WFOs will include fire weather hazards in their CWA issued by another WFO.
- (5) Flooding. WFOs will discuss flood hazards for all or portions of their geographic area of responsibility. This includes inland flooding associated with a tropical cyclone. WFOs may include information on small stream flood situations and life-threatening flood prone areas such as narrow canyons.
- (6) Marine. WFOs will discuss the following marine hazards: high winds, high seas, high surf, coastal flooding, and potential for waterspouts for all or portions of their area of responsibility. Rip currents may be discussed following the rip current guidance in NWSI 10-310, Section 3.6. WFOs routinely or seasonally providing rip current information will include this information in the Day 1 portion of the HWO when forecasting a high risk of rip currents. Marine hazards that do not directly affect the coastline or lakeshore, such as those associated with Small Craft Advisories and Gale Warnings, may be omitted from the HWO based on local user needs.
- (7) Tropical. WFOs will headline the Day 1 Tropical Cyclone Watches and Warnings issued by the National Hurricane Center (NHC), Central Pacific Hurricane Center (CPHC), or Joint Typhoon Warning Center (JTWC). The HWO should urge users to consult Hurricane Local Statements issued by the WFO to obtain detailed information concerning potential hazards such as strong winds, storm surge, and excessive rainfall. WFOs should be consistent with official guidance and products issued by the NHC/WPC in the Days 2 through 7 time period of the HWO. If a WFO forecasts a potential impact to all or portions of its geographic area of responsibility in Days 2 through 5, WFOs may use the following statement in the HWO: “Consult the latest guidance and information from the National Hurricane Center concerning the possible effects of (Hurricane or Tropical Storm) xxxx” where (xxxx is the name of the storm). WFOs will not reference tropical cyclone activity beyond the time period addressed by official tropical cyclone products (currently 5 days).

- e. **“Nil” Statement.** If the HWO is a routine product and no weather hazards are expected, WFOs will include one of the following statements in the Day One and/or Days Two through Seven sections:

“No hazardous weather is expected at this time” or
 “The probability for widespread hazardous weather is low”

The HWO should not contain “nil” statements for specific types of weather hazards.

- f. **Spotter Instructions.** HWOs should include instructions to spotters and emergency managers for any time during the seven-day forecast period.
- g. **Grids and Graphics.** WFOs may produce information supplemental to the text HWO in the form of grids or graphics with Regional concurrence. Any supplemental grids or graphics will be consistent with the text HWO.

4.3.4 Format

```
FLaa4i cccc ddhhmm
HWOccc
```

```
Hazardous Weather Outlook
National Weather Service city state
time am/pm time_zone day mon dd yyyy
```

```
STZ001-002-003-ddhhmm-
ZONE 1-ZONE 2-ZONE 3-
time am/pm time_zone day mon dd yyyy
```

```
...HEADLINE FOR ACTIVE TROPICAL CYCLONE WATCHES AND WARNINGS...
(MANDATORY)
```

```
...HEADLINE FOR ALL OTHER ACTIVE WATCHES, WARNINGS, ADVISORIES OR
SIGNIFICANT WEATHER HAZARDS... (Optional)
```

```
This Hazardous Weather Outlook is for portion of State(s).
```

```
.DAY ONE...Actual day of the week (Optional - Such as Today, This
Afternoon, or Tonight)
```

```
WFOs will discuss in concise non-technical terms each hazard’s impact
in a free text format for the first and second forecast periods.
WFOs may reference supporting warnings, watches, advisories, and
statements.
```

```
.DAYS TWO THROUGH SEVEN...Actual day of the week (Optional - Such as
Monday through Saturday)
```

```
WFOs should discuss in concise non-technical terms each hazard’s
impact in a free text format for days two through seven. WFOs may
```

reference supporting warnings, watches, advisories, and statements. This section is a "heads up" for planning purposes.

.SPOTTER INFORMATION STATEMENT...

Instructions to spotters or emergency managers. WFOs may omit this section if no hazardous weather is expected in both the day one and days two through seven time periods.

\$\$

STZ004-005-006-ddhmm-
 ZONE 4-ZONE 5-ZONE 6-
 time am/pm time_zone day mon dd yyyy

Optional second segment with the same format as the first segment.

\$\$

FORECASTER NAME/NUMBER (OPTIONAL)

Figure 3. Hazardous Weather Outlook Format

4.4 Updates, Amendments and Corrections

WFOs should update the HWO if the forecast for hazardous weather changes. WFOs will place higher priority on updating the relevant watch, warning, and advisory products. WFOs will correct outlooks for format and grammatical errors.

5. Preliminary Local Storm Report (product category LSR)

5.1 Mission Connection

Preliminary Local Storm Reports (LSR) provide the Storm Prediction Center (SPC), River Forecast Centers (RFCs), adjacent WFOs, the public, media, and emergency managers with reported observations of hazardous weather events. Preliminary Local Storm Reports also serve as the primary basis for the official monthly publication *Storm Data*.

5.2 Issuance Guidelines

5.2.1 Creation Software

WFOs should use the AWIPS LSR generation software for reports. Other LSR generation software may be used with Regional concurrence.

5.2.2 Issuance Criteria

WFOs will issue LSRs for severe weather events such as tornadoes, waterspouts, large hail, thunderstorm/marine wind gusts and flash floods. WFOs should issue LSRs for other events listed in Appendix B. LSRs should be issued for events that meet or exceed applicable warning criteria. WFOs should issue LSRs for hail reports equal to or larger than 0.75 inches in diameter. WFOs may issue LSRs for other hazardous weather events that do not exceed applicable warning criteria. LSRs should be issued as close to real-time as possible. WFOs should issue LSRs to "summarize" a list of reports during and/or at the end of an event (e.g. severe weather outbreak,

winter storm). Events reported more than seven days after occurrence will be included in monthly *Storm Data* reports instead of LSRs.

5.2.3 Issuance Time

LSRs are non-scheduled, event-driven products.

5.2.4 Valid Time

LSRs are valid upon issuance.

5.2.5 Product Expiration Time

Not applicable.

5.3 Technical Description

LSRs will follow the format and content described in this section.

5.3.1 UGC Type

Not applicable.

5.3.2 Mass News Disseminator Header

The LSR MND header is “PRELIMINARY LOCAL STORM REPORT.”

5.3.3 Content

LSRs will follow a national standard format. WFOs should denote whether the magnitude of a report was measured, estimated, or of unknown origin for a thunderstorm or non-thunderstorm wind gusts, marine thunderstorm wind gusts, downburst winds, high sustained winds, ice accumulation associated with freezing rain, sleet accumulation, snow accumulation, hail size, and visibility restrictions due to fog or dense fog. Many users decode the LSR and the SPC decodes the report to produce national hourly and daily reports. All fields of data will begin at the prescribed column of the page. The report should include type of phenomenon, date/time of occurrence, location of event (including state, county, direction, distance from a well-known site, and Latitude/Longitude points), source of the report, damage, deaths, and/or injuries and remarks to convey other noteworthy information about the event. The remarks section of the LSR should use plain English and be written in full sentences. After all weather events listed in the LSR, WFOs may use a delimiter “&&” to provide a narrative summary of weather events in plain English sentences.

LSRs are preliminary in nature. The final report of verified weather events will be listed in monthly *Storm Data* reports in accordance with NWSI 10-1605. Please refer to the NDS procedural directives or associated regional supplements for warning threshold criteria for the following weather phenomena:

Marine Weather	NWSI 10-313 (Special Marine Warnings)
Severe Weather	NWSI 10-511 (WFO Severe Weather Products Specification)
Winter Weather	NWSI 10-513 (WFO Winter Weather Products Specification)
Non-Precipitation	NWSI 10-515 (WFO Non-Precipitation Weather Products Specification)

Tropical Weather NWSI 10-601 (Tropical Cyclone Products)
 Flooding NWSI 10-922 (WFO Hydrologic Products Specification)

Please refer to Appendix B for a list of event sources and weather event types.

5.3.4 Format

```
NWaa5i Kccc DDHHMM
LSRccc

PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE CITY STATE
time am/pm time_zone day mon dd yyyy

..TIME...   ...EVENT...   ...CITY LOCATION...   ...LAT.LON...
..DATE...   ...MAG....   ..COUNTY LOCATION..ST.. ...SOURCE....
..REMARKS..

hhmm qM|x|x|EVENT           |DIST DIR CITY           |LL.LLd LLL.LLd|x|
MM/DD/YYYY|EMAG UNIT       |xx|COUNTY              |ST|x|SOURCE              |
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXX|*** # FATAL, # INJ *** OR REMARKS                      |
XXXXXXXXXXXX|REMARKS CONTINUED FOR UP TO 500 CHARACTERS TOTAL      |
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

&&

OPTIONAL FREE TEXT SUMMARY.

$$

FORECASTER NAME/NUMBER (OPTIONAL)
```

Figure 4. Local Storm Report Format. The “x” and “|” symbols indicate blank spaces. See Table 1 for explanation of fields within individual reports.

<u>Item</u>	<u>Description</u>	<u>Example(s)</u>	<u>Line:Chars</u>	<u>Length</u>
hhmm qM	time: hour and minute with am/pm qualifier, and preceding zero if necessary	0109 PM	1:1-7	7
EVENT	event type from the list in Appendix B	TORNADO TSTM WIND GST	1:13-28	16
DIST	distance from city	10	1:30-52	23
DIR	direction from city	NW		
CITY	City name (obtained from list)	NECHE		
LL.LLd	latitude to 2 decimal places and direction	38.31N	1:54-67	14
LLL.LLd	longitude to 2 decimal places and direction, no negative sign, no leading zero	104.92W		
MM/DD/YYYY	date: month / day / 4-digit year, no leading zero on month	8/22/2009	2:1-10	10
EMAG	event magnitude value, led by determination method designator (E/M/U) for those event types listed with an asterisk	E2.5 M59	2:13-25	13

	in Appendix B	U6.50 EF4		
UNIT	units of the magnitude value	INCHES MPH		
COUNTY	county name	PEMBINA	2:30-47	18
ST	state 2-letter postal abbreviation	ND	2:49-50	2
SOURCE	source of the report from list in Appendix B	TRAINED SPOTTER	2:54-69	16
FATAL INJ	numbers of fatalities and injuries, surrounded by 3 asterisks, separated by a comma, with spaces in between, at the beginning of the remarks section	*** 1 FATAL, 2 INJ *** *** 4 INJ ***	4+:13- 69	57 to 500

Table 1. Explanation of fields within individual reports in the LSR format described in Figure 4.

5.4 Updates, Amendments and Corrections

Updates and amendments are not applicable. WFOs will issue a new LSR if the office receives new reports of weather events that meet or exceed warning criteria or updated information on previously reported weather events. WFOs will correct statements for format and grammatical errors.

6. Mesoscale Discussion (product category MD)

6.1 Mission Connection

SPC issues Mesoscale Discussions (MD) to convey to CONUS WFOs, the public, media, emergency managers, and other specialized users, the location and current meteorological reasoning for short-term hazardous weather concerns.

6.2 Issuance Guidelines

6.2.1 Creation Software

SPC will use the N-AWIPS graphics creation tool in NMAP and SPC web-based product generation software to create and issue MDs.

6.2.2 Issuance Criteria

MD issuance criteria depend on the type of weather hazard. Refer to Section 6.3.3 for details.

6.2.3 Issuance Time

MDs are non-scheduled, event-driven products.

6.2.4 Valid Time

The valid time is from the time of issuance until the next update time.

6.3 Technical Description

MDs will follow the format and content described in this section.

6.3.1 UGC Type

MDs will use the Zone (Z) code of the UGC.

6.3.2 Mass News Disseminator Header

The MD MND header is “MESOSCALE DISCUSSION nnnn”, where nnnn is a four-digit number reset to 0001 on 1 January at 0000 UTC.

6.3.3 Content

SPC uses the Mesoscale Discussion (MD) to alert WFOs and various users to different types of short-term weather hazards. Types of MD by weather hazard are as follows:

- a. Severe Potential. SPC should issue an MD to discuss convective trends and severe thunderstorm potential as follows:
 - (1) Watch likely. This type of MD should be issued in an area where organized severe convection is expected, and should precede Severe Thunderstorm or Tornado Watch issuance by about 1 to 2 hours, allowing time for collaboration with the affected WFOs.
 - (2) Watch possible. This type of MD may be issued in an area where organized severe convection is possible, but it is unclear whether a Severe Thunderstorm or Tornado Watch will be needed in the next 1 to 2 hours.
 - (3) Watch unlikely. This type of MD may be issued in an area where isolated strong to severe convection is ongoing or expected, but is not expected to reach the severity or coverage criteria for a Severe Thunderstorm or Tornado Watch in the next 1 to 2 hours. SPC should also issue an MD for severe potential when it is monitoring an area for a potential convective watch or when thunderstorm development is potentially severe, but will not have enough areal coverage or duration that is expected to last long enough for a convective watch issuance.
 - (4) Watch needed soon. This type of MD may be issued in an area where organized severe convection may develop very rapidly and a Severe Thunderstorm or Tornado Watch will be issued within the next 15-30 minutes.
 - (5) Probability of watch issuance. This qualifies the likelihood of watch issuance contained in the Severe Potential line, using the following probability values: 5 and 20 percent (watch unlikely); 40 and 60 percent (watch possible); 80 and 95% (watch likely). A probability of 95 percent is also used for “watch needed soon” situations.
- b. Watch Update. SPC should issue an MD at least once every 2 to 3 hours for each convective watch that is in effect and focus on mesoscale and storm-scale features affecting the severe weather within the watch area. An MD should also be issued within the last 1-2 hours before convective watch expiration detailing expected SPC

actions for possible new watch issuance. The text of the MD should begin “THE SEVERE WEATHER THREAT FOR (SEVERE THUNDERSTORM/TORNADO) WATCH nnnn CONTINUES.”

- c. Heavy Snow. SPC should issue an MD for snowfall accumulation rates of 1 inch per hour or greater for a period of 2 hours or greater at elevations below 4000 feet MSL (mean sea level) and accumulation rates of 2 inches per hour or greater for a period of 2 hours or greater at elevations above 4000 feet MSL. Discussions may also address precipitation trends (increasing or decreasing rates), and climatologically rare events.
- d. Freezing Rain. SPC should issue an MD for freezing rain accumulations greater than .05 inch per hour for a period of 3 hours or greater. Discussions may also address where a precipitation type is forecast to change from liquid to freezing or from freezing to liquid.
- e. Blizzard. SPC should issue an MD for mesoscale blizzard conditions forecast to persist 3 hours or greater.
- f. Snow Squall. SPC should issue an MD for snow squalls that are expected to last at least 1 hour with visibility reductions of 1/2 SM or less.
- g. Convective Outlook Upgrade. SPC should issue an MD when upgrading a Day 1 convective outlook risk category to “moderate” or “high” risk. SPC will issue this type of MD prior to the 1300, 1630, 2000, or 0100 UTC convective outlook issuance times, and briefly describe the area to be upgraded. This MD will refer to the ensuing outlook discussion.
- h. Update to the 0100 UTC Convective Outlook. After the 0600 UTC outlook is issued, the 0100 UTC outlook cannot be amended. When thunderstorms or severe thunderstorms develop after 0600 UTC in areas that are not adequately covered by the 0100 UTC outlook, and storms are expected to continue for at least 2 hours, an MD should be issued to discuss convective threats not included in the 0100 UTC Day 1 Outlook.

6.3.4 Format for Severe Potential Mesoscale Discussion

```
ACUS11 KWNS ddhhmm
SWOMCD
SPC MCD ddhhmm
STZ000-STZ000-ddhhmm-
```

```
MESOSCALE DISCUSSION nnnn
NWS STORM PREDICTION CENTER NORMAN OK
time am/pm time zone day mon dd yyyy
```

AREAS AFFECTED... (PORTION OF STATES OR GEOGRAPHICAL AREAS) ...

CONCERNING... (TYPE OF MD)

```

VALID DDHHMMZ - DDHHMMZ

PROBABILITY OF WATCH ISSUANCE...[increments of 20 percent from 20-80
percent, including 5 and 95 percent]

SUMMARY...[A concise statement regarding the forecast
(timing, coverage, intensity, and mode) severe threat.]

DISCUSSION...[The description of significant mesoscale features and
atmospheric processes which will likely result in the expected
event.]

..FORECASTER NAME.. mm/dd/yyyy

...PLEASE SEE WWW.SPC.NOAA.GOV FOR GRAPHICAL PRODUCT...

ATTN...WFO A...WFO B... (affected WFOs)

LAT...LON AAaaBBbb AAaaBBbb AAaaBBbb AAaaBBbb AAaaBBbb AAaaBBbb
AAaaBBbb AAaaBBbb (list of latitude/longitude coordinates
outlining the for MD graphic area)

```

Figure 5. Severe Potential Mesoscale Discussion format, where AAaa=Latitude north in degrees to two decimal places (without decimal point), BBbb=Longitude west in degrees to two decimal places (without decimal point and without leading 1 west of 100 degrees west).

6.3.5 Format for all other Mesoscale Discussions (Watch Update, Winter, Heavy Rain, and Outlook Upgrade MDs)

```

ACUS11 KWNS ddhhmm
SWOMCD
SPC MCD ddhhmm
STZ000-STZ000-ddhhmm-

MESOSCALE DISCUSSION nnnn
NWS STORM PREDICTION CENTER NORMAN OK
time am/pm time zone day mon dd yyyy

AREAS AFFECTED...(PORTION OF STATES OR GEOGRAPHICAL AREAS)...

CONCERNING...(TYPE OF MD)

VALID DDHHMMZ - DDHHMMZ

SUMMARY...[A concise statement regarding the forecast
(timing, coverage, intensity, and mode) severe threat.]

DISCUSSION...[The description of significant mesoscale features and
atmospheric processes which will likely result in the expected
event.]

```

```
..FORECASTER NAME.. mm/dd/yyyy  
...PLEASE SEE WWW.SPC.NOAA.GOV FOR GRAPHICAL PRODUCT...  
ATTN...WFO A...WFO B... (affected WFOs)  
LAT...LON AAaaBBbb AAaaBBbb AAaaBBbb AAaaBBbb AAaaBBbb AAaaBBbb  
AAaaBBbb AAaaBBbb (corner points for MD graphic)
```

Figure 6. Mesoscale Discussion format (other than Severe Potential Discussions), where AAaa=Latitude north in degrees to two decimal places (without decimal point), BBbb=Longitude west in degrees to two decimal places (without decimal point and without leading 1 west of 100 degrees west).

6.4 Updates, Amendments and Corrections

SPC will issue MDs as needed and there are no updates. SPC will correct messages for format and grammatical errors.

APPENDIX A - Product Examples

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4. Hazardous Weather Outlook	A-12
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1. Introduction

This appendix provides product examples for the WFOs, SPC, and the public.

2. Short Term Forecast.

(Non-segmented version)

FPUS74 KEWX 061227
NOWEWX

Short Term Forecast
National Weather Service Austin/San Antonio TX
627 AM CST Tue Feb 6 2018

TXZ171>173-183>194-202>209-219>225-061500-
Llano-Burnet-Williamson-Val Verde-Edwards-Real-Kerr-Bandera-
Gillespie-Kendall-Blanco-Hays-Travis-Bastrop-Lee-Kinney-Uvalde-
Medina-Bexar-Comal-Guadalupe-Caldwell-Fayette-Frio-Atascosa-
Wilson-Karnes-Gonzales-De Witt-Lavaca-
Including the cities of Llano, Burnet, Georgetown, Del Rio,
Rocksprings, Leakey, Kerrville, Bandera, Fredericksburg, Boerne,
Blanco, San Marcos, Austin, Bastrop, Giddings, Bracketville,
Uvalde, Hondo, San Antonio, New Braunfels, Seguin, Lockhart,
La Grange, Pearsall, Pleasanton, Floresville, Karnes City,
Gonzales, Cuero, and Hallettsville
627 AM CST Tue Feb 6 2018

.NOW...

Patchy fog and drizzle will continue across most of South Central Texas for at least the rest of the morning hours. In addition, isolated rain showers capable of producing accumulations up to a tenth of an inch are possible as well. Please slow down and use your low beam headlights when encountering reduced visibilities due to fog and drizzle this morning.

\$\$

(Segmented version)

FPUS74 KEWX 190551
NOWEWX

Short Term Forecast
National Weather Service Austin/San Antonio TX
1151 PM CST Sun Feb 18 2018

TXZ171>173-186>192-190800-
Llano-Burnet-Williamson-Kerr-Bandera-Gillespie-Kendall-Blanco-
Hays-Travis-
Including the cities of Llano, Burnet, Georgetown, Kerrville,
Bandera, Fredericksburg, Boerne, Blanco, San Marcos, and Austin
1151 PM CST Sun Feb 18 2018

.NOW...

Through 3 am CST, a broken line of showers will move northeast at 40 mph across the eastern Hill Country. Spotty rainfall amounts of a trace up to one quarter inch will be possible north of a line from Hondo to Dripping Springs to Jarrell. An isolated thunderstorm could form among this line in the early morning hours.

\$\$

TXZ183-184-202-217-190800-
Val Verde-Edwards-Kinney-Maverick-
Including the cities of Del Rio, Rocksprings, Bracketville,
and Eagle Pass
1151 PM CST Sun Feb 18 2018

.NOW...

Through 3 am CST, a cluster of thunderstorms will move northeast at 40 mph across northern Mexico into the Southern Edwards Plateau. Spotty rainfall amounts of one quarter to one half inch will be possible mainly north of a Del Rio to Barksdale line.

\$\$

(Segmented version with coastal marine zones)

FPUS74 KBRO 051158
NOWBRO

Short Term Forecast
National Weather Service Brownsville TX
558 AM CST Mon Feb 5 2018

TXZ250-251-253>257-051400-
Brooks-Kenedy-Hidalgo-Inland Willacy-Inland Cameron-
Coastal Willacy-Coastal Cameron-
Including the cities of Falfurrias, Sarita, McAllen, Edinburg,
Pharr, Mission, Weslaco, Raymondville, Brownsville, Harlingen,
Port Mansfield, Port Isabel, South Padre Island, Laguna Heights,
and Laguna Vista
558 AM CST Mon Feb 5 2018

.NOW...

Through 8 am...areas of fog, some locally dense, will reduce visibility to one half mile or less at times across mainly eastern portions of deep south Texas and the Rio Grande Valley. Motorists are advised to drive with caution, use low beam headlights and allow extra time to travel this morning.

\$\$

GMZ130-132-135-150-155-051400-
Laguna Madre from the Port of Brownsville to the Arroyo Colorado-
Laguna Madre from the Arroyo Colorado To 5 NM north of Port
Mansfield TX-
Laguna Madre from 5 nm north of Port Mansfield to Baffin Bay TX-
Coastal waters from Port Mansfield to the Rio Grande out 20 nm-
Coastal waters from Baffin Bay to Port Mansfield out 20 nm-
558 AM CST Mon Feb 5 2018

.NOW...

Through 8 am...areas of fog, some locally dense, will reduce
visibility to 2 nautical miles or less at times across coastal and
nearshore waters. Mariners are advised to navigate with caution,
slow down and use running lights.

\$\$

3. Special Weather Statement

(Sub-severe thunderstorm)

WWUS85 KFGZ 092021
SPSFGZ

Special Weather Statement
National Weather Service Flagstaff AZ
121 PM MST Thu Sep 9 2021

AZZ007-015-092045-
Western Mogollon Rim-Coconino Plateau-
121 PM MST Thu Sep 9 2021

...A strong thunderstorm will impact portions of Coconino County
including Valle through 145 PM MST...

At 120 PM MST, Doppler radar was tracking a strong thunderstorm near
Valle, moving northwest at 20 mph.

HAZARD...Winds in excess of 40 mph and penny size hail.

SOURCE...Radar indicated.

IMPACT...Gusty winds could knock down tree limbs and blow around
unsecured objects. Minor damage to outdoor objects is
possible.

Locations impacted include...
Valle.

This includes the following highways...
State Route 64 between mile markers 202 and 220.
Highway 180 between mile markers 254 and 265.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

If outdoors, consider seeking shelter inside a building.

&&

LAT...LON 3560 11193 3545 11203 3552 11245 3584 11223
TIME...MOT...LOC 2020Z 117DEG 16KT 3557 11210

MAX HAIL SIZE...0.75 IN
MAX WIND GUST...40 MPH

\$\$

(Line of sub-severe thunderstorms)

WWUS83 KGRB 071023
SPSGRB

Special Weather Statement
National Weather Service Green Bay WI
523 AM CDT Tue Sep 7 2021

WIZ013-020>022-031-073-074-071115-
Southern Oconto County WI-Southern Marinette County WI-Shawano WI-
Northern Oconto County WI-Door WI-Menominee WI-
Northern Marinette County WI-
523 AM CDT Tue Sep 7 2021

...Strong thunderstorms will impact portions of southern Marinette,
northern Door, Menominee, Oconto and eastern Shawano Counties through
615 AM CDT...

At 522 AM CDT, Doppler radar was tracking strong thunderstorms along
a line extending from near Escanaba to near Wausaukee to 10 miles
west of Neopit. Movement was east at 45 mph.

HAZARD...Winds in excess of 40 mph and half inch hail.

SOURCE...Radar indicated.

IMPACT...Gusty winds could knock down tree limbs and blow around
unsecured objects. Minor damage to outdoor objects is
possible.

Strong thunderstorms will be near...
Wausaukee around 530 AM CDT.
Keshena around 550 AM CDT.
Menominee around 555 AM CDT.
Legend Lake around 600 AM CDT.
Gillett around 610 AM CDT.

Ephraim and Egg Harbor around 615 AM CDT.

Other locations impacted by these storms include College Of Menominee Nation, Cullen, Underhill, Breed, Peninsula State Park, Middle Inlet, Rock Island State Park, Hayes, High Falls Reservoir and Hickory Corners.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

If outdoors, consider seeking shelter inside a building.

&&

LAT...LON 4521 8691 4510 8713 4501 8740 4512 8737
4517 8744 4512 8753 4495 8758 4474 8824
4497 8908 4544 8786 4544 8785 4535 8789
4511 8760 4524 8735 4526 8717 4541 8698
4542 8681 4541 8680
TIME...MOT...LOC 1022Z 291DEG 39KT 4579 8714 4535 8799 4498 8904

MAX HAIL SIZE...0.50 IN
MAX WIND GUST...40 MPH

\$\$

(Sub-severe thunderstorm with landspout potential)

WWUS81 KGYX 231752
SPSGYX

Special Weather Statement
National Weather Service Gray ME
152 PM EDT Mon Aug 23 2021

NHZ011-015-231830-
Western And Central Hillsborough NH-Cheshire NH-
152 PM EDT Mon Aug 23 2021

...A strong thunderstorm will impact portions of east central Cheshire and southwestern Hillsborough Counties through 230 PM EDT...

At 151 PM EDT, Doppler radar was tracking a strong thunderstorm capable of producing a landspout over Mason, or 7 miles north of Fitchburg, moving northwest at 30 mph.

HAZARD...Landspouts and winds in excess of 40 mph.

SOURCE...Radar indicated.

IMPACT...Minor damage to outdoor objects is possible. Gusty winds could knock down tree limbs and blow around unsecured objects.

Locations impacted include...

Jaffrey, Peterborough, Greenfield, Lyndeborough, Dublin, Frankestown, Bennington, Harrisville, Greenville, Wilton, New Ipswich, Sharon, Mason, Temple, Hancock, Brookline and Rindge.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

If outdoors, consider seeking shelter inside a building.

&&

LAT...LON 4271 7191 4294 7212 4301 7185 4271 7168
TIME...MOT...LOC 1751Z 140DEG 27KT 4271 7177

LANDSPOUT...POSSIBLE
MAX HAIL SIZE...0.00 IN
MAX WIND GUST...40 MPH

\$\$

(Local dense fog)

WWUS83 KARX 111222
SPSARX

Special Weather Statement
National Weather Service La Crosse WI
722 AM CDT Wed Aug 11 2021

IAZ008>011-018-019-029-030-MNZ079-086>088-094>096-WIZ017-029-032>034-041>044-053>055-061-111500-
Mitchell-Howard-Winneshiek-Allamakee-Floyd-Chickasaw-Fayette-
Clayton-Wabasha-Dodge-Olmsted-Winona-Mower-Fillmore-Houston-
Taylor-Clark-Buffalo-Trempealeau-Jackson-La Crosse-Monroe-Juneau-
Adams-Vernon-Crawford-Richland-Grant-
Including the cities of Osage, Cresco, Decorah, Waukon,
Charles City, New Hampton, Oelwein, Elkader, Wabasha,
Dodge Center, Rochester, Winona, Austin, Preston, Caledonia,
Medford, Neillsville, Alma, Arcadia, Whitehall,
Black River Falls, La Crosse, Sparta, Tomah, Mauston, Friendship,
Viroqua, Prairie Du Chien, Richland Center, and Platteville
722 AM CDT Wed Aug 11 2021

...Areas of Dense Fog This Morning...

Through 10 AM, there will be areas of dense fog. This fog will mainly affect north-central Wisconsin and the ridge tops of southeast Minnesota, northeast Iowa, and in southwest and central Wisconsin.

Be prepared for fog that could suddenly reduce visibilities to 1/4 mile or less. Expect the fog to dissipate by 10 AM. Slow down and allow extra time to reach your destination.

\$\$

(General information about an upcoming potential for special weather phenomena)

WWUS83 KLOT 032047
SPSLOT

SPECIAL WEATHER STATEMENT
National Weather Service Chicago/Romeoville IL
347 PM CDT Sun Oct 3 2021

ILZ033-039-INZ010-011-019-032300-
Iroquois-Ford-Newton-Jasper-Benton-
Including the cities of Watseka, Gilman, Paxton, Gibson City,
Roselawn, Kentland, Morocco, Rensselaer, DeMotte, Fowler,
and Oxford
347 PM CDT Sun Oct 3 2021 /447 PM EDT Sun Oct 3 2021/

...Funnel Clouds Possible Late This Afternoon...

Atmospheric conditions exist today across east central Illinois and parts of northwestern Indiana that favor the possible formation of weak circulations. Some of these circulations are occurring underneath developing showers and thunderstorms, where a funnel cloud may develop.

Low hanging clouds can also appear to dip up and down at times, but they will not show signs of any rapid rotation. An actual funnel cloud will exhibit spinning in a counter-clockwise direction.

In rare instances, these funnels may briefly touch down. Stay alert and be prepared to move to a safe shelter if a funnel cloud approaches the ground.

\$\$

(Sub-warning snow squalls/snow showers)

WWUS81 KBTV 011424
SPSBTV

Special Weather Statement
National Weather Service Burlington VT
924 AM EST Tue Mar 1 2022

NYZ026-027-029>031-034-087-011500-
Northern St. Lawrence NY-Northern Franklin NY-
Southeastern St. Lawrence NY-Southern Franklin NY-Western Essex NY-
Western Clinton NY-Southwestern St. Lawrence NY-
924 AM EST Tue Mar 1 2022

...A band of heavy snow will impact portions of southwestern

NWSI 10-517 AUGUST 1, 2022

Clinton, Franklin, northeastern St. Lawrence and northwestern Essex Counties through 1000 AM EST...

At 922 AM EST, a band of heavy snow was reported along a line extending from near Lisbon to near Piercefield. Movement was northeast at 40 mph.

HAZARD...Visibility less than a mile, and snow accumulation up to 1 inch per hour.

SOURCE...Radar indicated.

IMPACT...Low visibility may pose a hazard to motorists. Accumulating snow will make travel difficult.

Locations impacted include...

Potsdam, Massena, Adirondack Regional Airport, Saranac Lake, Tupper Lake, Norfolk, Louisville, Moira, Bangor, Parishville, Colton, Bombay, Wilmington, Bryants Mill, Massena International Airport - Richards Field, Helena, Carry Falls Reservoir, Waddington, Madrid and Brushton.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Conditions can deteriorate rapidly in winter weather situations. Be prepared for snow or ice covered roads. Slow down and allow extra time when traveling.

&&

LAT...LON 4499 7474 4500 7454 4435 7355 4424 7448
4480 7533 4488 7522 4489 7517 4487 7516
4493 7508 4493 7501 4496 7497 4495 7495
4497 7496 4499 7489 4497 7493 4497 7488
4500 7489 4501 7483

TIME...MOT...LOC 1422Z 255DEG 35KT 4480 7537 4429 7459

\$\$

(Short-range hazardous weather)

WWUS81 KBTV 271334
SPSBTV

Special Weather Statement
National Weather Service Burlington VT
834 AM EST Sun Feb 27 2022

NYZ026>031-034-035-087-VTZ001>012-016>019-271800-
Northern St. Lawrence-Northern Franklin-Eastern Clinton-
Southeastern St. Lawrence-Southern Franklin-Western Clinton-
Western Essex-Eastern Essex-Southwestern St. Lawrence-Grand Isle-
Western Franklin-Orleans-Essex-Western Chittenden-Lamoille-

Caledonia-Washington-Western Addison-Orange-Western Rutland-
Windsor-Eastern Franklin-Eastern Chittenden-Eastern Addison-
Eastern Rutland-

Including the cities of Massena, Malone, Plattsburgh, Star Lake,
Saranac Lake, Tupper Lake, Dannemora, Lake Placid, Port Henry,
Ticonderoga, Ogdensburg, Potsdam, Gouverneur, Alburgh,
South Hero, St. Albans, Newport, Island Pond, Burlington,
Johnson, Stowe, St. Johnsbury, Montpelier, Middlebury, Vergennes,
Bradford, Randolph, Rutland, Springfield, White River Junction,
Enosburg Falls, Richford, Underhill, Bristol, Ripton,
East Wallingford, and Killington

834 AM EST Sun Feb 27 2022

...Snow squalls possible this afternoon and evening...

Snow squalls are possible this afternoon and evening as an arctic front moves across the North Country. Affected locations will see rapidly changing weather and road conditions, with brief heavy snow and gusty winds. A quick snow accumulation of up to an inch is possible.

Precautionary/Preparedness Actions...

Be prepared for areas of blowing and drifting snow. This could lead to temporary whiteout conditions and the potential for dangerous driving conditions. Icy roads are also possible. If you are traveling and encounter adverse winter driving conditions, reduce speed and make sure headlights are on.

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(Long-range hazardous weather)

WWUS86 KSTO 032130
SPSSTO

Special Weather Statement
National Weather Service Sacramento CA
130 PM PST Sun Mar 3 2019

CAZ013>019-063-064-066>069-041200-
Shasta Lake Area / Northern Shasta County-
Burney Basin / Eastern Shasta County-Northern Sacramento Valley-
Central Sacramento Valley-Southern Sacramento Valley-
Carquinez Strait and Delta-Northern San Joaquin Valley-
Mountains Southwestern Shasta County to Northern Lake County-
Clear Lake/Southern Lake County-
Northeast Foothills/Sacramento Valley-Motherlode-
Western Plumas County/Lassen Park-
West Slope Northern Sierra Nevada-
Including the cities of Shasta Dam, Burney, Redding, Red Bluff,
Chico, Oroville, Marysville/Yuba City, Sacramento,

Fairfield/Suisun, Stockton, Modesto, Alder Springs, Lakeport,
Paradise, Grass Valley, Jackson, Chester, Quincy, and Blue Canyon
130 PM PST Sun Mar 3 2019

...Periods of moderate to heavy precipitation this upcoming week...

Mostly dry weather expected Monday into early Tuesday, then a series of Pacific storms will return wet weather to interior Northern California. Widespread precipitation develops Tuesday afternoon into evening, becoming moderate to heavy overnight Tuesday through Wednesday night. Additional storms will bring light to moderate precipitation Thursday into Friday. Periods of heavy snow and strong wind can be expected in the mountains midweek, impacting travel. With already saturated soils, excessive runoff from additional rain will increase flooding potential. Travelers into the high country, and residents living near potential flood zones should keep up to date on the latest weather information this upcoming week.

\$\$

(NOAA Weather Radio-related notification; areawide)

WWUS86 KEKA 061806
SPSEKA

Special Weather Statement
National Weather Service EUREKA CA
1106 AM PDT Tue Aug 6 2019

CAZ101>113-071900-
Coastal Del Norte-Del Norte Interior-Northern Humboldt Coast-
Southwestern Humboldt-Northern Humboldt Interior-
Southern Humboldt Interior-Northern Trinity-Southern Trinity-
Mendocino Coast-Northwestern Mendocino Interior-
Northeastern Mendocino Interior-Southwestern Mendocino Interior-
Southeastern Mendocino Interior-
1106 AM PDT Tue Aug 6 2019

...NO WEEKLY WEATHER RADIO EAS TEST THIS WEEK...

The National Weather Service in Eureka, California, will not be conducting the weekly weather radio EAS test this Wednesday, August 7th. The weekly radio test is cancelled because FEMA and the FCC will be conducting a national test of the EAS system on August 7th at 1120 AM. To reduce confusion between the two tests, it was determined that the NWS Eureka EAS test would be cancelled this week and then resumed again next week.

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4. Hazardous Weather Outlook

(Severe Convective Weather and other hazards, with optional headline)

LUS43 KPAH 092042
HWOPAH

Hazardous Weather Outlook
National Weather Service Paducah KY
242 PM CST Thu Dec 9 2021

ILZ075>078-080>094-INZ081-082-085>088-KYZ001>022-MOZ076-086-087-
100-107>112-114-102045-
Jefferson-Wayne IL-Edwards-Wabash-Perry IL-Franklin-Hamilton-
White-Jackson-Williamson-Saline-Gallatin-Union-Johnson-Pope-
Hardin-Alexander-Pulaski-Massac-Gibson-Pike-Posey-Vanderburgh-
Warrick-Spencer-Fulton-Hickman-Carlisle-Ballard-McCracken-Graves-
Livingston-Marshall-Calloway-Crittenden-Lyon-Trigg-Caldwell-
Union KY-Webster-Hopkins-Christian-Henderson-Daviess-McLean-
Muhlenberg-Todd-Perry MO-Bollinger-Cape Girardeau-Wayne MO-Carter-
Ripley-Butler-Stoddard-Scott-Mississippi-New Madrid-
242 PM CST Thu Dec 9 2021

...Potent Storm System Will Bring The Risk Of Tornadoes and
Damaging Winds Friday Night...

This Hazardous Weather Outlook is for portions of southern
Illinois, southwest Indiana, western Kentucky, and southeast
Missouri.

.DAY ONE...This Afternoon and Tonight

Areas of fog will develop tonight, especially after midnight.
Limited visibility could impact driving conditions into the early
morning commute.

.DAYS TWO THROUGH SEVEN...Friday through Wednesday

An organized outbreak of severe thunderstorms is possible Friday
night. The main hazards will be damaging winds and isolated
tornadoes, possibly including a couple strong tornadoes.

Storms are expected to develop early Friday night over southeast
Missouri and southwest Illinois, then continue through the
overnight hours across western Kentucky and southwest Indiana.
Conditions will be favorable for brief spin-up tornadoes along
a line of storms, but a couple of long-track supercell tornadoes
are also possible.

.SPOTTER INFORMATION STATEMENT...

Spotter activation will likely be needed Friday night.

\$\$

(Flooding and high winds)

FLUS44 KOHX 181216
HWOOHX

Hazardous Weather Outlook
National Weather Service Nashville TN
716 AM CDT Wed Aug 18 2021

TNZ005>011-023>034-056>066-075-077>080-093>095-191030-
Stewart-Montgomery-Robertson-Sumner-Macon-Clay-Pickett-Houston-
Humphreys-Dickson-Cheatham-Davidson-Wilson-Trousdale-Smith-Jackson-
Putnam-Overton-Fentress-Perry-Hickman-Lewis-Williamson-Maury-
Marshall-Rutherford-Cannon-De Kalb-White-Cumberland-Bedford-Coffee-
Warren-Grundy-Van Buren-Wayne-Lawrence-Giles-
716 AM CDT Wed Aug 18 2021

This Hazardous Weather Outlook is for Middle Tennessee.

.DAY ONE...Today and tonight.

There is a marginal risk of severe storms today, particularly during the afternoon. The primary risk is strong to severe wind gusts.

.DAYS TWO THROUGH SEVEN...Thursday through Tuesday.

There is a high probability of showers and thunderstorms lasting through Saturday night. Significant rainfall accumulations are possible in areas that are affected by multiple rounds of storms, and some flooding may occur, especially in areas near the Alabama state line.

.SPOTTER INFORMATION STATEMENT...

Spotter activation may be needed. Please relay any information about observed severe weather to the NWS.

\$\$

(Fire Weather)

FLUS44 KAMA 080858
HWOAMA

Hazardous Weather Outlook
National Weather Service Amarillo TX
258 AM CST Wed Dec 8 2021

OKZ001>003-TXZ001>020-317-082100-
Cimarron-Texas-Beaver-Dallam-Sherman-Hansford-Ochiltree-Lipscomb-

Hartley-Moore-Hutchinson-Roberts-Hemphill-Oldham-Potter-Carson-
Gray-Wheeler-Deaf Smith-Randall-Armstrong-Donley-Collingsworth-
Palo Duro Canyon-
258 AM CST Wed Dec 8 2021

This Hazardous Weather Outlook is for the Texas and Oklahoma
Panhandles.

.DAY ONE...Today and Tonight.

Elevated fire weather conditions are expected this afternoon in
the western Panhandles.

.DAYS TWO THROUGH SEVEN...Thursday through Tuesday.

Elevated to low end critical fire weather conditions will be
possible Thursday across the southwestern half of the Panhandles.

Critical fire weather conditions are possible across the entire
Panhandles on Friday.

Elevated along with some low end critical fire weather conditions
are possible across portions of the Panhandles Saturday through
Tuesday, with a relatively higher probability of critical
conditions Sunday.

.SPOTTER INFORMATION STATEMENT...

Spotter activation is not anticipated at this time.

Area fire managers and emergency officials should be alert for
elevated to critical fire weather conditions through the next
seven days, particularly Friday.

\$\$

(Marine)

FLUS41 KAKQ 100900
HWOAKQ

Hazardous Weather Outlook
National Weather Service Wakefield VA
400 AM EST Fri Dec 10 2021

NCZ012>017-030>032-102-VAZ084-086-089-090-092-093-095>100-523>525-
110900-

Northampton-Hertford-Gates-Pasquotank-Camden-Western Currituck-
Bertie-Chowan-Perquimans-Eastern Currituck-Gloucester-Mathews-Surry-
James City-Southampton-Isle of Wight-Norfolk/Portsmouth-Suffolk-
Chesapeake-Virginia Beach-Accomack-York-Newport News-
Hampton/Poquoson-

400 AM EST Fri Dec 10 2021

This Hazardous Weather Outlook is for northeast North Carolina, eastern Virginia and southeast Virginia.

.DAY ONE...Today and tonight.

No hazardous weather is expected at this time.

.DAYS TWO THROUGH SEVEN...Saturday through Thursday.

Gusty south to southwest winds are expected on Saturday ahead of a cold frontal passage. Wind gusts of 30 to 40 mph will be possible across the outlook area Saturday afternoon into Saturday night.

.SPOTTER INFORMATION STATEMENT...

Spotter activation is not expected at this time.

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(Bitterly cold temperatures/wind chills)

FLUS43 KUNR 081134
HWOUNR

Hazardous Weather Outlook
National Weather Service Rapid City SD
434 AM MST Fri Feb 8 2019

SDZ001-002-013-014-032-091400-
Harding-Perkins-Northern Meade Co Plains-Ziebach-Haakon-
434 AM MST Fri Feb 8 2019

This Hazardous Weather Outlook is for portions of northwestern South Dakota...and southwestern South Dakota.

.DAY ONE...Today and Tonight

Wind chills of 25 below to 40 below zero are expected this morning, and again tonight. Some blowing snow is expected on the open plains this afternoon and evening as gusty southerly winds develop.

.DAYS TWO THROUGH SEVEN...Saturday through Thursday

Another surge of bitterly cold air will arrive Saturday afternoon through Sunday, along with additional snowfall of a few inches.

.SPOTTER INFORMATION STATEMENT...

Spotter activation will not be needed today.

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Stay tuned to NOAA weather radio for further updates...or check our web site at weather.gov/rapidcity

\$\$

SDZ012-024>031-041-042-072>074-WYZ054>058-071-091400-
Butte-Northern Black Hills-Northern Foot Hills-Rapid City-
Southern Foot Hills-Central Black Hills-Southern Black Hills-
Custer Co Plains-Pennington Co Plains-Fall River-Oglala Lakota-
Sturgis/Piedmont Foot Hills-Southern Meade Co Plains-
Hermosa Foot Hills-Northern Campbell-Southern Campbell-
Western Crook-Wyoming Black Hills-Weston-Northeastern Crook-
434 AM MST Fri Feb 8 2019

This Hazardous Weather Outlook is for portions of northwestern South Dakota...southwestern South Dakota...the Black Hills of South Dakota...northeast Wyoming...and the Black Hills of Wyoming.

.DAY ONE...Today and Tonight

Wind chills of 15 below to 35 below zero are expected this morning.

.DAYS TWO THROUGH SEVEN...Saturday through Thursday

Another surge of bitterly cold air will arrive Saturday afternoon through Sunday, along with additional snowfall of at least a few inches.

.SPOTTER INFORMATION STATEMENT...

Spotter activation will not be needed today.

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Stay tuned to NOAA weather radio for further updates...or check our web site at weather.gov/rapidcity

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SDZ043-044-046-047-049-091400-
Jackson-Bennett-Mellette-Todd-Tripp-
434 AM MST Fri Feb 8 2019 /534 AM CST Fri Feb 8 2019/

This Hazardous Weather Outlook is for portions of south central South Dakota...and southwestern South Dakota.

.DAY ONE...Today and Tonight

Wind chills of 20 below to 35 below zero are expected this

morning.

.DAYS TWO THROUGH SEVEN...Saturday through Thursday

Another surge of bitterly cold air will arrive Saturday afternoon through Sunday, along with additional snowfall of at least a few inches. Then, the possibility exists for a stronger storm on Monday and Tuesday, although the timing and track of this storm remain uncertain at this time.

.SPOTTER INFORMATION STATEMENT...

Spotter activation will not be needed today.

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Stay tuned to NOAA weather radio for further updates...or check our web site at weather.gov/rapidcity

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(Segmented example; multiple hazards and in-effect headlines)

Hazardous Weather Outlook
National Weather Service Baltimore MD/Washington DC
302 PM EST Thu Feb 24 2022

ANZ530>543-DCZ001-MDZ008-011-013-014-016>018-504-506-508-
VAZ052>057-252015-
Chesapeake Bay north of Pooles Island MD-
Chesapeake Bay from Pooles Island to Sandy Point MD-
Chesapeake Bay from Sandy Point to North Beach MD-
Chesapeake Bay from North Beach to Drum Point MD-
Chesapeake Bay from Drum Point MD to Smith Point VA-
Tidal Potomac from Key Bridge to Indian Head MD-
Tidal Potomac from Indian Head to Cobb Island MD-
Tidal Potomac from Cobb Island MD to Smith Point VA-
Patapsco River including Baltimore Harbor-
Chester River to Queenstown MD-Eastern Bay-
Choptank River to Cambridge MD and the Little Choptank River-
Patuxent River to Broomes Island MD-
Tangier Sound and the inland waters surrounding Bloodsworth
Island-District of Columbia-Cecil-Southern Baltimore-
Prince Georges-Anne Arundel-Charles-St. Marys-Calvert-
Central and Southeast Montgomery-Central and Southeast Howard-
Southeast Harford-Prince William/Manassas/Manassas Park-Fairfax-
Arlington/Falls Church/Alexandria-Stafford-Spotsylvania-
King George-
302 PM EST Thu Feb 24 2022

This Hazardous Weather Outlook is for the Maryland portion of the Chesapeake Bay, Tidal Potomac River, and I-95 corridor through central Maryland, northern Virginia, and District of Columbia.

.DAY ONE...Tonight

A Winter Weather Advisory is in effect for portions of north central and northeast Maryland.

.DAYS TWO THROUGH SEVEN...Friday through Wednesday

A Gale Warning is in effect for the upper Chesapeake Bay Friday.

.SPOTTER INFORMATION STATEMENT...

Please report snow and ice measurements according to standard operating procedures.

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Hazardous Weather Outlook
National Weather Service Baltimore MD/Washington DC
302 PM EST Thu Feb 24 2022

MDZ001-501-502-VAZ503-504-WVZ501>506-252015-
Garrett-Extreme Western Allegany-Central and Eastern Allegany-
Western Highland-Eastern Highland-Western Grant-Eastern Grant-
Western Mineral-Eastern Mineral-Western Pendleton-
Eastern Pendleton-
302 PM EST Thu Feb 24 2022

This Hazardous Weather Outlook is for the Allegheny Front counties in western Maryland, eastern West Virginia, and Highland County Virginia.

.DAY ONE...Tonight

An Ice Storm Warning is in effect for Allegany, Garrett, and Mineral Counties. A Winter Weather Advisory is in effect for the remainder of the outlook area.

.DAYS TWO THROUGH SEVEN...Friday through Wednesday

The Ice Storm Warning continues until 10 AM Wednesday.

.SPOTTER INFORMATION STATEMENT...

Please report snow and ice measurements according to standard operating procedures.

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Hazardous Weather Outlook
National Weather Service Baltimore MD/Washington DC
302 PM EST Thu Feb 24 2022

NWSI 10-517 AUGUST 1, 2022

MDZ003>006-503-505-507-VAZ025>031-036>040-050-051-501-502-505>508-
WVZ050>053-055-252015-

Washington-Frederick MD-Carroll-Northern Baltimore-
Northwest Montgomery-Northwest Howard-Northwest Harford-Augusta-
Rockingham-Shenandoah-Frederick VA-Page-Warren-Clarke-Nelson-
Albemarle-Greene-Madison-Rappahannock-Orange-Culpeper-
Northern Fauquier-Southern Fauquier-Western Loudoun-
Eastern Loudoun-Northern Virginia Blue Ridge-
Central Virginia Blue Ridge-Hampshire-Morgan-Berkeley-Jefferson-
Hardy-

302 PM EST Thu Feb 24 2022

This Hazardous Weather Outlook is for portions of eastern West Virginia, northern and central Virginia, and central and western Maryland.

.DAY ONE...Tonight

Winter Weather Advisories are in effect for the central Shenandoah Valley and surrounding highlands, portions of northern Maryland, northern Virginia, and eastern West Virginia.

.DAYS TWO THROUGH SEVEN...Friday through Wednesday

The Winter Weather Advisory continues until 10 AM Friday for portions of northern Maryland and eastern West Virginia.

.SPOTTER INFORMATION STATEMENT...

Please report snow and ice measurements according to standard operating procedures.

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(Approaching named tropical cyclone with associated headlines in effect; one segment)

FLUS44 KLCH 271103
HWOLCH

Hazardous Weather Outlook
National Weather Service Lake Charles LA
603 AM CDT Fri Aug 27 2021

LAZ052>054-281100-
Vermilion-Iberia-St. Mary-
603 AM CDT Fri Aug 27 2021

...HURRICANE WATCH IN EFFECT...
...STORM SURGE WATCH IN EFFECT...

This Hazardous Weather Outlook is for south central Louisiana and southwest Louisiana.

.DAY ONE...Today and tonight.

Please listen to NOAA Weather Radio or go to weather.gov on the Internet for more information about the following hazards.

Storm Surge Watch.

Hurricane Watch.

Widespread showers and thunderstorms are expected to develop across the area by this afternoon. No severe thunderstorms are expected, but stronger thunderstorms will be capable of producing gusty winds and locally heavy rainfall.

.DAYS TWO THROUGH SEVEN...Saturday through Thursday.

Please listen to NOAA Weather Radio or go to weather.gov on the Internet for more information about the following hazards.

Storm Surge Watch.

Hurricane Watch.

Shower and thunderstorm activity will remain scattered to numerous into the weekend. No severe thunderstorms are expected at this time.

Please see the latest advisories on Tropical Storm Ida from the National Hurricane Center regarding the track of this potentially powerful system, forecast to strengthen to a major hurricane before making landfall somewhere along the northern coast of the Gulf of Mexico late Sunday into early Monday.

Once Ida departs the region, we look to remain in our recent wet pattern with elevated rain chances persisting for the middle of next week. No severe thunderstorms are expected at this time.

.SPOTTER INFORMATION STATEMENT...

Spotter activation will likely be needed.

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(No Hazardous Weather)

FLUS41 KBOX 080736
HWOBOX

Hazardous Weather Outlook
National Weather Service Boston/Norton MA
336 AM EDT Wed May 8 2019

CTZ002>004-MAZ002>024-026-RIZ001>008-090745-
Hartford CT-Tolland CT-Windham CT-Western Franklin MA-
Eastern Franklin MA-Northern Worcester MA-Central Middlesex MA-

Western Essex MA-Eastern Essex MA-Western Hampshire MA-
Western Hampden MA-Eastern Hampshire MA-Eastern Hampden MA-
Southern Worcester MA-Western Norfolk MA-Southeast Middlesex MA-
Suffolk MA-Eastern Norfolk MA-Northern Bristol MA-
Western Plymouth MA-Eastern Plymouth MA-Southern Bristol MA-
Southern Plymouth MA-Barnstable MA-Dukes MA-Nantucket MA-
Northern Middlesex MA-Northwest Providence RI-
Southeast Providence RI-Western Kent RI-Eastern Kent RI-Bristol RI-
Washington RI-Newport RI-Block Island RI-
336 AM EDT Wed May 8 2019

This Hazardous Weather Outlook is for northern Connecticut, all of
Massachusetts east of Berkshire County, and Rhode Island.

.DAY ONE...Today and tonight.

No hazardous weather is expected at this time.

.DAYS TWO THROUGH SEVEN...Thursday through Tuesday.

No hazardous weather is expected at this time.

.SPOTTER INFORMATION STATEMENT...

Spotter activation is not expected at this time.

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5. Preliminary Local Storm Report

Individual Report Examples:

(Tornado; recently received report)

NWUS53 KPAH 110306
LSRPAH

PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE PADUCAH KY
906 PM CST FRI DEC 10 2021

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	...MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		

0901 PM	TORNADO	CAYCE	36.56N 89.04W
12/10/2021		FULTON	KY AMATEUR RADIO

DAMAGE REPORTED IN CAYCE TO A CAFE AND THE
FIRE DEPARTMENT.

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(Tornado; fatalities)

NWUS53 KPAH 131517
LSRPAH

PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE PADUCAH KY
917 AM CST MON DEC 13 2021

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	...MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		
0958 PM 12/10/2021	TORNADO	5 S GRAND RIVERS MARSHALL	36.93N 88.24W KY NWS STORM SURVEY

*** 2 FATAL ***
TOTAL DESTRUCTION OF DOZENS OF HOMES IN THE
CAMBRIDGE SHORES AND SHERWOOD SHORES AREAS
ALONG KY LAKE. DAMAGE SURVEYS ARE ONGOING,
BUT A MINIMUM OF EF-3 DAMAGE HAS OCCURRED.
MAX PATH WIDTH APPROXIMATELY 3/4 TO 1 MILE
WIDE. PRELIMINARY ESTIMATE OF 2 FATALITIES.
DAMAGE SURVEY RESULTS REVEAL THE TORNADO WAS
ON THE GROUND ACROSS THE ENTIRETY OF
MARSHALL COUNTY FROM APPROXIMATELY 8 MILES
WSW OF BENTON, PASSING BY JUST NORTH OF
BENTON, AND CONTINUING ONTO KY LAKE.

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(Tornado; post-event recap)

NWUS53 KPAH 082121
LSRPAH

PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE PADUCAH KY
321 PM CST WED DEC 8 2021

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	...MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		
0440 AM 12/08/2021	TORNADO	5 S ELKTON TODD	36.74N 87.17W KY EMERGENCY MNGR

SEVERAL SHEDS EXPERIENCED ROOF DAMAGE AND/OR WALL COLLAPSE FROM OLD RAILROAD LANE TO ALLENSVILLE ROAD. THIS EF-0 TORNADO WAS ON THE GROUND FOR 4.1 MILES. PEAK WIND SPEEDS OF 85 MPH AND MAX WIDTH OF 75 YARDS.

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(Non-Thunderstorm Wind)

NWUS53 KDMX 151941
LSRDMX

PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE DES MOINES IA
141 PM CST WED DEC 15 2021

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		
0125 PM 12/15/2021	NON-TSTM WND DMG	STUART ADAIR	41.50N 94.32W IA EMERGENCY MNGR

POWER POLE DOWN AT SE 4TH AND S FREMONT IN STUART.

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(Report referencing social media/internet-based source)

NWUS53 KDMX 152111
LSRDMX

PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE DES MOINES IA
311 PM CST WED DEC 15 2021

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		
0216 PM 12/15/2021	NON-TSTM WND DMG 3	WNW DES MOINES INT POLK	AI 41.56N 93.70W IA LAW ENFORCEMENT

POWER LINE AND POWER POLE DOWN. VIA TWITTER.

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(Measured Thunderstorm Wind Gust)

NWUS53 KDMX 152301
LSRDMX

PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE DES MOINES IA
501 PM CST WED DEC 15 2021

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	...MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		

0455 PM	TSTM WND GST	4 NNE BUCK GROVE	41.97N 95.37W
12/15/2021	M81 MPH	CRAWFORD	IA AWOS

AWOS STATION KDNS DENISON AIRPORT.

&&

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(Estimated Thunderstorm Wind Gust)

NWUS53 KDMX 152320
LSRDMX

PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE DES MOINES IA
520 PM CST WED DEC 15 2021

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	...MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		

0515 PM	TSTM WND GST	2 S ADAIR	41.48N 94.64W
12/15/2021	E80 MPH	ADAIR	IA EMERGENCY MNGR

EM REPORTS 80+ MPH WINDS, ZERO VISIBILITY
SOUTH OF ADAIR.

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(Estimated hail size)

NWUS54 KEWX 290434

LSREWX

PRELIMINARY LOCAL STORM REPORT
 NATIONAL WEATHER SERVICE AUSTIN/SAN ANTONIO TX
 1134 PM CDT WED APR 28 2021

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		
0745 PM	HAIL	HONDO	29.35N 99.14W
04/28/2021	E4.00 INCH	MEDINA TX	BROADCAST MEDIA

SEVERAL PICTURES SHOWING 3 TO 4 INCH
 DIAMETER HAIL IN THE HONDO AREA.

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Summary Report Examples:

(Thunderstorm winds and hail)

NWUS54 KSJT 302036
 LRSRJT

PRELIMINARY LOCAL STORM REPORT...SUMMARY
 NATIONAL WEATHER SERVICE SAN ANGELO TX
 336 PM CDT FRI APR 30 2021

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		
0950 PM	TSTM WND DMG	2 NW EARLY	31.76N 98.97W
04/28/2021		BROWN TX	EMERGENCY MNGR

ROOF OF MOBILE HOME AND DAMAGE TO 3 OTHER
 MOBILE HOMES. ALSO, DOORS BLOWN OUT OF
 AIRPORT HANGAR.

0945 PM	TSTM WND DMG	2 E LAKE BROWNWOOD	31.82N 99.07W
04/28/2021		BROWN TX	PUBLIC

CORRECTS PREVIOUS TSTM WND DMG REPORT FROM 2
 E LAKE BROWNWOOD NEAR CASON COVE AND
 MOUNTAIN VIEW LANE. 1 DOCK WAS SEVERELY
 DAMAGED AND FLIPPED AND ANOTHER DOCK HAD
 DAMAGE. THE WINDS WERE ESTIMATED TO BE AT
 LEAST 80 MPH.

NWSI 10-517 AUGUST 1, 2022

0937 PM TSTM WND DMG 2 N BANGS 31.75N 99.13W
04/28/2021 BROWN TX EMERGENCY MNGR

EMERGENCY MANAGER REPORTED DAMAGING WINDS DESTROYED TWO SHEDS THAT HOUSE TWO GOATS. THE TWO GOATS WERE KILLED WHEN THESE SMALLER SHEDS WERE TOSSED BY THE THUNDERSTORM WINDS.

0935 PM TSTM WND DMG 3 E FIFE 31.39N 99.34W
04/28/2021 MCCULLOCH TX TRAINED SPOTTER

DAMAGING THUNDERSTORMS WINDS DESTROYED A BARN AND THREW IT FOR 300 FEET TO THE EAST. FOUR WINDOWS ON THE WEST SIDE WERE BROKEN BY THE WIND DRIVEN HAIL.

0932 PM TSTM WND DMG 1 ESE FIFE 31.39N 99.38W
04/28/2021 MCCULLOCH TX TRAINED SPOTTER

3 POWER POLES WERE SNAPPED ABOUT A MILE SOUTH OF THE FM765 AND U.S. 283 INTERSECTION.

0930 PM HAIL LOHN 31.33N 99.41W
04/28/2021 E1.50 INCH MCCULLOCH TX PUBLIC

PING PONG SIZE HAIL AND STRONG WINDS BROKE ONE WINDOW AT THE SCHOOL IN LOHN. THE WIND DRIVEN LARGE HAIL DESTROYED HUNDREDS OF ACRES OF WHEAT BETWEEN FM504 AND FM765.

0930 PM HAIL 3 E FIFE 31.39N 99.34W
04/28/2021 E1.00 INCH MCCULLOCH TX TRAINED SPOTTER

COMBINATION OF LOTS OF HAIL AND STRONG WINDS RESULTED IN NEAR WHITEOUT CONDITIONS FOR 5 MINUTES.

0915 PM TSTM WND DMG DOOLE 31.39N 99.60W
04/28/2021 MCCULLOCH TX TRAINED SPOTTER

DAMAGING THUNDERSTORM WINDS BLEW THE ROOF OF A BARN, UPROOTED A TREE AND BROKE LARGE MESQUITE TREE LIMBS.

0915 PM TSTM WND DMG 1 N SALT GAP 31.31N 99.60W
04/28/2021 MCCULLOCH TX TRAINED SPOTTER

SEVEN POWER POLES WERE BLOWN DOWN NEAR FM503 AND FM504. TREES AND BRUSH HAD TO BE CLEARED FROM FM503. THE TRAINED SPOTTER REPORTED EVERYTHING WAS BLOWN FROM WEST TO EAST. WINDS ARE ESTIMATED AT 85 MPH.

NWSI 10-517 AUGUST 1, 2022

0831 PM TSTM WND DMG 10 WNW THROCKMORTON 33.24N 99.34W
04/28/2021 THROCKMORTON TX LAW ENFORCEMENT

DAMAGING THUNDERSTORM WINDS TORE SOME OF THE METAL OFF OF ABOUT 6 HOMES, FLIPPED AN RV ON ITS SIDE, AND DAMAGED A SMALLER OUTBUILDING. IT DAMAGED AN OLDER BARN, CAUSING IT TO LEAN OVER. AN AWNING ON A HOME WAS DAMAGED. THE WIND DRIVEN HAIL ALSO BROKE SEVERAL WINDOWS ON THE NORTH AND WEST SIDE OF HOMES AND SEVERAL VEHICLES IN THE AREA.

0831 PM HAIL 10 WNW THROCKMORTON 33.23N 99.33W
04/28/2021 E1.75 INCH THROCKMORTON TX LAW ENFORCEMENT

CORRECTS PREVIOUS HAIL REPORT FROM 9 W THROCKMORTON. CORRECTS PREVIOUS HAIL REPORT FROM 9 W THROCKMORTON. WIND DRIVEN GOLFBALL SIZED HAIL DAMAGED ABOUT 5-6 HOMES, BREAKING WINDOWS ON THE NORTH AND WEST SIDE OF THEIR HOMES. SOME OF THE HOMES HAD ROOF AND WATER DAMAGE IN THEIR HOMES. AN R/V WAS FLIPPED. VEHICLES WERE BADLY DAMAGED. HAIL WAS AT LEAST GOLF BALL SIZE. WINDS WERE ESTIMATED AT 80-85 MPH.

0755 PM TSTM WND GST RULE 33.19N 99.89W
04/28/2021 E58 MPH HASKELL TX PUBLIC

PUBLIC ESTIMATED WINDS OF AT LEAST 50 KNOTS. SUSTAINED WIND SQUALL FOR ABOUT 5 MINUTES.

0335 PM HAIL 2 E NOVICE 31.99N 99.59W
04/28/2021 M1.75 INCH COLEMAN TX PUBLIC

HAILSTONES WERE JUST UNDER 2 INCHES.

0231 PM HAIL WINGATE 32.04N 100.11W
04/28/2021 E0.88 INCH RUNNELS TX PUBLIC

THE PUBLIC REPORTED DIME TO NICKEL SIZE HAIL.

0218 PM HAIL BRONTE 31.89N 100.30W
04/28/2021 E1.25 INCH COKE TX FIRE DEPT/RESCUE

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(Measuerd rainfall reports)

NWUS53 KPAH 071734
LSRPAH

PRELIMINARY LOCAL STORM REPORT
NATIONAL WEATHER SERVICE PADUCAH KY
1134 AM CST MON MAR 7 2022

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	...MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		

0800 AM	HEAVY RAIN	1 E SCOTT CITY	37.22N 89.51W
03/07/2022	M2.85 INCH	SCOTT MO	COCORAHS

24 HOUR RAINFALL FOR COCORAHS STATION
MO-SC-5: SCOTT CITY 0.9 E.

0700 AM	HEAVY RAIN	5 NNW OXLY	36.67N 90.73W
03/07/2022	M2.50 INCH	RIPLEY MO	COCORAHS

24 HOUR RAINFALL FOR COCORAHS STATION
MO-RP-6: FAIRDEALING 6.0 W.

0700 AM	HEAVY RAIN	2 SW STONEFORT	37.59N 88.73W
03/07/2022	M5.04 INCH	JOHNSON IL	COCORAHS

24 HOUR RAINFALL AMOUNT AT COCORAHS STATION
IL-JH-1: NEW BURNSIDE 1.8 ENE.

0800 AM	HEAVY RAIN	4 NE GOREVILLE	37.59N 88.92W
03/07/2022	M2.89 INCH	JOHNSON IL	COCORAHS

24 HOUR RAINFALL REPORT FROM COCORAHS
STATION IL-JH-2: GOREVILLE 3.8 NE.

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(Measured and estimated snow reports)

NWUS55 KBOU 070247
LSRBOU

PRELIMINARY LOCAL STORM REPORT...SUMMARY
NATIONAL WEATHER SERVICE DENVER CO
747 PM MST SUN MAR 6 2022

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	...MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		

NWSI 10-517 AUGUST 1, 2022

0735 PM	SNOW	1 E KEN CARYL	39.58N 105.13W
03/06/2022	M11.6 INCH	JEFFERSON CO	PUBLIC
0650 AM	SNOW	1 N GENESEE	39.70N 105.28W
03/06/2022	M11.3 INCH	JEFFERSON CO	PUBLIC
0340 PM	SNOW	1 S CRESCENT VILLAGE	39.91N 105.34W
03/06/2022	M6.0 INCH	JEFFERSON CO	PUBLIC
0112 PM	SNOW	1 NE EVERGREEN	39.64N 105.33W
03/06/2022	M5.9 INCH	JEFFERSON CO	PUBLIC
0536 PM	SNOW	4 S BENNETT	39.70N 104.41W
03/06/2022	M5.6 INCH	ARAPAHOE CO	PUBLIC
0309 PM	SNOW	1 NW PONDEROSA PARK	39.41N 104.66W
03/06/2022	M5.5 INCH	ELBERT CO	PUBLIC
0717 PM	SNOW	3 W CASTLE ROCK	39.39N 104.91W
03/06/2022	E5.5 INCH	DOUGLAS CO	PUBLIC
0234 PM	SNOW	1 E EDGEWATER	39.75N 105.04W
03/06/2022	M5.3 INCH	DENVER CO	PUBLIC
0403 PM	SNOW	4 N BAILEY	39.45N 105.46W
03/06/2022	M5.0 INCH	PARK CO	TRAINED SPOTTER
0105 PM	SNOW	4 W ARVADA	39.83N 105.17W
03/06/2022	E4.8 INCH	JEFFERSON CO	NWS EMPLOYEE
0400 PM	SNOW	2 E DENVER	39.74N 104.95W
03/06/2022	M4.8 INCH	DENVER CO	PUBLIC
0744 PM	SNOW	2 ENE CHERRY HILLS VILL	39.65N 104.91W
03/06/2022	M4.6 INCH	DENVER CO	TRAINED SPOTTER
1150 AM	SNOW	4 ENE DENVER	39.76N 104.92W
03/06/2022	M4.5 INCH	DENVER CO	TRAINED SPOTTER
0101 PM	SNOW	2 NNE ESTES PARK	40.39N 105.51W
03/06/2022	E4.5 INCH	LARIMER CO	TRAINED SPOTTER
0436 PM	SNOW	1 NW FEDERAL HEIGHTS	39.88N 105.03W
03/06/2022	M4.5 INCH	ADAMS CO	PUBLIC
0500 PM	SNOW	4 NE NEDERLAND	39.99N 105.45W
03/06/2022	M4.5 INCH	BOULDER CO	PUBLIC
0900 AM	SNOW	2 SSE LAPORTE	40.60N 105.12W
03/06/2022	M4.3 INCH	LARIMER CO	COCORAHS

COCORAHS STATION CO-LR-1242 LAPORTE 1.5 SSE.

NWSI 10-517 AUGUST 1, 2022

0700 AM SNOW 2 S ESTES PARK 40.35N 105.52W
 03/06/2022 M4.2 INCH LARIMER CO COCORAHS

COCORAHS STATION CO-LR-767 ESTES PARK 1.8 S.

0450 PM SNOW 1 W NORTHGLENN 39.91N 104.99W
 03/06/2022 M4.1 INCH ADAMS CO PUBLIC

0500 PM SNOW DENVER INTL AIRPORT 39.84N 104.67W
 03/06/2022 M4.1 INCH DENVER CO OFFICIAL NWS OBS

CORRECTS PREVIOUS SNOW REPORT FROM 2 S
 DENVER INTL AIRPORT. STORM TOTAL
 MEASUREMENT.

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(Various events)

NWUS53 KFGF 291503
 LSRFGF

PRELIMINARY LOCAL STORM REPORT...SUMMARY
 NATIONAL WEATHER SERVICE EASTERN ND/GRAND FORKS ND
 1003 AM CDT FRI JUN 29 2018

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		

0248 AM TSTM WND GST 7 E LEEDS 48.29N 99.29W
 06/29/2018 M56.50 MPH BENSON ND MESONET

LEEDS RWIS MEASURED WIND GUST OF 56.5 MPH.

0255 AM TSTM WND GST 1 SW CANDO 48.48N 99.22W
 06/29/2018 M58.00 MPH TOWNER ND AWOS

AWOS MEASURED WIND GUST TO 58 MPH.

0308 AM TSTM WND GST 2 W DEVILS LAKE 48.11N 98.92W
 06/29/2018 M54.00 MPH RAMSEY ND AWOS

0321 AM TSTM WND GST 4 NW COOPERSTOWN 47.49N 98.18W
 06/29/2018 M96.00 MPH GRIGGS ND PUBLIC

PERSONAL DAVIS WEATHER STATION REPORTED 96 MPH WIND GUST.

0329 AM TSTM WND GST 8 SW FINLEY 47.43N 97.96W
 06/29/2018 M57.00 MPH STEELE ND PUBLIC

NWSI 10-517 AUGUST 1, 2022

PUBLIC PERSONAL WEATHER UNDERGROUND STATION REPORTED WIND GUST OF 57 MPH.

0334 AM TSTM WND DMG MCVILLE 47.77N 98.18W
06/29/2018 NELSON ND CO-OP OBSERVER

GRAIN BIN BLOWN IN AT MCVILLE ELEVATOR

0343 AM TSTM WND GST 7 SE FINLEY 46.69N 97.69W
06/29/2018 M63.00 MPH BARNES ND PUBLIC

PUBLIC PERSONAL WEATHER UNDERGROUND STATION REPORTED WIND GUST OF 63 MPH.

0345 AM TSTM WND GST 1 S SHERBROOKE 47.45N 97.72W
06/29/2018 M63.00 MPH STEELE ND PUBLIC

MEASURED ON DAVIS PERSONAL WEATHER STATION.

0345 AM TSTM WND DMG MICHIGAN 48.03N 98.12W
06/29/2018 NELSON ND PUBLIC

TRAMPOLINE RE-ARRANGED WITHIN BACKYARD. REPORTED VIA SOCIAL MEDIA.

0400 AM TSTM WND DMG GRAND FORKS AFB 47.96N 97.38W
06/29/2018 GRAND FORKS ND PUBLIC

SEVERAL PHOTOGRAPHS OF TREE DAMAGE INCLUDING A LIMB THAT PIERCED THE SIDING OF HOUSE AND WENT THROUGH WINDOW. BRICK STRUCTURES WERE TOPPLED WITH PLENTY OF DOWNED TREES AND SEVERAL STREET SIGNS.

0409 AM TSTM WND DMG 6 N THOMPSON 47.86N 97.11W
06/29/2018 GRAND FORKS ND PUBLIC

4 LARGE GRAIN BINS BLOWN DOWN AND OFF OF FOUNDATIONS AT DREES FARMING NEAR MERRIFIELD. SPRAYER WRAPPED AROUND A GRAIN BIN.

0412 AM TSTM WND GST 6 W GRAND FORKS 47.92N 97.20W
06/29/2018 M76.00 MPH GRAND FORKS ND ASOS

GRAND FORKS AIRPORT ASOS MEASURED 76 MPH WIND GUST.

0412 AM TSTM WND GST 16 W GRAND FORKS 47.92N 97.42W
06/29/2018 M62.00 MPH GRAND FORKS ND ASOS

GRAND FORKS AFB ASOS MEASURED 62 MPH WIND GUST.

0415 AM LIGHTNING 1 N EAST GRAND FORKS 47.94N 97.02W
06/29/2018 POLK MN PUBLIC

NWSI 10-517 AUGUST 1, 2022

LIGHTNING STRUCK TREE AND SPLIT BRANCHES. PHOTOGRAPH SUBMITTED VIA SOCIAL MEDIA.

0430 AM TSTM WND DMG 8 W REYNOLDS 47.67N 97.28W
06/29/2018 TRAILL ND PUBLIC

PLENTY OF TREES DOWN ON HIGHWAY 15. REPORT RECEIVED VIA SOCIAL MEDIA.

0430 AM TSTM WND DMG CROOKSTON 47.77N 96.61W
06/29/2018 POLK MN PUBLIC

PHOTOGRAPH OF FALLEN TREE AT RESIDENCE. REPORTED VIA SOCIAL MEDIA.

0449 AM TSTM WND DMG 1 W RINDAL 47.50N 96.15W
06/29/2018 NORMAN MN TRAINED SPOTTER

SIDING RIPPED OFF FAABERG LUTHERAN CHURCH. LOTS OF UP TO 3 INCH DIAMETER BRANCHES DOWN. POWER OUT FOR SEVERAL HOURS.

0449 AM TSTM WND DMG GRAND FORKS 47.92N 97.07W
06/29/2018 GRAND FORKS ND PUBLIC

PART OF FENCE BLOWN OFF AT RESIDENCE IN SOUTH GRAND FORKS. REPORT VIA SOCIAL MEDIA.

0449 AM NON-TSTM WND GST 2 NE PEKIN 47.81N 98.30W
06/29/2018 M63.00 MPH NELSON ND MESONET

NDAWN MEASURED WIND GUST OF 63 MPH WITHIN STRATIFORM RAIN ASSOCIATED WITH BACK SIDE OF MCV.

0505 AM TSTM WND GST 3 S BROOKS 47.77N 96.00W
06/29/2018 M65.00 MPH RED LAKE MN MESONET

BROOKS RWIS MEASURED 65 MPH WIND GUST.

0526 AM NON-TSTM WND GST NORTHWOOD 47.74N 97.57W
06/29/2018 M59.00 MPH GRAND FORKS ND PUBLIC

PERSONAL WEATHER STATION MEASURED GUST OF 59 MPH ASSOCIATED WITH BACK SIDE OF MCV.

0530 AM NON-TSTM WND DMG CAVALIER 48.80N 97.62W
06/29/2018 PEMBINA ND PUBLIC

PHOTOGRAPHS OF WIND INDUCED TREE DAMAGE. SUBMITTED VIA SOCIAL MEDIA.

0546 AM NON-TSTM WND GST 3 NW EDMORE 48.44N 98.50W
06/29/2018 M60.00 MPH RAMSEY ND MESONET

NWSI 10-517 AUGUST 1, 2022

NDAWN MEASURED WIND GUST OF 60 MPH ASSOCIATED WITH BACK SIDE OF MCV.

0640 AM TSTM WND DMG 1 N BAGLEY 47.54N 95.40W
06/29/2018 CLEARWATER MN PUBLIC

FOUR WHEEL UTILITY WAGON TURNED OVER. EVENT PROBABLY OCCURRED SOMETIME BEFORE REPORTTIME.REPORTED VIA SOCIAL MEDIA.

0653 AM TSTM WND DMG 1 NNW KELLIHER 47.95N 94.45W
06/29/2018 BELTRAMI MN LAW ENFORCEMENT

OVERTURNED AIRCRAFT NORTHWEST OF KELLIHER AT THE AIRPORT. OVERTURNED AIRCRAFT IN THE MIDDLE OF HIGHWAY 72.

0700 AM NON-TSTM WND DMG CRYSTAL 48.60N 97.67W
06/29/2018 PEMBINA ND PUBLIC

TREES ARE DOWN. NO POWER AT PRESENT. REPORTED VIA SOCIAL MEDIA.

0700 AM TSTM WND DMG 3 N BEMIDJI 47.53N 94.88W
06/29/2018 BELTRAMI MN PUBLIC

DECK BOXES AND FURNITURE BLOWN OFF DECK. 2.01 INCHES OF RAIN. REPORTED VIA SOCIAL MEDIA.

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(Marine Event)

NWUS51 KPHI 031755
LSRPHI

PRELIMINARY LOCAL STORM REPORT...SUMMARY
NATIONAL WEATHER SERVICE MOUNT HOLLY NJ
155 PM EDT TUE AUG 3 2021

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		

0319 PM MARINE TSTM WIND DEWEY BEACH 38.69N 75.07W
07/29/2021 M39 MPH SUSSEX DE MESONET

0319 PM MARINE TSTM WIND INDIAN BEACH 38.68N 75.08W
07/29/2021 M45 MPH ANZ455 DE MESONET

DEWEY BEACH WEATHERFLOW SITE.

NWSI 10-517 AUGUST 1, 2022

0334 PM MARINE TSTM WIND 5 E LONG NECK 38.61N 75.06W
07/29/2021 M43 MPH SUSSEX DE DEPT OF HIGHWAYS

DEDOT GAUGE MEASURED GUST.

0346 PM WATER SPOUT 5 N BETHANY BEACH 38.61N 75.06W
07/29/2021 ANZ455 DE TRAINED SPOTTER

PICTURES AND A VIDEO OF A WATERSPOUT IN
PROGRESS JUST OFFSHORE OF THE INDIAN RIVER
INLET.

0552 PM MARINE TSTM WIND 2 E LANOKA HARBOR 39.86N 74.13W
07/29/2021 M39 MPH OCEAN NJ MESONET

KITE ISLAND.

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6. Mesoscale Discussion

(Winter Weather Discussion; Mixed Precipitation)

Mesoscale Discussion 0075
NWS Storm Prediction Center Norman OK
0742 AM CST Sun Jan 16 2022

Areas affected...Northern South Carolina...North Carolina...Southern
and Central Virginia

Concerning...Winter mixed precipitation

Valid 161342Z - 161945Z

SUMMARY...Heavy snowfall with rates exceeding one inch per hour will
be possible across the southern Appalachians and Virginia Piedmont
this morning from western North Carolina into southern and central
Virginia. Freezing rain or a changeover to freezing rain is expected
from parts of northern South Carolina northeastward into
southeastern Virginia.

DISCUSSION...Water vapor imagery shows an upper-level low moving
eastward across the central Gulf Coast states with divergent
mid-level flow located across southern sections of the Eastern
Seaboard. A plume of mid-level moisture is located across the
Carolinas and Virginia, where widespread precipitation is ongoing.
Temperatures are currently below freezing across much of the
southern Appalachian Mountains, where snow is being reported. A few

locations have exceeded one inch per hour snowfall rates. As large-scale ascent spreads northeastward ahead of the upper-level low, the potential for heavy snow should increase across parts of western and central Virginia.

Further to the east, temperatures are also below freezing across much of the North Carolina Piedmont. In this area, freezing rain is being reported in many locations due to a low-level warm layer that is forecast to spread northward into southeastern Virginia later this morning. In response, freezing rain should continue across parts of central North Carolina. Snow should gradually change over to freezing rain across much of southeastern Virginia this morning.

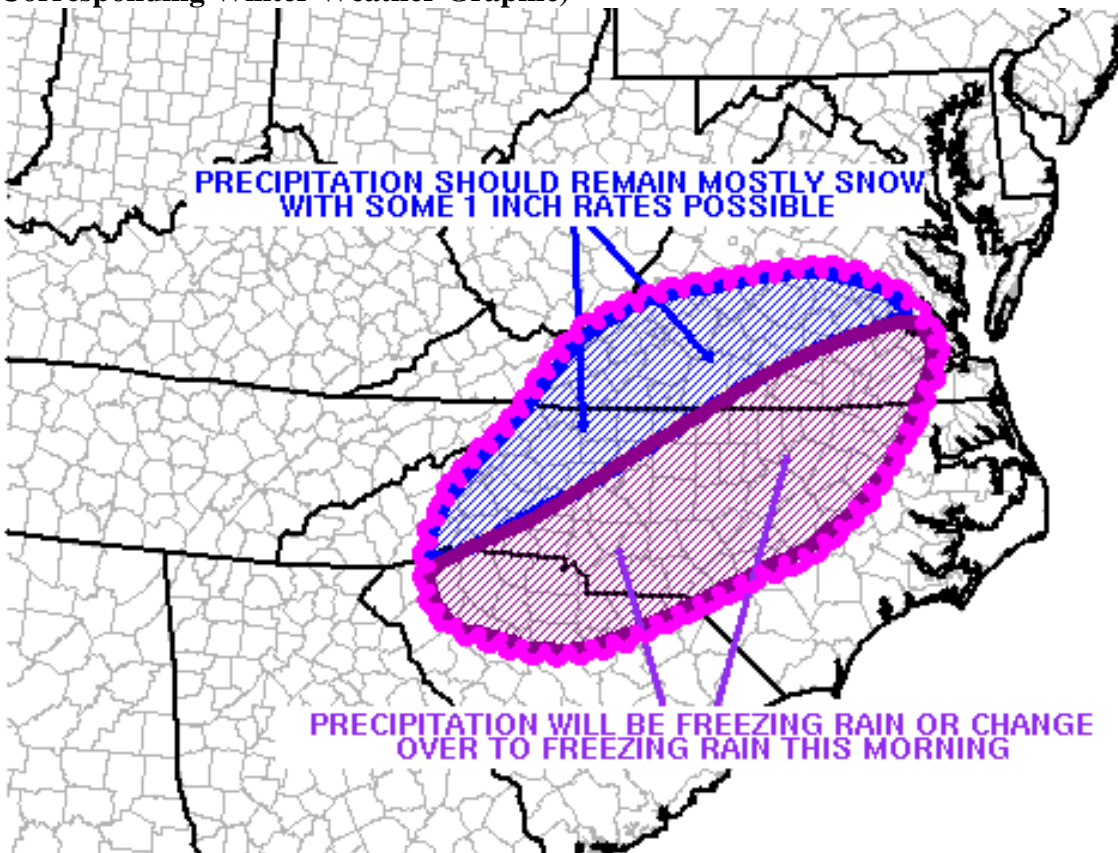
..Broyles/Edwards.. 01/16/2022

...Please see www.spc.noaa.gov for graphic product...

ATTN...WFO...MFL...TBW...

LAT...LON	26608178	27028195	27088205	27118226	27028246	26808250
	26378238	25848179	25658156	25458136	25118126	24958110
	24898098	25048068	25378075	25668088	25978114	26608178

(Corresponding Winter Weather Graphic)



SPC MCD #0075

(Winter Weather Discussion; Heavy Snow)

Mesoscale Discussion 0092
NWS Storm Prediction Center Norman OK
1040 AM CST Tue Jan 25 2022

Areas affected...Portions of far eastern CO into western KS

Concerning...Heavy snow

Valid 251640Z - 252145Z

SUMMARY...Moderate to heavy snow, with rates up to 1 inch per hour, should continue in a narrow band through the afternoon.

DISCUSSION...A relatively narrow band of moderate to heavy snow is ongoing late this morning from parts of far eastern CO into western KS. This band is being aided by modest isentropic ascent/upslope flow at low levels, along with mid-level frontogenesis preceding a shortwave trough over the Great Basin and central Rockies. Within the band, there is a focused area of 30+ dBZ reflectivity based on recent data from KGLD. Given that the entire thermal profile is below freezing, this area of greater reflectivity is producing moderate to locally heavy snowfall, with rates up to 1 inch per hour. Indeed, multiple recent surface observations confirm that moderate to heavy snow is occurring across this area. Current expectations are for this band to develop slowly east-southeastward across parts of western KS through much of the early to mid afternoon in tandem with the progression of the shortwave trough. By 21-22Z, most guidance suggests the intensity of the band should begin to diminish as low/mid-level forcing for ascent gradually weakens.

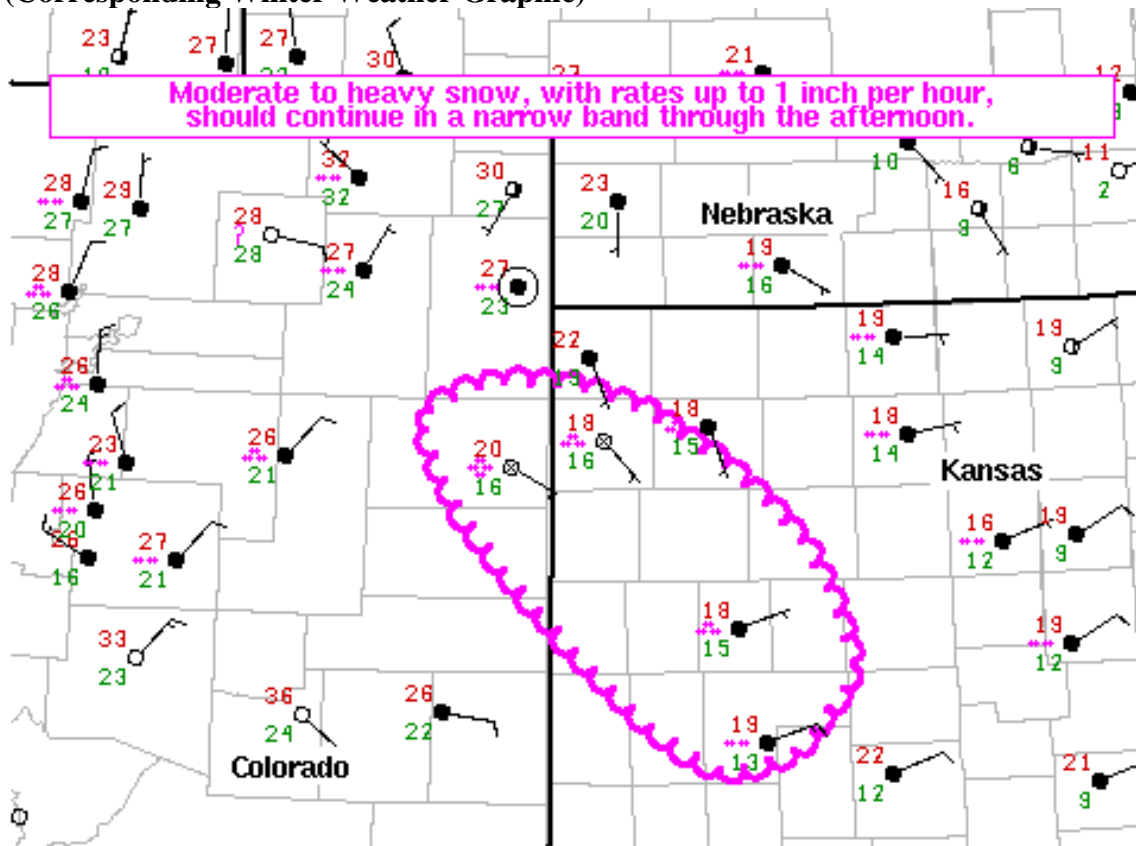
..Gleason.. 01/25/2022

...Please see www.spc.noaa.gov for graphic product...

ATTN...WFO...DDC...GLD...PUB...

LAT...LON 38280176 38710228 39110265 39490284 39650242 39640191
 39520148 39200088 38910051 38560028 38240019 37880055
 37780098 37990138 38280176

(Corresponding Winter Weather Graphic)



SPC MCD #0092

(Winter Weather Discussion; Snow Squall)

Mesoscale Discussion 0063
 NWS Storm Prediction Center Norman OK
 0737 PM CST Mon Jan 10 2022

Areas affected...parts of northern and central PA

Concerning...Snow Squall

Valid 110137Z - 110400Z

SUMMARY...A snow squall will continue spreading southeastward across parts of northern and central PA over the next few hours, with sudden visibility reductions of a half mile or less.

DISCUSSION...Radar imagery from CCX/BGM shows an east-west oriented snow squall moving southeastward across parts of northern PA, where sudden visibility reductions of a half mile or less have been noted. Ahead of the snow squall, RAP forecast soundings depict a deeply saturated and unstable boundary layer, where VWP's show 30-35 knots of 0-2 km flow. The latest high-resolution model guidance suggests that this snow squall may persist for another few hours as it

advances southeastward across parts of northern and central PA, where sudden visibility reductions will be possible. A lack of stronger low-level convergence with southward extent should eventually lead to the demise of the snow squall.

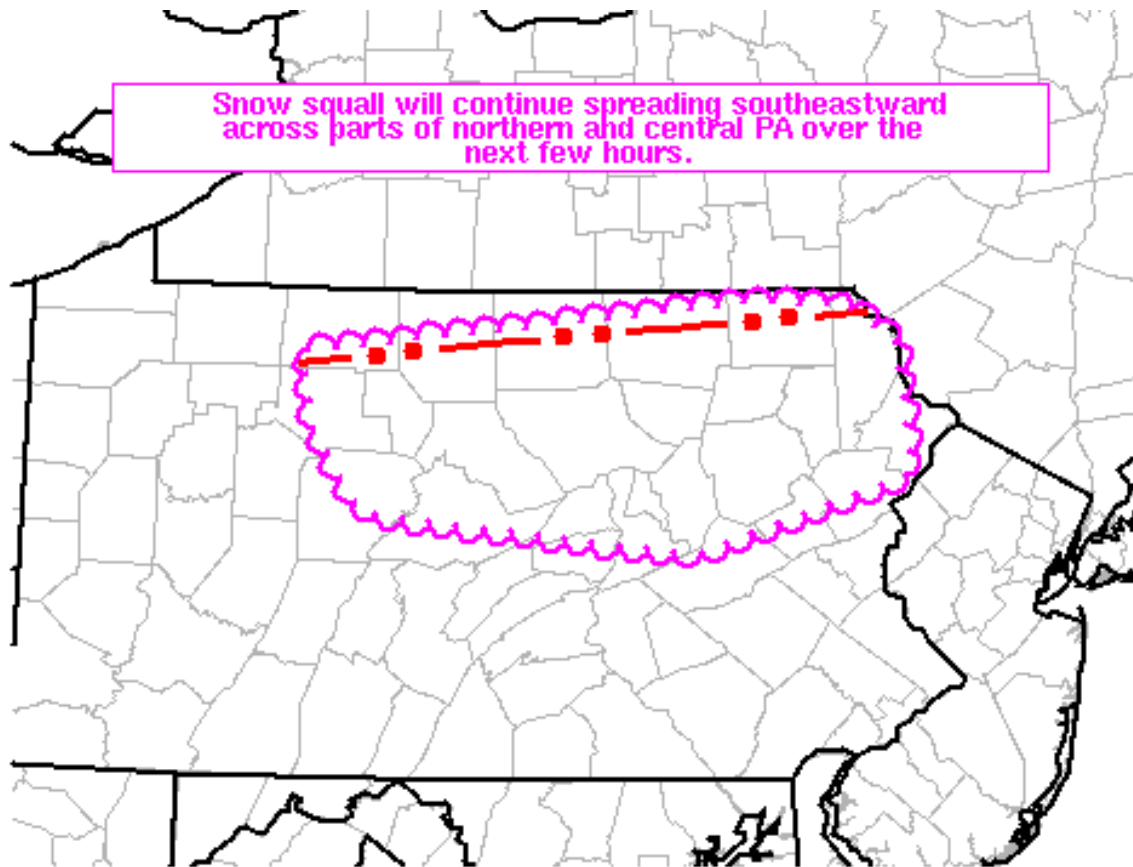
..Weinman.. 01/11/2022

...Please see www.spc.noaa.gov for graphic product...

ATTN...WFO...PHI...BGM...CTP...

LAT...LON 41337872 41707880 41847720 41947599 41927535 41747507
41127499 40767637 40957841 41337872

(Corresponding Winter Weather Graphic)



SPC MCD #0063

(Severe Potential Mesoscale Discussion; Watch Unlikely)

Mesoscale Discussion 0220
NWS Storm Prediction Center Norman OK
0253 PM CST Mon Mar 07 2022

Areas affected...Western and central Pennsylvania...southwest New York...and western Maryland

Concerning...Severe potential...Watch unlikely

Valid 072053Z - 072300Z

Probability of Watch Issuance...20 percent

SUMMARY...A shallow squall line will continue to rapidly progress eastward across Pennsylvania and adjacent areas of New York, far northern West Virginia, and western Maryland over the next several hours. Although it is uncertain if/when this line will intensify, strong winds may cause sporadic wind damage.

DISCUSSION...A narrow band of shallow, but strongly forced, convection has been ongoing across eastern OH into western PA for the past couple of hours. This line is primarily being driven by a strong surface cold front and is progressing rapidly eastward at around 40 mph. Several wind gusts between 35-45 mph have been noted across eastern OH and far western PA with the passage of this line, and recent velocity data from KPBZ shows winds up to 60 mph between 500-1000 feet off the surface.

Although the propensity for severe/damaging winds from this line has been low so far, the downstream air mass across central PA is gradually becoming more conditionally favorable for deeper convection as mid-50s F dewpoints overspread the region. Latest RAP/HRRR forecast soundings hint that MLCAPE values up to 250-500 J/kg are possible by late afternoon if surface temperatures can warm into the low to mid 60s. While this is possible, the ongoing cloud cover and precipitation cast considerable uncertainty into the degree of destabilization. A watch is not anticipated at this time, but trends will be monitored over the coming hours for deepening convection, warming surface temperatures, and/or surface wind observations.

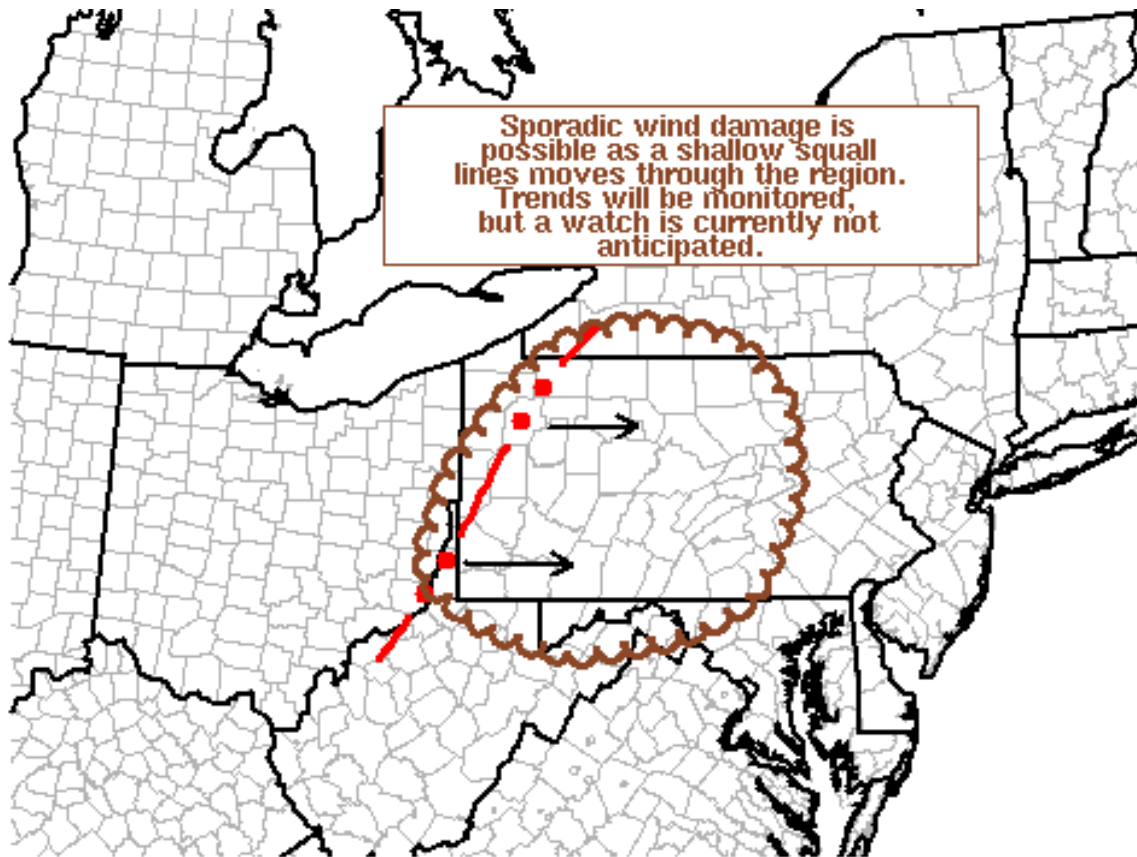
..Moore/Hart.. 03/07/2022

...Please see www.spc.noaa.gov for graphic product...

ATTN...WFO...BGM...BUF...CTP...LWX...PBZ...RLX...CLE...

LAT...LON	40858060	41657993	42127926	42327823	42097703	41527644
	40687640	39807687	39487753	39337822	39217920	39518019
	39738063	39958096	40858060			

(Corresponding Severe Potential Graphic)



SPC MCD #0220

(Severe Potential Mesoscale Discussion; Watch Likely)

Mesoscale Discussion 0142
NWS Storm Prediction Center Norman OK
1005 AM CST Thu Feb 17 2022

Areas affected...Parts of northeastern Louisiana and southern/eastern Arkansas through much of western and northern Mississippi and southwestern Tennessee

Concerning...Severe potential...Tornado Watch likely

Valid 171605Z - 171830Z

Probability of Watch Issuance...80 percent

SUMMARY...Potential for scattered discrete supercell development appears likely to increase near and east of the Mississippi River by around Noon through 3 PM CST. These storms will pose a risk of producing tornadoes, at least a couple of which could become strong.

DISCUSSION...Influx of highest low-level moisture content is focused in a narrow pre-frontal corridor across the lower Mississippi Valley, generally along a very strong south to southwesterly lower/mid-tropospheric jet (including speeds of 50-70+ in the 850-700 mb layer). Through 18-21Z the core of this jet is forecast to nose across the northwestern Mississippi Delta Region through middle Tennessee, but flow in excess of 50 kt likely will continue to trail south-southwestward into Louisiana coastal areas.

Along and to the west/northwest of this jet axis, large-scale ascent has been contributing to sustained convective development, but (based on soundings and visible satellite imagery) this activity has remained rooted above a relatively deep surface-based layer characterized by weak lapse rates near moist adiabatic. This may remain the case into midday as activity gradually spreads eastward. However, breaks in cloud cover do appear to be allowing for at least weak boundary-layer destabilization near and east of the Mississippi River vicinity, and as the area of convective development/forcing for ascent approaches this region toward 18Z, intensifying boundary-layer based thunderstorm development seems increasingly possible.

Strongest mid/upper forcing for ascent appears likely to overspread much of western Kentucky and Tennessee, where boundary-layer destabilization remains much more uncertain. However, beneath at least weakly diffluent upper flow to the south, the environment is expected to be conducive to discrete storm development, in the presence of strong deep-layer shear supportive of supercells.

Of primary concern, low-level hodographs within the destabilizing warm sector will become large and clockwise curved, characterized by modest veering of winds with height and strong to extreme speed shear. This environment may become conducive to a few sustained and strong, fast moving low-level mesocyclones, with the potential to produce strong tornadoes.

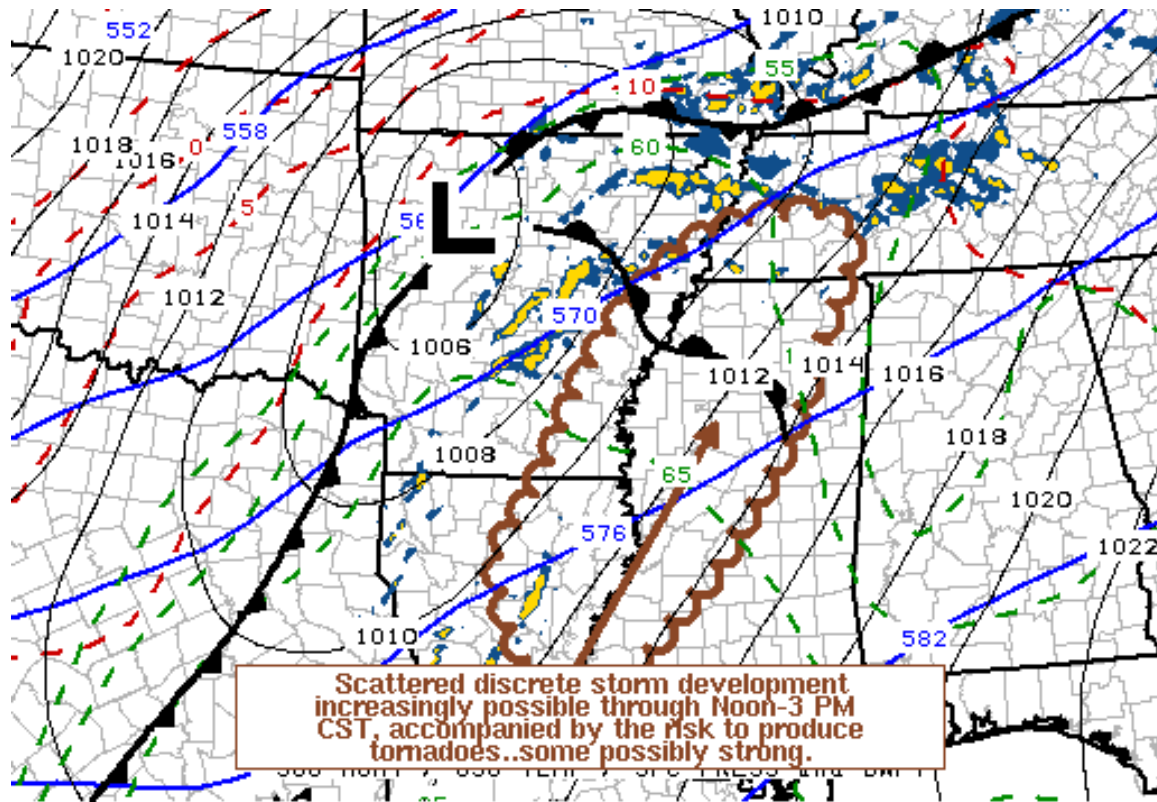
..Kerr/Grams.. 02/17/2022

...Please see www.spc.noaa.gov for graphic product...

ATTN...WFO...MEG...JAN...LIX...LZK...LCH...SHV...

LAT...LON 32859222 34549127 35489003 35558840 34468876 33068945
31339092 30989204 32129262 32859222

(Corresponding Severe Potential Graphic)



SPC MCD #0142

(Watch Update Discussion)

Mesoscale Discussion 0174
NWS Storm Prediction Center Norman OK
0710 PM CST Tue Feb 22 2022

Areas affected...central Mississippi into northern Alabama

Concerning...Tornado Watch [26](#)...

Valid 230110Z - 230315Z

The severe weather threat for Tornado Watch 26 continues.

SUMMARY...Sporadic severe reports remain possible across the region this evening.

DISCUSSION...Small cells across central MS and extending southwest into parts of LA have produced marginally severe hail at times, driven mainly by the warmed air mass and favorable shear for supercells. Large-scale lift is weak here, and the loss of heating will likely lead to a decrease in storm coverage.

Farther north, a more organized line of storms currently stretches from northern MS across far southern TN and into northern AL in association with the cold front. A few cells are ongoing along the front, with elevated storms north of the front as well. Deep-layer shear remains strong, although oriented roughly parallel to the front. However, the slow movement may yet allow for a brief tornado or two with the strongest cells as effective SRH remains at over 200 m2/s2. Recent radar trends suggest an increase in velocities over northern AL, and this is where the primary severe/tornado risk is focused.

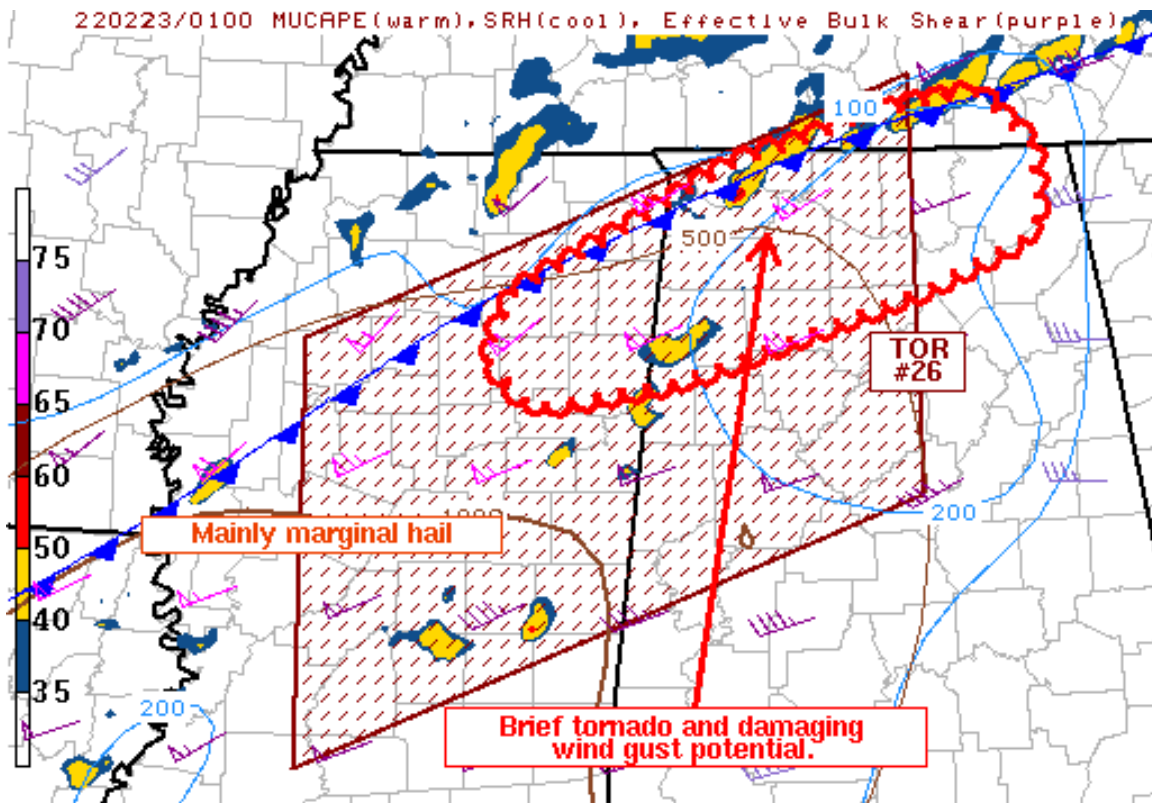
..Jewell.. 02/23/2022

...Please see www.spc.noaa.gov for graphic product...

ATTN...WFO...MRX...OHX...BMX...HUN...MEG...JAN...

LAT...LON	34318649	33858802	33728894	33968921	34288905	34558849
	34928771	35178682	35258637	35278614	35008583	34648580
	34508594	34318649				

(Corresponding Graphic)



SPC MCD #0174

APPENDIX B - Preliminary Local Storm Report Event Sources and Types

PRELIMINARY LOCAL STORM REPORT EVENT SOURCES

911 CALL CENTER	LAW ENFORCEMENT
AIRPLANE PILOT	MESONET
AMATEUR RADIO	NEWSPAPER
ASOS	NWS EMPLOYEE
AWOS	NWS STORM SURVEY
BROADCAST MEDIA	OFFICIAL NWS OBS
BUOY	OTHER FEDERAL
C-MAN STATION	PARK/FOREST SRVC
COAST GUARD	POST OFFICE
COCORAHs	PUBLIC
CO-OP OBSERVER	SHIP
COUNTY OFFICIAL	STORM CHASER
DEPT OF HIGHWAYS	TRAINED SPOTTER
EMERGENCY MNGR	UNKNOWN
FIRE DEPT/RESCUE	UTILITY COMPANY
INSURANCE CO	

PRELIMINARY LOCAL STORM REPORT WEATHER EVENT TYPES

AVALANCHE	FUNNEL CLOUD	RIP CURRENTS
BLIZZARD	*HAIL	SEICHE
COASTAL FLOOD	HEAVY RAIN	*SLEET
DEBRIS FLOW	*HEAVY SNOW	SNEAKER WAVE
*DENSE FOG	HIGH ASTR TIDES	*SNOW
*DOWNBURST	*HIGH SUST WINDS	STORM SURGE
DROUGHT	HURRICANE	TORNADO
*DUST STORM	ICE STORM	TROPICAL STORM
*EXCESSIVE HEAT	LAKESHORE FLOOD	TSTM WND DMG
*EXTREME COLD	LIGHTNING	*TSTM WND GST
EXTR WIND CHILL	*MARINE HAIL	TSUNAMI
FLASH FLOOD	*MARINE TSTM WIND	VOLCANIC ASHFALL
FLOOD	NON-TSTM WND DMG	WATER SPOUT
FREEZE	*NON-TSTM WND GST	*WILDFIRE
*FREEZING RAIN		

*Events which require an estimated (E), measured (M) or unknown origin (U) designation.