

NATIONAL WEATHER SERVICE INSTRUCTION 10-517

September 28, 2012

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

MULTI-PURPOSE WEATHER PRODUCTS SPECIFICATION

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

OPR: W/OS22 (A. Horvitz)

Certified by: W/OS22 (E. Jacks)

Type of Issuance: Routine

SUMMARY OF REVISIONS: This directive supersedes NWSI 10-517, “Multi-Purpose Weather Products Specification”, dated August 9, 2010.

- 1) Added WarnGen as creation software option for Short Term Forecast (NOW) issuance (Section 2.2.1).
- 2) Special Weather Statements (SPS) issuance criteria modified for Developing Hazardous Convective Weather (Section 3.2.2)
- 3) Special Weather Statement (SPS) format changed to allow for an optional polygon section (Section 3.3.4)
- 4) Hazardous Weather Outlook (HWO) issuance criteria modified to allow offices with regional approval to not issue the HWO (Section 4.2.2)
- 5) Storm Prediction Center Mesoscale Discussion (MD) format updated (Section 6.3.4)
- 6) Preliminary Local Storm Report (LSR) Event Sources and Weather Event Types added in Appendix B
- 7) Change in OPR.

Signed

09/17/12

David B. Caldwell

Date

Director, Office of Climate, Water, and Weather Services

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 severe, 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 Graphical Hazards Generation Editor (GHG) or Warngen software to issue Short Term Forecasts.

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 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.

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 precipitation location, movement, intensity, amounts and duration. Short Term Forecasts should be concise. WFOs should segment Short Term Forecast into separate zone groupings based on common weather conditions. 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

.NOW...
...OPTIONAL HEADLINE...

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. General criteria for a sub-severe thunderstorm is considered to be one or a combination of the following events:
 - (1) Sustained winds or 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) funnel clouds not expected to become a tornado threat
- 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
 - (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 where wind is 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.

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. WFOs may use the term “SIGNIFICANT WEATHER ADVISORY” in the text and/or headline(s) of the SPS.

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, strong thunderstorms, 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.

LAT...LON AAaa BBBbb AAaa BBBbb AAaa BBBbb ... (Optional list of at
least three latitude/longitude coordinates outlining the forecaster-
drawn threat area.)

$$

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.

LAT...LON AAaa BBBbb AAaa BBBbb AAaa BBBbb ...

$$

FORECASTER NAME/NUMBER (OPTIONAL)

```

Figure 2. Special Weather Statement Format, where AAaa indicates latitude in decimal degrees north to two decimal places (without the decimal point), and BBBbb indicates 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 flood hazards (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 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 am and 7 am local time, except where local users request a different issuance time.

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 periods. 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 reference readers to other long-fuse WFO watch, warning, 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 (Slight, Moderate and High) of organized severe convective weather. WFOs may include information on strong (less than severe) convection.
 - (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 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.

- (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 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 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/HPC 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 OR THIS
AFTERNOON)

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 DAYS 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-ddhhmm-
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)

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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 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 LL.LLd|x|
MM/DD/YYYY|EMAG UNIT      |xx|COUNTY              |ST|x|SOURCE            |
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXX|*** # FATAL, # INJ *** OR REMARKS
XXXXXXXXXXXX|REMARKS CONTINUED FOR UP TO 500 CHARACTERS TOTAL
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

&&

OPTIONAL FREE TEXT SUMMARY.

$$

FORECASTER NAME/NUMBER (OPTIONAL)

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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 in Appendix B	E2.5 M59 U6.50 EF4	2:13-25	13
UNIT	units of the magnitude value	INCHES MPH		
COUNTY	county name (or marine zone ID)	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 which 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 expiration 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 a 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 quantifies 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 a 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. A 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 Rainfall. SPC should issue a MD for:
- Localized areas of convective rainfall where rates equal to or greater than 3 inches per hour,
 - Two or more inches are expected at any one location in one hour, **or**
 - Rainfall rates of 1.5 inches per hour are expected to occur for 3 hours or greater.
- SPC may issue a Convective Heavy Rain MD to forecast the end of a heavy rain event.
- d. Heavy Snow. SPC should issue a 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.
- e. Freezing Rain. SPC should issue a 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.
- f. Blizzard. SPC should issue a MD for mesoscale blizzard conditions forecast to persist 3 hours or greater.
- g. Convective Outlook Upgrade. SPC should issue a 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.

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 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) of the 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 or amendments. SPC will correct messages for format and grammatical errors.

APPENDIX A - Product Examples

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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 KSHV 070258
NOWSHV

SHORT TERM FORECAST
NATIONAL WEATHER SERVICE SHREVEPORT LA
958 PM CDT WED JUN 6 2012

ARZ070-OKZ077-TXZ096-097-108>112-124>126-136>138-149>153-165>167-
070500-
MILLER-MCCURTAIN-RED RIVER-BOWIE-FRANKLIN-TITUS-CAMP-MORRIS-CASS-
WOOD-UPSHUR-MARION-SMITH-GREGG-HARRISON-CHEROKEE-RUSK-PANOLA-
NACOGDOCHES-SHELBY-ANGELINA-SAN AUGUSTINE-SABINE TX-
INCLUDING THE CITIES OF...TEXARKANA...IDABEL...CLARKSVILLE...
MT VERNON...MT PLEASANT...PITTSBURG...DAINGERFIELD...ATLANTA...
QUITMAN...GILMER...JEFFERSON...TYLER...LONGVIEW...MARSHALL...
RUSK...HENDERSON...CARTHAGE...NACOGDOCHES...CENTER...LUFKIN...
SAN AUGUSTINE...HEMPHILL
958 PM CDT WED JUN 6 2012

.NOW...
SHOWERS AND THUNDERSTORMS...ALONG WITH A LARGE AREA OF LIGHT TO
MODERATE RAIN OVER EAST TEXAS...WILL CONTINUE TO MOVE SLOWLY TO THE
EAST THROUGH MIDNIGHT. A FEW OF THE STRONGER STORMS MAY PRODUCE GUSTY
WIND...BRIEF HEAVY RAINFALL...AND DANGEROUS CLOUD TO GROUND LIGHTNING.
RAINFALL AMOUNTS OF A QUARTER TO A HALF
INCH CAN BE EXPECTED WEST OF A DAINGERFIELD...LONGVIEW...MOUNT
ENTERPRISE LINE...WITH AMOUNTS OF OVER AN INCH POSSIBLE FROM A FEW
STORMS.

\$\$

(Segmented version)

FPUS75 KCYS 070512
NOWCYS

SHORT TERM FORECAST
NATIONAL WEATHER SERVICE CHEYENNE WY
1112 PM MDT WED JUN 6 2012

WYZ106>108-117>119-070700-
CENTRAL LARAMIE RANGE AND SOUTHWEST PLATTE COUNTY-
EAST PLATTE COUNTY-GOSHEN COUNTY-SOUTH LARAMIE RANGE FOOTHILLS-
CENTRAL LARAMIE COUNTY-EAST LARAMIE COUNTY-
INCLUDING THE CITIES OF...BORDEAUX...GLENDO...WHEATLAND...
CHUGWATER...GUERNSEY...TORRINGTON...HORSE CREEK...HARRIMAN...
WHITAKER...CHEYENNE...BURNS...CARPENTER...ALBIN...PINE BLUFFS
1112 PM MDT WED JUN 6 2012

.NOW...

NUMEROUS SHOWERS AND THUNDERSTORMS WILL CONTINUE OVER SOUTHEAST WYOMING TO THE EAST OF THE LARAMIE RANGE THROUGH 100 AM. THE STRONGEST THUNDERSTORM IS CURRENTLY JUST TO THE EAST OF CHEYENNE AND MOVING TO THE EAST AT AROUND 20 MPH. HEAVY RAIN AND SOME PEA SIZED HAIL CAN BE EXPECTED FROM THIS STORM.

\$\$

NEZ002-003-019>021-054-055-095-096-070700-
DAWES-BOX BUTTE-SCOTTS BLUFF-BANNER-MORRILL-KIMBALL-CHEYENNE-
NORTH SIOUX-SOUTH SIOUX-
INCLUDING THE CITIES OF...CHADRON...ALLIANCE...SCOTTSBLUFF...
GERING...HARRISBURG...BRIDGEPORT...BAYARD...KIMBALL...SIDNEY...
HARRISON...AGATE
1112 PM MDT WED JUN 6 2012

.NOW...

SCATTERED LIGHT RAIN SHOWERS WILL CONTINUE OVER PORTIONS OF THE NEBRASKA PANHANDLE THROUGH 100 AM. RAINFALL AMOUNTS WILL GENERALLY BE LESS THAN A FEW TENTHS OF AN INCH.

\$\$

(Segmented version broken down by time periods)

FPUS74 KTSA 122156
NOWTSA

SHORT TERM FORECAST
NATIONAL WEATHER SERVICE TULSA OK
356 PM CST SAT DEC 12 2009

OKZ060-130400-
TULSA-
INCLUDING THE CITIES OF...TULSA...
356 PM CST SAT DEC 12 2009

THROUGH 6 PM...INCREASING CLOUDS. WINDY. TEMPERATURES 65 TO 68.
SOUTHEAST WINDS 15 TO 25 MPH WITH GUSTS TO 40 MPH.

6 PM TO 8 PM...CLOUDY WITH A FEW SHOWERS DEVELOPING. TEMPERATURES 64 TO 66. SOUTH WINDS SHIFTING TO WEST 10 TO 20 MPH.

8 PM TO 10 PM...CLOUDY AND WINDY. RAIN...HEAVY AT TIMES. TEMPERATURES FALLING TO AROUND 50. WINDS BECOMING NORTHWEST AT 25 TO 30 MPH.

\$\$

ARZ019-029-130400-
CRAWFORD-SEBASTIAN-
INCLUDING THE CITIES OF...FORT SMITH...VAN BUREN...
356 PM CST SAT DEC 12 2009

THROUGH 6 PM...CLEAR. TEMPERATURES 55 TO 60. EAST WINDS 10 TO 15 MPH.

6 PM TO 8 PM...INCREASING CLOUDS. TEMPERATURES 53 TO 58. SOUTHEAST 15 TO 20 MPH.

8 PM TO 10 PM...CLOUDY WITH SHOWERS AND THUNDERSTORMS INCREASING. TEMPERATURES 52 TO 57. SOUTHEAST WINDS 15 TO 25 MPH.

\$\$

3. Special Weather Statement.

(Sub-severe thunderstorm with optional headline)

WWUS84 KSJT 140313
SPSSJT

SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE SAN ANGELO TX
1013 PM CDT WED JUN 13 2012

TXZ049-140400-
FISHER TX-
1013 PM CDT WED JUN 13 2012

...SIGNIFICANT WEATHER ADVISORY IN EFFECT FOR FISHER COUNTY UNTIL 1100 PM CDT...

AT 1007 PM CDT...A STRONG THUNDERSTORM WAS INDICATED BY NATIONAL WEATHER SERVICE DOPPLER RADAR OVER HOBBS...OR ABOUT 19 MILES EAST OF SNYDER...MOVING NORTHEAST AT 20 MPH.

* THE STRONG THUNDERSTORM WILL BE NEAR...
ROTAN BY 1035 PM CDT
HITSON BY 1100 PM CDT

DIME SIZE HAIL AND WIND GUSTS TO 50 MPH ARE LIKELY WITH THIS STORM. HEAVY RAINFALL WILL CAUSE PONDING OF WATER ON AREA ROADWAYS... ESPECIALLY THOSE IN POOR DRAINAGE AREAS. RESIDENTS ARE ENCOURAGED TO MONITOR THE SITUATION CLOSELY AND BE PREPARED TO TAKE THE PROPER ACTIONS SHOULD A WARNING BE ISSUED.

LAT...LON 3296 10023 3278 10014 3267 10014 3260 10063
3269 10067 3289 10066 3297 10055
TIME...MOT...LOC 0313Z 241DEG 18KT 3281 10058

\$\$

(Severe thunderstorms approaching the area)

WWUS83 KLOT 142103
SPSLOT

SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE CHICAGO IL
403 PM CDT THU MAY 14 2009

ILZ006-013-014-022-142200-
COOK-DUPAGE-LAKE IL-WILL-
INCLUDING THE CITIES OF...CHICAGO...JOLIET...WAUKEGAN...WHEATON...
403 PM CDT THU MAY 14 2009

...LINE OF DAMAGING SEVERE THUNDERSTORMS RACING TOWARD CHICAGO METRO
AREA DURING RUSH HOUR...

A LINE OF SEVERE THUNDERSTORMS WITH A HISTORY OF PRODUCING WIND
DAMAGE WILL MOVE EAST AT 50 MPH REACHING THE WESTERN SUBURBS OF
CHICAGO AROUND 530 PM AND THE LAKEFRONT AROUND 600 PM. PEOPLE IN
CHICAGOLAND SHOULD BE PREPARED FOR SEVERE WEATHER INCLUDING STRONG
WINDS...FREQUENT LIGHTNING...AND VERY HEAVY RAIN DURING THE EVENING
RUSH HOUR.

\$\$

(Local dense fog)

SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE TAUNTON MA
1024 PM EDT MON MAY 21 2012

MAZ015>024-RIZ002-004>008-221100-
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-
SOUTHEAST PROVIDENCE RI-EASTERN KENT RI-BRISTOL RI-WASHINGTON RI-
NEWPORT RI-BLOCK ISLAND RI-
INCLUDING THE CITIES OF...BOSTON...QUINCY...TAUNTON...BROCKTON...
PLYMOUTH...FALL RIVER...NEW BEDFORD...MATTAPoisETT...CHATHAM...
FALMOUTH...PROVINCETOWN...VINEYARD HAVEN...NANTUCKET...
PROVIDENCE...WARWICK...BRISTOL...NARRAGANSETT...WESTERLY...
NEWPORT...BLOCK ISLAND
1024 PM EDT MON MAY 21 2012

...AREAS OF DENSE FOG WILL CONTINUE OVERNIGHT ACROSS PORTIONS OF
SOUTHERN RHODE ISLAND AND EASTERN MASSACHUSETTS...

AREAS OF DENSE FOG WILL REDUCE VISIBILITY TO ONE QUARTER MILE OR
LESS AT TIMES. MOTORISTS SHOULD USE EXTRA CAUTION OVERNIGHT.
VISIBILITIES WILL IMPROVE BY MID MORNING TUESDAY.

\$\$

(Snow squall with optional headline)

WWUS81 KCTP 171037
SPSCTP

SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE STATE COLLEGE PA
537 AM EST THU DEC 17 2009

PAZ037-171115-
TIOGA PA-
537 AM EST THU DEC 17 2009

...HEAVY SNOW SQUALL AFFECTING TIOGA COUNTY...

A HEAVY SNOW SQUALL WILL MOVE SOUTHEAST AT 10 MPH ACROSS THE TIOGA AND WELLSBORO AREAS BY 6 AM. VISIBILITY IN THE SQUALL WILL RAPIDLY DROP TO LESS THAN A MILE WITH A QUICK COATING OF SNOW...CAUSING SUDDEN HAZARDOUS DRIVING CONDITIONS. THE SQUALL WILL MOVE INTO THE MANSFIELD AND BLOSSBURG AREAS SHORTLY AFTER 6 AM.

\$\$

(Long-range hazardous weather)

WWUS86 KEKA 132200
SPSEKA

SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE EUREKA CA
200 PM PST SUN DEC 13 2009

CAZ001>004-076-140400-
REDWOOD COAST-MENDOCINO COAST-NORTH COAST INTERIOR-
UPPER TRINITY RIVER-MENDOCINO INTERIOR-
200 PM PST SUN DEC 13 2009

...PERIODS OF MODERATE TO HEAVY RAIN EXPECTED MONDAY NIGHT THROUGH WEDNESDAY...

PERIODS OF MODERATE TO HEAVY RAIN MONDAY EVENING THROUGH WEDNESDAY MORNING. TOTAL RAINFALL AMOUNTS OF 2 TO 3 INCHES WILL BE POSSIBLE OVER A WIDESPREAD AREA. THE KING RANGE AND SOUTH FORK WILL LIKELY RECEIVE GREATER AMOUNTS.

LOCALIZED MINOR FLOODING WILL BE POSSIBLE...ESPECIALLY ACROSS THE KING RANGE AND SOUTH FORK REGIONS...AND IN LOW LYING AREAS. WATER WILL POND ON THE ROADWAYS AND VISIBILITY WILL BE REDUCED...CAUSING HAZARDOUS DRIVING CONDITIONS.

SNOW OR A MIX OF RAIN AND SNOW IS EXPECTED MONDAY NIGHT THROUGH WEDNESDAY MORNING ABOVE 5000 FEET. SEVERAL INCHES OF SNOW ACCUMULATION AND GUSTY WINDS ARE EXPECTED ABOVE 6000 FEET.

\$\$

4. Hazardous Weather Outlook.

(Severe Convective Weather and other hazards)

HAZARDOUS WEATHER OUTLOOK
NATIONAL WEATHER SERVICE ALBANY NY
358 AM EDT WED MAY 16 2012

NYZ032-033-038-042-058-063-082-VTZ013-014-171100-
NORTHERN HERKIMER-HAMILTON-SOUTHERN HERKIMER-NORTHERN WARREN-
WESTERN GREENE-WESTERN ULSTER-NORTHERN FULTON-BENNINGTON-
WESTERN WINDHAM-
358 AM EDT WED MAY 16 2012

THIS HAZARDOUS WEATHER OUTLOOK IS FOR THE SOUTHERN
ADIRONDACKS...WESTERN MOHAWK VALLEY AND CENTRAL AND SOUTHEAST
CATSKILLS OF EAST CENTRAL NEW YORK AND THE SOUTHERN GREEN
MOUNTAINS OF VERMONT.

.DAY ONE...TODAY AND TONIGHT

THERE IS A SLIGHT RISK OF SEVERE THUNDERSTORMS THIS AFTERNOON INTO
EARLY THIS EVENING AHEAD OF A STRONG COLD FRONT. THE POTENTIAL
SEVERE THUNDERSTORMS MAY PRODUCE HAIL STONES ONE INCH IN DIAMETER
AND LARGER...AND DAMAGING WINDS 58 MPH AND GREATER. THE STORMS MAY
FORM INTO ONE OR MORE LINES WHICH WILL MOVE FROM WEST TO EAST AS
INDIVIDUAL STORMS TRACK FROM SOUTHWEST TO NORTHEAST AT 35 TO 45
MPH.

.DAYS TWO THROUGH SEVEN...THURSDAY THROUGH TUESDAY

FROST IS POSSIBLE LATE THURSDAY NIGHT INTO EARLY FRIDAY MORNING AS
TEMPERATURES ARE EXPECTED TO DROP INTO THE LOW TO MID 30S WITH
SOME UPPER 20S POSSIBLE ACROSS THE WESTERN ADIRONDACKS.

.SPOTTER INFORMATION STATEMENT...

SKYWARN ACTIVATION MAY BE REQUESTED THIS AFTERNOON INTO EARLY THIS
EVENING. ANY COUNTIES WHERE ACTIVATION IS REQUESTED WILL BE LISTED
INDIVIDUALLY IN THIS STATEMENT.

\$\$

(Flooding and high winds)

FLUS45 KTWC 181400
HWOTWC

HAZARDOUS WEATHER OUTLOOK
NATIONAL WEATHER SERVICE TUCSON AZ
700 AM MST FRI SEP 18 2009

AZZ019-029>035-191400-

NORTHERN GREENLEE COUNTY-SOUTHEAST PINAL COUNTY-UPPER GILA RIVER
VALLEY-WESTERN PIMA COUNTY-TOHONO-ODHAM NATION-TUCSON
METRO/MARANA/GREEN VALLEY-SANTA CRUZ COUNTY-COCHISE COUNTY-
700 AM MST FRI SEP 18 2009

THIS HAZARDOUS WEATHER OUTLOOK IS FOR SOUTHEAST ARIZONA

.DAY ONE...TODAY

THE REMNANTS OF HURRICANE ERIK WILL BRING HEAVY RAIN AND GUSTY WINDS
ACROSS THE AREA THIS AFTERNOON AND TONIGHT. NORMALLY DRY WASHES WILL
FLOOD QUICKLY AFTER THE HEAVY RAIN BEGINS. URBAN FLOODING IS ALSO
LIKELY. DAMAGING WIND GUSTS ARE POSSIBLE AT ELEVATIONS ABOVE 5000
FEET BETWEEN 3 PM AND 9 PM.

.DAYS TWO THROUGH SEVEN...SATURDAY THROUGH THURSDAY

ISOLATED STRONG THUNDERSTORMS ARE POSSIBLE MONDAY AFTERNOON AND
EVENING AS A STORM SYSTEM MOVES ACROSS THE AREA. OTHERWISE...NO
ADDITIONAL HAZARDOUS WEATHER IS EXPECTED THROUGH THE PERIOD.

.SPOTTER INFORMATION STATEMENT...

SKYWARN SPOTTER ACTIVATION WILL BE NEEDED THIS AFTERNOON AND EVENING.

\$\$

(Fire Weather)

HAZARDOUS WEATHER OUTLOOK
NATIONAL WEATHER SERVICE FLAGSTAFF AZ
328 AM MST WED MAY 16 2012

AZZ004>018-037>040-170715-
KAIBAB PLATEAU-MARBLE AND GLEN CANYONS-GRAND CANYON COUNTRY-
COCONINO PLATEAU-YAVAPAI COUNTY MOUNTAINS-
NORTHEAST PLATEAUS AND MESAS HWY 264 NORTHWARD-CHINLE VALLEY-
CHUSKA MOUNTAINS AND DEFIANCE PLATEAU-
LITTLE COLORADO RIVER VALLEY IN COCONINO COUNTY-
LITTLE COLORADO RIVER VALLEY IN NAVAJO COUNTY-
LITTLE COLORADO RIVER VALLEY IN APACHE COUNTY-
WESTERN MOGOLLON RIM-EASTERN MOGOLLON RIM-WHITE MOUNTAINS-
NORTHERN GILA COUNTY-YAVAPAI COUNTY VALLEYS AND BASINS-
OAK CREEK AND SYCAMORE CANYONS-BLACK MESA AREA-
NORTHEAST PLATEAUS AND MESAS SOUTH OF HWY 264-
328 AM MST WED MAY 16 2012

THIS HAZARDOUS WEATHER OUTLOOK IS FOR PORTIONS OF EAST CENTRAL
ARIZONA...NORTH CENTRAL ARIZONA...NORTHEAST ARIZONA AND WEST
CENTRAL ARIZONA.

.DAY ONE...TODAY AND TONIGHT

EXPECT AREAS OF GUSTY SOUTHWESTERLY WINDS WITH SOME LOCATIONS IN
THE NORTHEAST CORNER OF ARIZONA APPROACHING CRITICAL FIRE WEATHER
CONDITIONS. ONGOING FIRES IN CENTRAL ARIZONA WILL LIKELY PRODUCE

AREAS OF DENSE SMOKE IN OR NEAR CROWN KING /GLADIATOR FIRE/ AND RYE /SUNFLOWER FIRE/ TONIGHT.

.DAYS TWO THROUGH SEVEN...THURSDAY THROUGH TUESDAY

DRY CONDITIONS AND GUSTY SOUTHWEST WINDS ARE EXPECTED EACH AFTERNOON THROUGH FRIDAY ACROSS NORTHERN ARIZONA. NEAR CRITICAL FIRE CONDITIONS ARE EXPECTED ON THURSDAY. A FIRE WEATHER WATCH IS IN EFFECT FOR FRIDAY AS DRY CONDITIONS AND SOUTHWEST WINDS OF 20 TO 35 MPH WITH GUSTS INTO THE 40 MPH RANGE ARE ANTICIPATED.

\$\$

(Marine)

HAZARDOUS WEATHER OUTLOOK
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX
541 AM CDT WED MAY 16 2012

GMZ230-235-250-255-270-275-TXZ229>234-239>247-171045-
BAYS AND WATERWAYS FROM BAFFIN BAY TO PORT ARANSAS-
BAYS AND WATERWAYS FROM PORT ARANSAS TO PORT O`CONNOR-
COASTAL WATERS FROM BAFFIN BAY TO PORT ARANSAS OUT 20 NM-
COASTAL WATERS FROM PORT ARANSAS TO MATAGORDA SHIP CHANNEL OUT
20 NM-WATERS FROM BAFFIN BAY TO PORT ARANSAS FROM 20 TO 60 NM-
WATERS FROM PORT ARANSAS TO MATAGORDA SHIP CHANNEL FROM 20 TO
60 NM-LA SALLE-MCMULLEN-LIVE OAK-BEE-GOLIAD-VICTORIA-WEBB-DUVAL-
JIM WELLS-KLEBERG-NUECES-SAN PATRICIO-ARANSAS-REFUGIO-CALHOUN-
541 AM CDT WED MAY 16 2012

THIS HAZARDOUS WEATHER OUTLOOK IS FOR SOUTH TEXAS AND THE MIDDLE TEXAS COASTAL WATERS.

.DAY ONE...TODAY AND TONIGHT

ISOLATED THUNDERSTORMS EXPECTED TODAY OVER THE COASTAL WATERS.

.DAYS TWO THROUGH SEVEN...THURSDAY THROUGH TUESDAY

NO HAZARDOUS WEATHER IS EXPECTED AT THIS TIME.

.SPOTTER INFORMATION STATEMENT...

SPOTTER ACTIVATION IS NOT ANTICIPATED.

\$\$

(Long Range Hazardous Weather)

HAZARDOUS WEATHER OUTLOOK
NATIONAL WEATHER SERVICE MOUNT HOLLY NJ
352 PM EDT TUE JUL 31 2012

MDZ008-012-015-019-020-NJZ001-007>010-012-016-PAZ054-055-060>062-
012000-
CECIL-KENT MD-QUEEN ANNES-TALBOT-CAROLINE-SUSSEX-WARREN-MORRIS-

HUNTERDON-SOMERSET-MIDDLESEX-SALEM-CARBON-MONROE-BERKS-LEHIGH-
NORTHAMPTON-
352 PM EDT TUE JUL 31 2012

THIS HAZARDOUS WEATHER OUTLOOK IS FOR NORTHEAST MARYLAND...NORTHERN
NEW JERSEY...NORTHWEST NEW JERSEY...SOUTHERN NEW JERSEY...EAST
CENTRAL PENNSYLVANIA AND NORTHEAST PENNSYLVANIA.

.DAY ONE...THIS AFTERNOON AND TONIGHT.

HAZARDOUS WEATHER IS NOT EXPECTED AT THIS TIME.

.DAYS TWO THROUGH SEVEN...WEDNESDAY THROUGH MONDAY.

CLUSTERS OF THUNDERSTORMS MAY BE STRONG WEDNESDAY AFTERNOON AND
EVENING AND AGAIN ON SUNDAY OR MONDAY. THEY COULD PRODUCE GUSTY
WINDS AND HEAVY DOWNPOURS. EASTERN PENNSYLVANIA...NORTHEAST
MARYLAND AND INTERIOR NEW JERSEY APPEAR TO BE THE MOST FAVORED
REGION FOR STRONG THUNDERSTORMS ON WEDNESDAY.

.SPOTTER INFORMATION STATEMENT...

SPOTTER ACTIVATION IS NOT EXPECTED AT THIS TIME.

\$\$

DEZ001-NJZ015-017>019-PAZ067>071-012000-
NEW CASTLE-MERCER-GLOUCESTER-CAMDEN-NORTHWESTERN BURLINGTON-CHESTER-
MONTGOMERY-BUCKS-DELAWARE-PHILADELPHIA-
352 PM EDT TUE JUL 31 2012

THIS HAZARDOUS WEATHER OUTLOOK IS FOR NORTHERN DELAWARE...CENTRAL
NEW JERSEY...SOUTHERN NEW JERSEY AND SOUTHEAST PENNSYLVANIA.

.DAY ONE...THIS AFTERNOON AND TONIGHT.

HAZARDOUS WEATHER IS NOT EXPECTED AT THIS TIME.

.DAYS TWO THROUGH SEVEN...WEDNESDAY THROUGH MONDAY.

CLUSTERS OF THUNDERSTORMS MAY BE STRONG WEDNESDAY AFTERNOON AND
EVENING AND AGAIN ON SUNDAY OR MONDAY. THEY COULD PRODUCE GUSTY
WINDS AND HEAVY DOWNPOURS.

HEAT INDEX VALUES PARTICULARLY IN URBAN AREAS SHOULD APPROACH OR
EXCEED 100 DEGREES FRIDAY THROUGH MONDAY WITH THE GREATEST CHANCES
ON THE WEEKEND.

.SPOTTER INFORMATION STATEMENT...

SPOTTER ACTIVATION IS NOT EXPECTED AT THIS TIME.

\$\$

(Marine/heavy snow threats, discussion of uncertainty, segmented example)

FLUS41 KBOX 171100
HWOBOX

HAZARDOUS WEATHER OUTLOOK
NATIONAL WEATHER SERVICE TAUNTON MA
600 AM EST THU DEC 17 2009

CTZ002>004-MAZ002>024-026-NHZ011-012-015-RIZ001>008-181100-
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-CHESHIRE NH-EASTERN HILLSBOROUGH NH-
WESTERN AND CENTRAL HILLSBOROUGH NH-NORTHWEST PROVIDENCE RI-
SOUTHEAST PROVIDENCE RI-WESTERN KENT RI-EASTERN KENT RI-BRISTOL RI-
WASHINGTON RI-NEWPORT RI-BLOCK ISLAND RI-
600 AM EST THU DEC 17 2009

THIS HAZARDOUS WEATHER OUTLOOK IS FOR NORTHERN
CONNECTICUT...CENTRAL MASSACHUSETTS...EASTERN
MASSACHUSETTS...NORTHEASTERN MASSACHUSETTS...SOUTHEASTERN
MASSACHUSETTS...WESTERN MASSACHUSETTS...SOUTHERN NEW
HAMPSHIRE...NORTHERN RHODE ISLAND AND SOUTHERN RHODE ISLAND.

.DAY ONE...THIS AFTERNOON AND TONIGHT

NO HAZARDOUS WEATHER IS EXPECTED AT THIS TIME.

.DAYS TWO THROUGH SEVEN...FRIDAY THROUGH WEDNESDAY

A COASTAL STORM MAY BRING ACCUMULATING SNOW TO MUCH OF SOUTHERN NEW
ENGLAND LATE SATURDAY INTO SUNDAY. THE MOST LIKELY SCENARIO WOULD
BRING MODERATE SNOWFALL OF 2 TO 6 INCHES TO NORTHEAST
CONNECTICUT...RHODE ISLAND AND EASTERN MASSACHUSETTS...FROM BOSTON TO
CAPE COD AND THE ISLANDS. STRONG NORTHEAST WINDS ARE POSSIBLE ALONG
THE COAST.

THERE IS UNCERTAINTY AS TO THE TRACK OF THIS STORM. IF IT PASSES
CLOSER TO NANTUCKET...IT WOULD BRING HIGHER ACCUMULATIONS AND AFFECT
MORE OF SOUTHERN NEW ENGLAND. IF IT PASSES FARTHER OUT TO SEA...LESSER
IMPACTS CAN BE EXPECTED ON LAND.

.SPOTTER INFORMATION STATEMENT...

SPOTTER ACTIVATION IS NOT EXPECTED AT THIS TIME.

\$\$

ANZ230>237-250-251-254>256-181100-
BOSTON HARBOR-CAPE COD BAY-NANTUCKET SOUND-VINEYARD SOUND-

BUZZARDS BAY-RHODE ISLAND SOUND-NARRAGANSETT BAY-BLOCK ISLAND SOUND-COASTAL WATERS EAST OF IPSWICH BAY AND THE STELLWAGEN BANK NATIONAL MARINE SANCTUARY-MASSACHUSETTS BAY AND IPSWICH BAY-COASTAL WATERS FROM PROVINCETOWN MA TO CHATHAM MA TO NANTUCKET MA OUT 20 NM-COASTAL WATERS EXTENDING OUT TO 25 NM SOUTH OF MARTHAS VINEYARD AND NANTUCKET- COASTAL WATERS FROM MONTAUK NY TO MARTHAS VINEYARD EXTENDING OUT TO 20 NM SOUTH OF BLOCK ISLAND-600 AM EST THU DEC 17 2009

THIS HAZARDOUS WEATHER OUTLOOK IS FOR MASSACHUSETTS COASTAL WATERS AND RHODE ISLAND COASTAL WATERS.

.DAY ONE...THIS AFTERNOON AND TONIGHT

NO HAZARDOUS WEATHER IS EXPECTED AT THIS TIME.

.DAYS TWO THROUGH SEVEN...FRIDAY THROUGH WEDNESDAY

HEAVY SNOW AND GALE FORCE NORTH TO NORTHEAST WINDS ARE POSSIBLE SATURDAY NIGHT INTO SUNDAY AS A COASTAL STORM TRACKS SOUTHEAST OF NANTUCKET.

.SPOTTER INFORMATION STATEMENT...

SPOTTER ACTIVATION IS NOT EXPECTED AT THIS TIME.

\$\$

(No Hazardous Weather)

HAZARDOUS WEATHER OUTLOOK
NATIONAL WEATHER SERVICE TAUNTON MA
1136 PM EDT SAT JUN 2 2012

CTZ002>004-MAZ002>006-008>014-017-018-020-021-023-024-026-NHZ011-012-015-RIZ001>008-040345-
HARTFORD CT-TOLLAND CT-WINDHAM CT-WESTERN FRANKLIN MA-
EASTERN FRANKLIN MA-NORTHERN WORCESTER MA-CENTRAL MIDDLESEX MA-
WESTERN ESSEX MA-WESTERN HAMPSHIRE MA-WESTERN HAMPDEN MA-
EASTERN HAMPSHIRE MA-EASTERN HAMPDEN MA-SOUTHERN WORCESTER MA-
WESTERN NORFOLK MA-SOUTHEAST MIDDLESEX MA-NORTHERN BRISTOL MA-
WESTERN PLYMOUTH MA-SOUTHERN BRISTOL MA-SOUTHERN PLYMOUTH MA-
DUKES MA-NANTUCKET MA-NORTHERN MIDDLESEX MA-CHESHIRE NH-
EASTERN HILLSBOROUGH NH-WESTERN AND CENTRAL HILLSBOROUGH NH-
NORTHWEST PROVIDENCE RI-SOUTHEAST PROVIDENCE RI-WESTERN KENT RI-
EASTERN KENT RI-BRISTOL RI-WASHINGTON RI-NEWPORT RI-BLOCK ISLAND RI-
1136 PM EDT SAT JUN 2 2012

THIS HAZARDOUS WEATHER OUTLOOK IS FOR NORTHERN CONNECTICUT...CENTRAL MASSACHUSETTS...EASTERN MASSACHUSETTS...NORTHEASTERN MASSACHUSETTS...SOUTHEASTERN MASSACHUSETTS...WESTERN MASSACHUSETTS...SOUTHERN NEW HAMPSHIRE...NORTHERN RHODE ISLAND AND SOUTHERN RHODE ISLAND.

.DAY ONE...TONIGHT.

NO HAZARDOUS WEATHER IS EXPECTED AT THIS TIME.

.DAYS TWO THROUGH SEVEN...SUNDAY THROUGH FRIDAY.

NO HAZARDOUS WEATHER IS EXPECTED AT THIS TIME.

.SPOTTER INFORMATION STATEMENT...

SPOTTER ACTIVATION IS NOT REQUESTED AT THIS TIME.

\$\$

5. Preliminary Local Storm Report.

(Winter storm with optional free-text remarks)

NWUS55 KPIH 161810
LSRPIH

PRELIMINARY LOCAL STORM REPORT...SUMMARY
NATIONAL WEATHER SERVICE POCATELLO ID
1110 AM MST WED DEC 16 2009

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

0800 AM	SNOW	KETCHUM	43.69N 114.38W
12/16/2009	M3.5 INCH	BLAINE	ID CO-OP OBSERVER

TOTAL IS FOR THE LAST 24 HOURS WITH 5 INCHES ON THE GROUND.

0800 AM	SNOW	HAILEY	43.51N 114.30W
12/16/2009	M4.5 INCH	BLAINE	ID CO-OP OBSERVER

TOTAL IS FOR THE LAST 24 HOURS WITH 6 INCHES ON THE GROUND.

0958 AM	HEAVY SNOW	5 WSW GANNETT	43.33N 114.27W
12/16/2009	M8.0 INCH	BLAINE	ID TRAINED SPOTTER

REPORT INCLUDES ENTIRE STORM ACCUMULATION.

0958 AM	HEAVY SNOW	3 WNW GALENA	43.87N 114.66W
12/16/2009	E10.0 INCH	BLAINE	ID TRAINED SPOTTER

REPORT INCLUDES ENTIRE STORM TOTAL ACCUMULATION.

1100 AM	HEAVY SNOW	17 WSW OAKLEY	42.15N 114.19W
12/16/2009	U10.0 INCH	CASSIA	ID PARK/FOREST SRVC

THIS WAS REPORTED AT BOSTETTER RANGER STATION AT 7500 FEET.

NWSI 10-517 September 28, 2012

1100 AM BLIZZARD 9 ENE BASIN 42.30N 113.62W
12/16/2009 E18.0 INCH CASSIA ID LAW ENFORCEMENT

VISIBILITY WAS NEAR ZERO ALONG OAKLEY ELBA ROAD ALL MORNING WITH DRIFTS TO 4 FEET AND TEMPERATURE NEAR 15.

1100 AM HEAVY SNOW 16 WSW KETCHUM 43.60N 114.67W
12/16/2009 E7.5 INCH CAMAS ID MESONET

THIS WAS REPORTED AT DOLLARHIDE SUMMIT AT 8420 FEET.

1100 AM HEAVY SNOW 3 W GALENA 43.87N 114.71W
12/16/2009 E7.5 INCH BLAINE ID MESONET

THIS WAS REPORTED AT GALENA SUMMIT AT 8780 FEET.

&&

OUR THANKS TO NWS SKYWARN STORM SPOTTERS AND COOPERATIVE OBSERVERS FOR THEIR TIMELY REPORTS DURING THIS WINTER STORM.

\$\$

(Tornado with injury)

NWUS53 KICT 270002
LSRICT

PRELIMINARY LOCAL STORM REPORT...CORRECTED
NATIONAL WEATHER SERVICE WICHITA KS
702 PM CDT SAT MAY 26 2012

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

0945 PM TORNADO RUSSELL 38.89N 98.85W
05/25/2012 RUSSELL KS TRAINED SPOTTER

*** 1 INJ *** TRAINED SPOTTER REPORTED DAMAGE FROM THE ROPE TORNADO WHICH DESTROYED ONE MODULAR HOME ON THE SOUTH SIDE OF RUSSELL. THE OCCUPANT HAD A FEW CUTS AND WAS LATER TRANSPORTED TO THE HOSPITAL FOR A BROKEN COLLAR BONE. HOUSES ON EITHER SIDE OF THE HOME RECEIVED MINOR DAMAGE.

\$\$

(Various events)

NWUS53 KOAX 281401
LSROAX

PRELIMINARY LOCAL STORM REPORT...SUMMARY
NATIONAL WEATHER SERVICE OMAHA/VALLEY NE
901 AM CDT MON MAY 28 2012

NWSI 10-517 September 28, 2012

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		
0457 PM 05/27/2012	HAIL E1.75 INCH	5 S WINSIDE WAYNE	42.11N 97.17W NE CO-OP OBSERVER
0500 PM 05/27/2012	HAIL E1.00 INCH	1 S ELGIN ANTELOPE	41.97N 98.08W NE TRAINED SPOTTER
A FUNNEL CLOUD WAS REPORTED WITH THIS STORM.			
0505 PM 05/27/2012	HAIL E1.00 INCH	ELGIN ANTELOPE	41.98N 98.08W NE CO-OP OBSERVER
0506 PM 05/27/2012	TORNADO	8 SE ELGIN BOONE	41.90N 97.97W NE LAW ENFORCEMENT
THE TORNADO WAS 6 MILES EAST AND 5 MILES SOUTH OF ELGIN			
0512 PM 05/27/2012	HAIL E2.50 INCH	ELGIN ANTELOPE	41.98N 98.08W NE CO-OP OBSERVER
WINDOWS WERE BROKEN OUT OF CARS AND BUILDINGS. A LARGE TREE WAS DOWN ON ROAD 4 MILES SE OF ELGIN.			
0525 PM 05/27/2012	HAIL E2.50 INCH	OAKDALE ANTELOPE	42.07N 97.97W NE EMERGENCY MNGR
MOST OF THE HAIL WAS GOLF BALL SIZE...BUT SOME WAS TENNIS BALL SIZE. SIDING WAS STRIPPED OFF HOMES. GLASS WAS BROKEN OUT OF CARS AND BUILDINGS.			
0537 PM 05/27/2012	HAIL M1.75 INCH	PIERCE PIERCE	42.20N 97.53W NE CO-OP OBSERVER
0542 PM 05/27/2012	FLOOD	1 E ELGIN ANTELOPE	41.98N 98.06W NE EMERGENCY MNGR
WATER WAS OVER A RURAL ROAD...WASHING OVER A BRIDGE.			
0548 PM 05/27/2012	HAIL E1.50 INCH	PRIMROSE BOONE	41.62N 98.24W NE LAW ENFORCEMENT
THE TIME WAS ESTIMATED			
0557 PM 05/27/2012	HAIL E2.75 INCH	5 W RANDOLPH PIERCE	42.38N 97.46W NE LAW ENFORCEMENT
0605 PM 05/27/2012	TORNADO	7 NW NEWMAN GROVE BOONE	41.82N 97.87W NE PUBLIC
0617 PM 05/27/2012	HAIL E1.75 INCH	6 S UTICA SEWARD	40.81N 97.35W NE LAW ENFORCEMENT

THE HAIL OCCURRED NEAR MILE MARKER 366 SOUTH OF UTICA.

NWSI 10-517 September 28, 2012

0630 PM TORNADO 2 SW BATTLE CREEK 41.98N 97.63W
 05/27/2012 MADISON NE FIRE DEPT/RESCUE

0635 PM HAIL 1 S ALBION 41.67N 98.00W
 05/27/2012 E1.00 INCH BOONE NE TRAINED SPOTTER

0639 PM HAIL ALBION 41.69N 98.00W
 05/27/2012 E0.75 INCH BOONE NE LAW ENFORCEMENT

0652 PM HAIL DAVID CITY 41.25N 97.13W
 05/27/2012 E1.75 INCH BUTLER NE EMERGENCY MNGR

HAIL WAS UP TO GOLFBALL SIZE BUT MOSTLY PING PONG BALL SIZE AND SMALLER.

0725 PM HAIL 2 ESE SEWARD 40.90N 97.06W
 05/27/2012 E1.25 INCH SEWARD NE TRAINED SPOTTER

0735 PM TSTM WND GST 1 NE WAHOO 41.23N 96.61W
 05/27/2012 M58.00 MPH SAUNDERS NE AWOS

0820 PM HAIL 3 S HUMPHREY 41.64N 97.49W
 05/27/2012 E1.00 INCH PLATTE NE TRAINED SPOTTER

0857 PM FLASH FLOOD 4 NW WAYNE 42.28N 97.07W
 05/27/2012 WAYNE NE TRAINED SPOTTER

WATER FROM FLOODED CORN FIELDS FLOWED OVER ROADS.

0922 PM FLASH FLOOD STANTON 41.95N 97.22W
 05/27/2012 STANTON NE LAW ENFORCEMENT

STREET FLOODING OCCURRED IN STANTON.

0922 PM FLASH FLOOD PILGER 42.01N 97.05W
 05/27/2012 STANTON NE LAW ENFORCEMENT

STREET FLOODING OCCURRED IN PILGER.

0946 PM FLASH FLOOD COLUMBUS 41.43N 97.36W
 05/27/2012 PLATTE NE TRAINED SPOTTER

WATER WAS OVER ROAD NEAR CARRIAGE HOUSE ESTATES. WATER WAS 4 TO 18 INCHES DEEP.

1001 PM FLASH FLOOD 1 N COLUMBUS 41.45N 97.36W
 05/27/2012 PLATTE NE TRAINED SPOTTER

WATER WAS 2 TO 3 FEET DEEP IN PARTS OF NORTH COLUMBUS. THREE CARS STALLED.

\$\$

(Marine Event)

NWUS51 KAKQ 301301
LSRAKQ

PRELIMINARY LOCAL STORM REPORT...SUMMARY
NATIONAL WEATHER SERVICE WAKEFIELD VA
901 AM EDT MON JUL 30 2012

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		
0800 AM 07/30/2012	WATER SPOUT	2 ESE FLEETON ANZ630	37.81N 76.25W VA 911 CALL CENTER

WATERSPOUT WAS REPORTED BY WATERMAN.

\$\$

6. Mesoscale Discussion.

(Winter Weather Discussion)

NWS STORM PREDICTION CENTER NORMAN OK
1128 PM CST TUE FEB 28 2012

AREAS AFFECTED...NRN LOWER MI

CONCERNING...WINTER MIXED PRECIPITATION

VALID 290528Z - 291130Z

SUMMARY...HEAVY SNOW WILL DEVELOP ACROSS NORTHERN PORTIONS LOWER MICHIGAN OVER THE NEXT COUPLE OF HOURS AND PERSIST THROUGH EARLY MORNING. SNOWFALL RATES WILL MAINLY RANGE FROM .5 TO 1 IN/HR. FURTHER SOUTH ACROSS THE DISCUSSION AREA...MIXED PRECIPITATION TYPES OF FREEZING RAIN AND SLEET ARE EXPECTED TO PREVAIL.

DISCUSSION...A SFC LOW CURRENTLY LOCATED OVER NORTHEAST NEBRASKA WILL CONTINUE TO TRACK NORTHEAST THROUGH THE EARLY MORNING HOURS AS WILL THE ASSOCIATED UPPER LEVEL TROUGH...NOW SITUATED FROM CENTRAL KANSAS NORTHWESTWARD TOWARD THE WESTERN DAKOTAS. AS THIS SYSTEM LIFTS NORTHEAST...A BAND OF FRONTOGENESIS AROUND THE 850-700 MB LAYER WILL PIVOT EASTWARD FROM MINNESOTA AND WISCONSIN INTO NORTHERN MICHIGAN. AIDED BY DEEP LAYER ASCENT THROUGH A DEEP SATURATED ENVIRONMENT AND NEARLY 50 MB DEEP DENDRITIC ZONE...PERIODS OF HEAVY SNOW ARE EXPECTED. POINT FORECAST SOUNDING INDICATE THAT THE VERTICAL THERMAL PROFILE WILL REMAIN SUB-FREEZING THROUGHOUT AND THE PRECIPITATION TYPE WILL REMAIN ALL SNOW THROUGH THE EARLY MORNING HOURS.

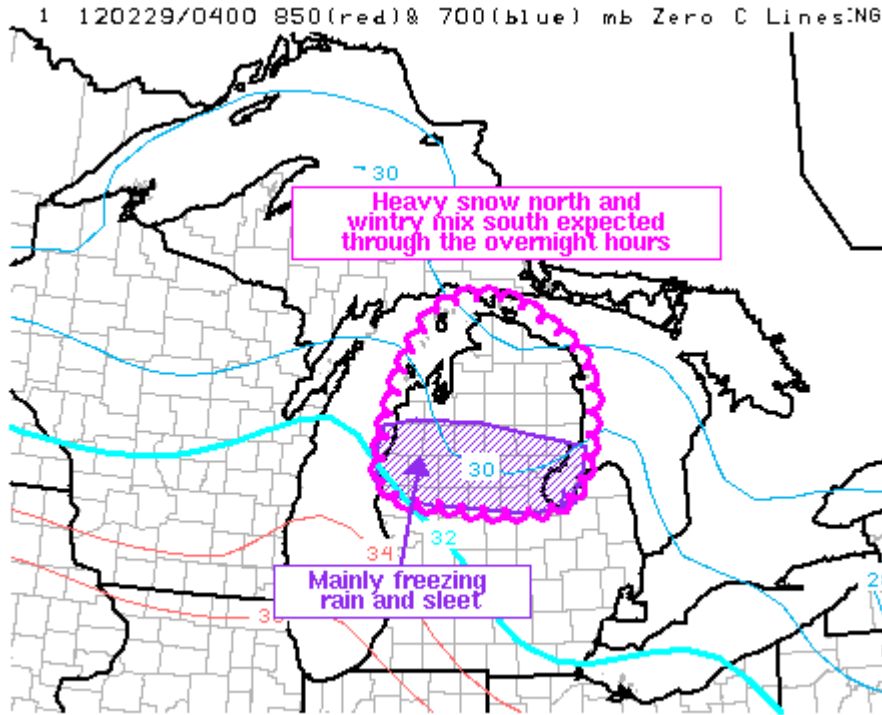
FURTHER SOUTH ACROSS THE DISCUSSION AREA...WARMER MIDDLELEVEL TEMPERATURES ON THE ORDER OF 1 TO 3 DEG C WILL LEAD TO MAINLY SLEET AND FREEZING RAIN AT THE SFC. SOME AREAS MAY EVEN TRANSITION TO RAIN BY 12Z ACROSS FAR SOUTHERN PARTS OF THE MCD AREA.

..LEITMAN.. 02/29/2012

ATTN...WFO...DTX...APX...GRR...

LAT...LON	44618635	45248609	45848561	45948504	45938455	45888430
	45468355	45398345	45018315	44378321	43878335	43608366
	43548436	43648580	43768644	44098645	44618635	

(Winter Weather Graphic)



SPC MCD #0174

(Heavy Rainfall Discussion)

MESOSCALE DISCUSSION 0112
 NWS STORM PREDICTION CENTER NORMAN OK
 0342 AM CST SAT FEB 04 2012

AREAS AFFECTED...PORTIONS S-CENTRAL/SE TX.

CONCERNING...HEAVY RAINFALL

VALID 040942Z - 041245Z

INITIALLY WIDELY SCATTERED AREAS OF 1-3 INCH/HOUR RAIN RATES MAY BECOME MORE WIDESPREAD AS BAND OF TSTMS OVER S-CENTRAL THROUGH E-CENTRAL TX BECOMES BETTER-DEFINED BY FRONTAL INTRUSION/ASCENT. PEAK OF HEAVY RAIN THREAT...INCLUDING SUSTAINED RAINFALL WITH SLOW-MOVING/MERGING/TRAINING CELLS...WILL BE THROUGH 12Z.

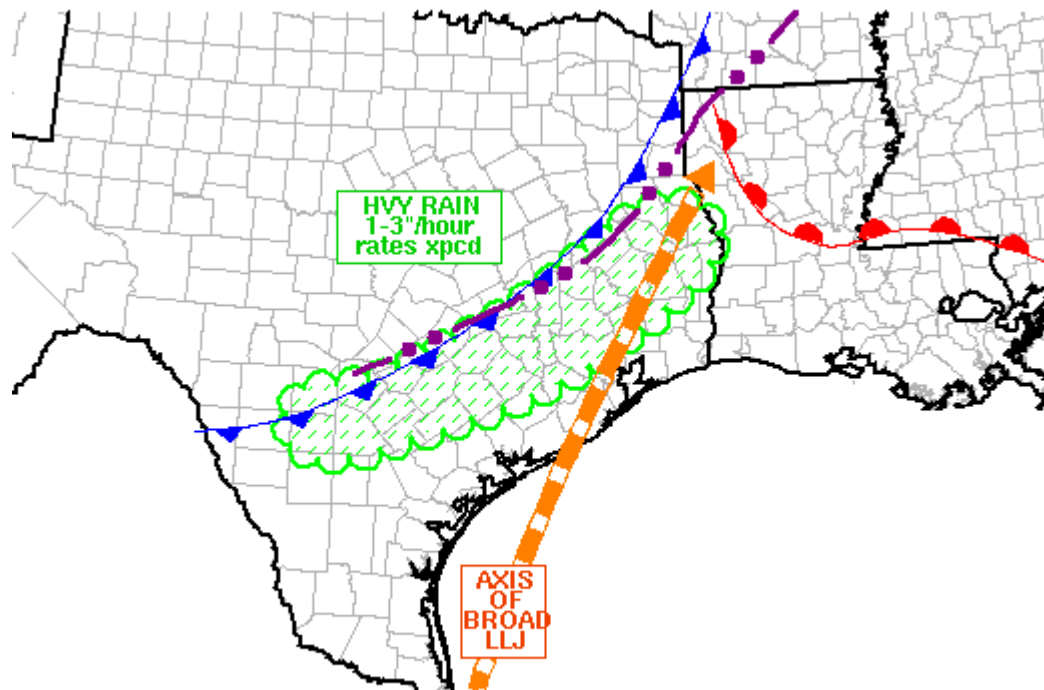
09Z SFC MESOANALYSIS SHOWED COLD FRONT...EXTENDING SWWD FROM WEAK LOW OVER WRN AR TO JUST SE OF TXK-GGG-HDO LINE. FRONT HAS CAUGHT UP TO PRE-EXISTING CONVECTIVE BAND FROM ABOUT I-45 SWWD...AND SHOULD DO SO OVER REMAINDER E TX SEGMENT DURING NEXT 2 HOURS. COLD FRONT HAS UNDERCUT TSTM LINE OVER SAT AREA...THOUGH CONVECTION IS PERSISTING AND MAY EVEN BACKBUILD AS FRONTAL ASCENT ACTS ON FAVORABLE MOISTURE/BUOYANCY IN ELEVATED LOW-LEVEL AIR MASS. ENHANCED LIFT FROM FRONTAL FORCING ALL ALONG THIS BAND...AND STORM-RELATIVE INFLOW AIDED BY BROAD/20-30 KT LLJ...WILL ACT TO CONCENTRATE/ENHANCE PRECIP FIELDS. INFLOW SECTOR WILL REMAIN CHARACTERIZED BY UPPER 60S TO LOW 70S SFC DEW POINTS...LAYER RH AOA 90%...AND PW REACHING 1.5-1.75 INCH RANGE. PRECIP LOADING ALSO MAY CONTRIBUTE TO THREAT FOR ISOLATED/LOCALIZED DAMAGING GUSTS...HOWEVER SVR HAZARD APPEARS TOO DISORGANIZED FOR WW AND IS SECONDARY TO THREAT FROM HEAVY RAIN. AS FRONT CONTINUES TO CROSS S AND SE TX...ESPECIALLY AFTER ABOUT 12Z...NET SEWD MOTION OF TSTM BAND SHOULD ACCELERATE...REDUCING AMOUNT OF TIME THAT HEAVIEST RAIN RATES ARE LIKELY TO REMAIN OVER MOST SPOTS.

..EDWARDS.. 02/04/2012

ATTN...WFO...LCH...SHV...HGX...CRP...EWX...

LAT...LON 29369925 29569821 30569620 31559472 31589382 30919374
 29709549 28909760 28559894 28829946 29369925

(Heavy Rainfall Graphic)



SPC MCD #0112

(Watch Update Discussion)

MESOSCALE DISCUSSION 1147
NWS STORM PREDICTION CENTER NORMAN OK
0738 PM CDT TUE JUN 12 2012

AREAS AFFECTED...ERN NM...WEST TX

CONCERNING...SEVERE THUNDERSTORM WATCH 383...

VALID 130038Z - 130145Z

THE SEVERE WEATHER THREAT FOR SEVERE THUNDERSTORM WATCH 383 CONTINUES.

SUMMARY...SEVERE THREAT PERSISTS ACROSS THE SRN HIGH PLAINS THIS EVENING...ESPECIALLY ACROSS SERN NM INTO THE PERMIAN BASIN OF WEST TX.

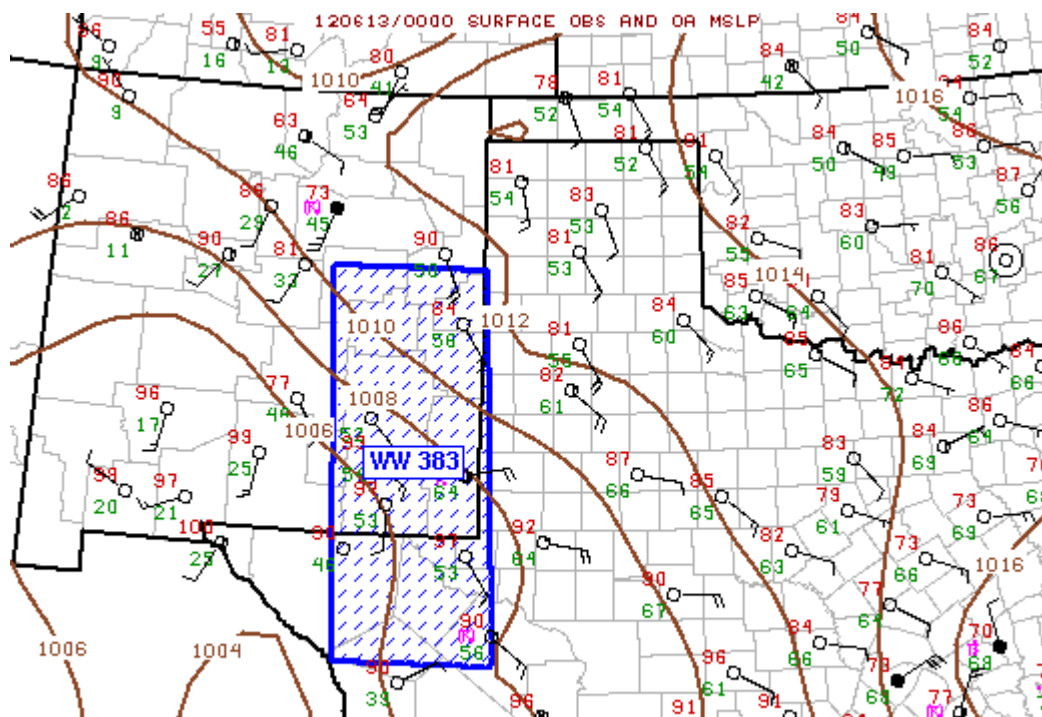
DISCUSSION...SEVERAL STORM CLUSTERS...WITH ISOLATED SUPERCELLS...HAVE EVOLVED ACROSS THE SRN HIGH PLAINS FROM SERN NM TO NEAR MAF. THIS ACTIVITY INITIATED WITHIN UPSLOPE REGIONS WHERE STRONG HEATING CONTRIBUTED TO AIRMASS DESTABILIZATION. 00Z SOUNDING FROM MAF APPEARED TO SAMPLE ENVIRONMENT JUST WEST OF OUTFLOW PER STEEP LOW LEVEL LAPSE RATES AND MID 50S DEW POINTS. THIS SOUNDING SUPPORTS SUPERCELL STRUCTURES THAT WILL LIKELY PROPAGATE SLOWLY EWD... ESPECIALLY GIVEN THAT A SEGMENT OF THE LLJ SHOULD INCREASE ACROSS THE PERMIAN BASIN INTO SERN NM OVER THE NEXT NEW HOURS. WITH INCREASING SHEAR ALONG WWD MOVING OUTFLOW BOUNDARY IT WOULD SEEM THESE STORMS WILL EXPERIENCE SOME LONGEVITY AND PERSIST WELL AFTER DARK. LARGE HAIL REMAINS THE PRIMARY SEVERE THREAT.

..DARROW.. 06/13/2012

ATTN...WFO...LUB...AMA...MAF...ABQ...EPZ...

LAT...LON 30570486 34990512 34980300 30580283 30570486

(Watch Update Graphic)



SPC MCD #1147

(Severe Potential Mesoscale Discussion)

MESOSCALE DISCUSSION 1289
NWS STORM PREDICTION CENTER NORMAN OK
0202 PM CDT TUE JUN 26 2012

AREAS AFFECTED...S-CNTRL/SERN TX

CONCERNING...SEVERE POTENTIAL...WATCH POSSIBLE

VALID 261902Z - 262100Z

PROBABILITY OF WATCH ISSUANCE...60 PERCENT

SUMMARY...AT LEAST ISOLATED HIGH-BASED TSTMS SHOULD FORM WITHIN A HOT THERMODYNAMIC ENVIRONMENT BY LATE AFTERNOON. WITH MODERATE MID-LEVEL NELYS...UPDRAFTS COULD COALESCE INTO AN ORGANIZED CLUSTER WITH THREATS OF ISOLATED SEVERE WIND AND HAIL.

DISCUSSION...CU HAS INCREASED IN THE PAST HOUR IN VISIBLE SATELLITE IMAGERY ALONG THE COASTAL PLAIN AND HILL COUNTRY. PRESENCE OF SCATTERED CIRRUS SUGGESTS A SUBTLE UPPER-LEVEL IMPULSE ALONG THE WRN GULF COAST MAY BE ENHANCING ASCENT. WITH SURFACE TEMPERATURES NOW REACHING 100-105...MLCIN SHOULD BE WEAK WITH A DEEPLY-MIXED BOUNDARY LAYER PER ACARS DATA INVOF AUS. GUIDANCE IS FAIRLY CONSISTENT THAT TSTMS SHOULD FORM...ALTHOUGH THE LACK OF WELL-DEFINED

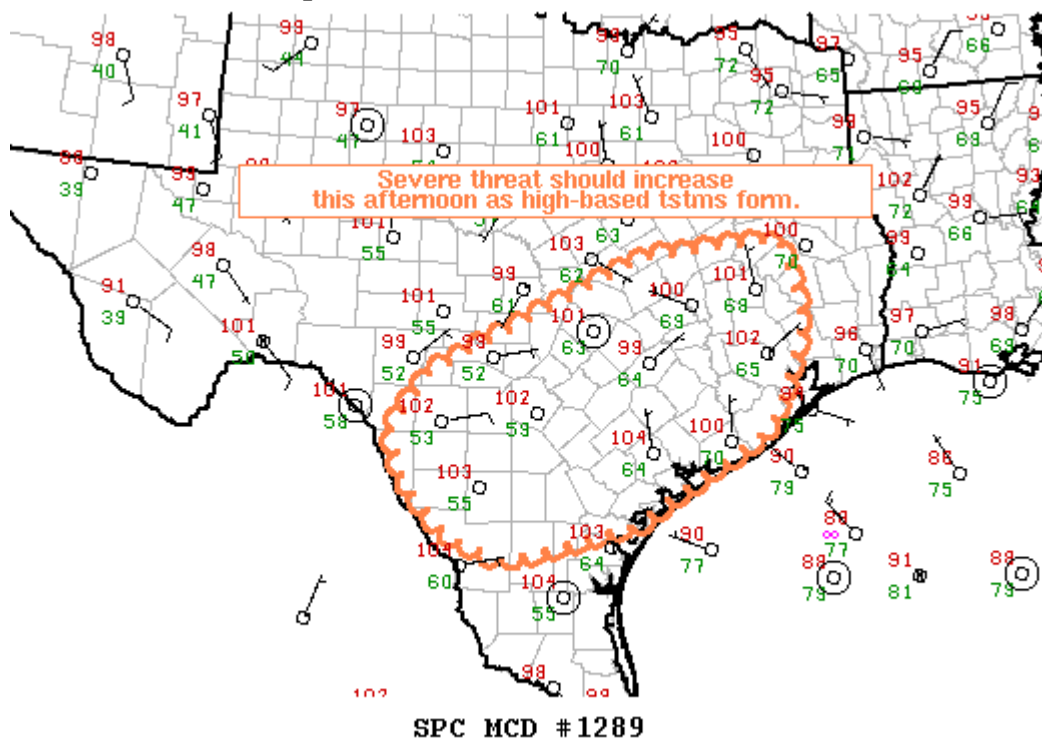
SURFACE/UPPER-LEVEL FEATURES BREEDS UNCERTAINTY IN WHERE DEVELOPMENT WILL FOCUS. NEVERTHELESS...PRESENCE OF 30-35 KT MID-LEVEL NELYS SAMPLED IN THE LEDBETTER TX PROFILER WOULD BE SUFFICIENT FOR ORGANIZING UPDRAFTS. THE STEEP LAPSE RATE ENVIRONMENT SHOULD PROMOTE RISKS FOR SEVERE WIND AND SOME HAIL.

..GRAMS/WEISS.. 06/26/2012

ATTN...WFO...HGX...FWD...CRP...EWX...

LAT...LON 29779993 30519839 31169694 31319508 30339483 29149531
27999721 27599886 27869963 28460022 29090042 29779993

(Severe Potential Graphic)



APPENDIX B

<u>Table of Contents:</u>	<u>Page</u>
1. Preliminary Local Storm Report Event Sources and Types.....	B-2

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

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