NATIONAL WEATHER SERVICE INSTRUCTION 10-501
JANUARY 25, 2021
Operations and Services
Public Weather Services, NWSPD 10-5

WFO STATEMENTS, SUMMARIES, TABLES PRODUCTS SPECIFICATION

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OPR: W/AFS21 (K. McMahon) **Certified by:** W/AFS21 (M. Hawkins)
Type of Issuance: Routine

SUMMARY OF REVISIONS: This directive supersedes NWSI 10-501, "*WFO Statements, Summaries, Tables Products Specification*," dated October 11, 2017. The following revisions were made to this Instruction:

1) Added new section for Public Information Statement (PNS) for Post-Storm Damage Surveys (tornado and significant thunderstorm wind) along with specific format specifications.

2) Converted ALL caps to mixed case.

3) Appendix A: Added examples for PNS Storm Damage Surveys.

STERN.ANDREW.D.1382920348 Digitally signed by STERN.ANDREW.D.1382920348 Date: 2021.01.11 10:42:24 -05'00'

Andrew D. Stern Date
Director
Analyze, Forecast, and Support Office

Table of Contents

1 Introduction

This procedural instruction describes narrative and tabular weather products issued by local Weather Forecast Offices (WFOs).

2 Public Information Statement (Product Category PNS) for Post-Storm Damage Surveys

2.1 Mission Connection

The Public Information Statement (PNS) for post-storm damage surveys is an event-driven alphanumeric message used to distribute information regarding post-storm damage survey results. The PNS is used by a wide variety of users and partners such as the general public, emergency managers, the media, and other governmental entities.

Information gained from post-storm damage surveys and relayed via the PNS product enables the National Weather Service (NWS) to increase the knowledge about hazardous weather events, determine how to better use existing equipment, improve NWS warning services, and provide accurate storm damage-related information to a wide variety of partners and users. This information often becomes the basis for entry into the official National Oceanic and Atmospheric Administration (NOAA)/NWS Storm Data publication that documents the occurrence of storms and other significant hazardous weather phenomena having sufficient intensity to cause loss of life, injuries, property damage, and/or disruption to commerce across the United States.

2.2 Issuance Guidelines

2.2.1 Creation Software

WFOs should use the Advanced Weather Interactive Processing System (AWIPS) Graphical Hazards Generation (GHG) program to issue a Post-Storm Damage Survey PNS.

2.2.2 Issuance Criteria

A post-storm damage survey should be issued after an NWS damage survey team confirms an event caused by a tornado, significant thunderstorm winds, or other weather-related damaging event(s). WFOs will use the PNS format described in Section 2.3.6. for post-storm damage surveys. WFOs should issue a PNS and any updates for these events, as frequently as key information about the event is gathered or received, to meet the time-sensitive data needs of internal and external users and partners. Significant thunderstorm wind events should be determined by the WFO on whether a post-storm survey is necessary. Refer to NWS Instruction (NWSI) 10-1604, Post-Storm Data Acquisition, for information on criteria and qualifications on post-storm damage surveys. However, if damage is surveyed, the WFO should issue a PNS with the results.

WFOs may also issue a generic, free-text narrative about the intentions to survey damage ahead of the actual surveying efforts. The content below the headline can be free or specified formatting, but the headline should follow the guidelines in Section 2.3.4 to maintain consistency with subsequent updates for the same surveyed event.

2.2.3 Issuance Time

The PNS for post-storm damage surveys is a non-scheduled product issued when appropriate.

2.2.4 Valid Time
The PNS is valid through the effective date or time period.

2.2.5 Product Expiration Time
The product expiration time of a PNS for post-storm damage surveys is usually up to 12–24 hours but may be up to 31 days depending upon product content.

2.2.6 Event Expiration Time
The PNS does not have an event expiration time.

2.3 Technical Description

2.3.1 UGC Type
The PNS will use Universal Geographic Code (UGC) Zone (Z) coding.

2.3.2 Mass News Disseminator (MND) Broadcast Instruction Line
There is no MND Broadcast Instruction Line for this product.

2.3.3 MND Product Type Line
This product will utilize "Public Information Statement," or any other appropriate header may be used. For damage survey PNS issuances, the terms "Update" or "Correction" should not be added to the MND line. Updated or corrected information from a previous issuance should be noted in the headline with the term "Update #" (see example headlines below). An optional bulleted section (".Update…"), immediately following the headline, should include the basic details for the update or correction from a previous issuance.

2.3.4 Headline for Post-Storm Damage Survey PNS
WFOs will highlight the PNS for post-storm damage surveys for tornado and significant thunderstorm wind events with a headline appropriate for the event(s). Refer to the examples (a, b and c) below for the general headline format. The headline will begin and end with the three periods (ellipsis) and should include notation of NWS damage survey, event date, event type (e.g. tornado or significant thunderstorm wind or both – see example c), and the update number, if applicable. If the event is considered to span multiple consecutive dates, use the first date of the multi-day event in the headline and address the date of each event in the individual segments/event reports, if there are multiple surveyed events.

Note: There is no limit to the number of updates or corrections allowed for a particular survey as long as the changed information constitutes a substantive difference in the previous information, such as event time(s) or damage rating. Corrected information, such as the spelling of a location or adjusted coordinates or times is also considered substantive for an update. Information about the update, such as a general area (e.g. Southwest Oklahoma, Indianapolis Metropolitan Area, Northern Indiana, Greene County, etc.), a change in event timing, location information, or number of surveyed tornadoes should be captured in the "Update" and/or "Overview" sections (outlined in section 2.3.6.1), as appropriate.

Example headlines:

a) Tornadoes

```
...NWS Damage Survey for 05/25/19 Tornado event...
...NWS Damage Survey for 05/25/19 Tornado event – Update 1...
...NWS Damage Survey for 05/25/19 Tornado event – Update 2...
```

b) Thunderstorm Wind

```
...NWS Damage Survey for 05/25/19 Thunderstorm Wind event...
...NWS Damage Survey for 05/25/19 Thunderstorm Wind event – Update 1...
...NWS Damage Survey for 05/25/19 Thunderstorm Wind event – Update 2...
```

c) Tornado and Thunderstorm Wind Combined

```
...NWS Damage Survey for 05/25/19 Tornado and Thunderstorm Wind event...
...NWS Damage Survey for 05/25/19 Tornado and Thunderstorm Wind event –
Update 1...
...NWS Damage Survey for 05/25/19 Tornado and Thunderstorm Wind event –
Update 2...
```

2.3.5 Content

The PNS for post-storm damage surveys may contain various weather or NWS related information of public interest as described in Section 2.1.

2.3.6 Format

The PNS for post-storm damage survey results will use the format specified in sections 2.3.6.1, 2.3.6.1.1, and 2.3.6.1.2, based on the appropriate event type. The nature of the report (i.e., unofficial, preliminary, or final) should be stated in the explanatory text.

WFOs should consider issuing a generic format PNS (based on the format in section 3.3.5.1) once survey plans have been determined for events with multiple tornadoes and/or significant wind damage that occurred within their area of forecast responsibility, normally during the morning hours, the day after an event. This type of issuance should be a brief overview of survey plans. See example H in the Appendix. A similarly formatted PNS should be sent after surveys are completed in the event that more information is needed to determine a tornado rating, for instance, or if the survey results were inconclusive at that point, to update the public, media, and other external users. See example I in the Appendix.

2.3.6.1 Post-Storm Damage Survey Format Description

Following the headline(s), the PNS for post-storm damage surveys should contain up to six separate sections, with a section header for each, within the product body in the following order:

.Update…
The Update section is mandatory and should briefly describe the events that are being updated.

.Overview…
The Overview section is optional and should briefly describe the event causative factor, general geographic location, event date(s) of the tornado, significant thunderstorm wind or other events, and general findings. Information pertaining to storm survey scheduling may be included in the Overview.

.Tornado (or) Thunderstorm Wind (or) Other Event…
For consistency between issuances, all entries in the "Tornado," "Thunderstorm Wind" (e.g.

derecho, downburst, macroburst, microburst, heatburst, etc.), or "Other Event" (e.g. gradient wind) tabular sections are mandatory and provide specific information regarding event ratings (for tornadoes), fatalities/injuries (if known and confirmed), the begin/end times and dates of the event in local time, and the begin/end points of the event related to geographic locations (Azimuth and Range (AZRAN) to city/town using 16 point compass/statute miles).

To enhance event location accuracy, WFOs will include the Decimal Degree Latitude / Longitude (LAT / LON) begin/end points of the event. Minimum allowed accuracy is to the second decimal point and a maximum up to the fourth decimal point.

For consistency between issuances, do not delete or modify components within Tornado, Thunderstorm Wind, or Other Event tabular sections of the PNS product. If more than one surveyed event appears in a single issuance, the ordering of events (from first to last) is determined by the local WFO. Tabular data that is unavailable at the time of issuance will be noted as "Pending." Mandatory tabular data entries will follow established reporting protocols found in NWSI 10-1605 (Storm Data Preparation).

.Survey Summary…
The Survey Summary section is optional and allows WFOs to add specific and detailed information about tornadic (rotational wind) or thunderstorm wind (straight-line) events (e.g., derechos, downbursts, macrobursts, microbursts, heatbursts) and other non-thunderstorm wind events (e.g., gradient) that have been observed in storm damage surveys. Specific details on event locations, border crossers (events that cross regional, state, county, or County Warning Area (CWA) borders), damages, fatalities/injuries, storm track shifts, ratings, or other pertinent details regarding the event may be described. Inclusion of fatality causative factors (mobile home, vehicle) is encouraged if known.

.EF Scale…
Inclusion of the EF-Scale (Enhanced Fujita) section is optional. The EF-Scale number, corresponding tornado class (weak, strong, violent) and wind speed ranges may be provided.

.NOTE:
A sentence denoting the preliminary nature of the damage survey PNS will be included.

2.3.6.1.1 Tornado Damage Survey PNS Format

```
         1         2         3         4         5         6
1234567890123456789012345678901234567890123456789012345678901234567890123456789

NOUS4X_cccc_ddhhmm
PNSccc
STZ001-002-003-ddhhmm-

Public Information Statement
National Weather Service City State
Time AM/PM time zone day mon dd yyyy

...Headline...                                                    (Mandatory)

.Update...                                                       (Mandatory)

.Overview...                                                      (Optional)

.Tornado (#)... or .(reference)_Tornado...                        (Mandatory)
```

```
Rating:                 (EF-x; where x = 0-5)                          (Mandatory)
Estimated_Peak_Wind:    (xxx mph)                                      (Mandatory)
Path Length_/Statute/:  (xx.xx miles)                                  (Mandatory)
Path Width_/Maximum/:   (xxx yards)                                    (Mandatory)
Fatalities:             (x)                                            (Mandatory)
Injuries:               (x)                                            (Mandatory)

Start Date:             (mon/dd/yyyy)                                   (Mandatory)
Start Time:             (time_AM/PM_ time zone)                        (Mandatory)
Start Location:         (azran to city/town_/_county/parish_/_st)      (Mandatory)
Start_Lat/Lon:          (xx.xxxx_/_-xx.xxxx)                           (Mandatory)

End Date:               (mon/dd/yyyy)                                   (Mandatory)
End Time:               (time_AM/PM_ time zone)                        (Mandatory)
End Location:           (azran to city/town_/_county/parish_/_st)      (Mandatory)
End_Lat/Lon:            (xx.xxxx_/_-xx.xxxx)                           (Mandatory)

Survey Summary:                                                        (Optional)

.Tornado (#)... or .(reference)_Tornado...                           (if applicable)

&&

EF_Scale:                                                              (Mandatory)

NOTE:                                                                  (Mandatory)
The information in this statement is preliminary and subject to
change pending final review of the event/s/ and publication in
NWS Storm Data.

$$

Forecaster Name/Number                                                 (Optional)
```

2.3.6.1.2 Thunderstorm Wind Damage Survey (Significant Event) PNS Format

```
         1         2         3         4         5         6
1234567890123456789012345678901234567890123456789012345678901234567890123456789

NOUS4X_cccc_ddhhmm
PNSccc
STZ001-002-003-ddhhmm-

Public Information Statement
National Weather Service City State
Time AM/PM time zone day mon dd yyyy

...Headline...                                                         (Mandatory)

.Update...                                                             (Mandatory)

.Overview...                                                           (Optional)

.Thunderstorm Wind (#)... or .(reference)_Thunderstorm Wind...         (Mandatory)

Peak Wind /E/ or /M/:   (xxx mph)                                      (Mandatory)
Path Length_/Statute/:  (xx.xx miles)                                  (Mandatory)
Path Width_/MAXIMUM/:   (xxx yards)                                    (Mandatory)
Fatalities:             (x)                                            (Mandatory)
Injuries:               (x)                                            (Mandatory)

Start Date:             (mon/dd/yyyy)                                   (Mandatory)
```

```
Start Time:             (time_AM/PM_ time zone)                          (Mandatory)
Start   Location:    (azran    to    city/town_/_county/parish_/_st)     (Mandatory)
Start_Lat/Lon:          (xx.xxxx_/_-xx.xxxx)                             (Mandatory)

End Date:               (mon/dd/yyyy)                                    (Mandatory)
End Time:               (time_AM/PM_ time zone)                          (Mandatory)
End Location:           (azran   to   city/town_/_county/parish_/_st)    (Mandatory)
End_Lat/Lon:            (xx.xxxx_/_-xx.xxxx)                             (Mandatory)

Survey Summary:                                                          (Optional)

.Thunderstorm Wind (#)... or .(reference)_Thunderstorm Wind...      (if applicable)

&&

NOTE:                                                                    (Mandatory)
The information in this statement is preliminary and subject to
change pending final review of the event/s/ and publication in
NWS Storm Data.

$$

Forecaster Name/Number                                                   (Optional)
```

Note: Multiple individual survey results from the same weather event may be included in the same PNS issuance with each subsequent individual report beginning after the ".Survey Summary…" section from the previous entry.

2.4 Updates, Amendments, and Corrections

For damage survey PNSs, follow the instructions about updates in Section 2.3.3 and the Note in Section 2.3.4.

3 Generic Public Information Statement (Product Category PNS)

3.1 Mission Connection

The generic Public Information Statement (PNS) is an alphanumeric message used to distribute information regarding hydrometeorological events, public education, NWS service changes, limitations or interruptions and special guidelines for interpreting NWS data. The PNS is used by a wide variety of users and partners such as the general public, emergency managers, the media and other governmental entities.

3.2 Issuance Guidelines

3.2.1 Creation Software

WFOs may use the AWIPS GHG program, the AWIPS text editor or any other text editor to produce this product. The Post-Storm Damage Survey PNS should be issued via the AWIPS GHG program.

3.2.2 Issuance Criteria

The issuing office determines the need for issuance of a PNS.

3.2.3 Issuance Time

The PNS is a non-scheduled product issued when appropriate.

3.2.4 Valid Time
The PNS is valid through the effective date or time period.

3.2.5 Product Expiration Time
The product expiration time of a PNS is usually up to 12–24 hours but may be up to 31 days depending upon product content.

3.2.6 Event Expiration Time
The PNS does not have an event expiration time.

3.3 Technical Description.

3.3.1 UGC Type
The PNS will use UGC Zone (Z) coding.

3.3.2 MND Broadcast Instruction Line
There is no MND Broadcast Instruction Line for this product.

3.3.3 MND Product Type Line
The PNS does not have a mandatory MND product type line. This product will utilize "Public Information Statement" or any other appropriate header may be used.

3.3.4 Content
The PNS may contain various weather or NWS related information of public interest as described in Section 3.1.

3.3.5 Format
The generic PNS is a free-form narrative or tabular text product format as shown in Section 3.3.5.1. However, if the generic PNS is used to report preliminary hydrometeorological information during or final hydrometeorological information following a weather event, WFOs should use the format specified in Section 3.3.5.2, 3.3.5.3, or 3.3.5.4. The nature of the report (i.e., unofficial, preliminary or final) should be stated in the explanatory text.

3.3.5.1 Generic PNS Product Format

Product Format	Description of Entry
NOaaii cccc ddhhmm	(WMO Heading)
PNSxxx	(AWIPS ID)
stZ001-005>015-ddhhmm-	(UGC:**Z** & Product expiration time)
Public Information Statement	(MND)
-or-	
Appropriate Header Information	
National Weather Service City ST	(Issuing office)
time AM/PM time zone day mon dd yyyy	(Issuance time and date)
[TEXT]	
$$	
Name/Initials/Fcstr ID	(Optional)

Note: The "xxx" in this product is a modernized three-letter WFO identifier, a three-character

FAA-approved alphanumeric identifier, or a two-letter state abbreviation followed by a "space."

3.3.5.2 Hydrometeorological Format (with water equivalent)

```
         1         2         3         4         5         6
1234567890123456789012345678901234567890123456789012345678901234567890123456789

Product Format                                          Description of Entry

NOaaii cccc ddhhmm                                      (WMO Heading)
PNSxxx                                                  (AWIPS ID)
stZ001-005>015-ddhhmm-                                  (UGC:Z & Product expiration time)

PUBLIC INFOMRATION STATEMENT                            (MND)
                                        -or-
APPROPRIATE HEADER INFORMATION
National Weather Service City ST                        (Issuing office)
time AM/PM time zone day mon dd yyyy                    (Issuance time and date)

EXPLANATORY TEXT /HYDROMET TYPE A/

LOCATION ELEVATION  HYDROMET  WATER     COMMENTS
                    Data 1    EQUIV

STATE 1
...Geopolitical Descriptor 1...

CITY ELEVATION      XXX.X     XX.XX     (Optional text)

...Geopolitical Descriptor 2...

CITY ELEVATION      XXX.X     XX.XX     (Optional text)
CITY 2              XXX.X     XX.XX     (Optional text)

STATE 2
...Geopolitical Descriptor 1...
CITY    XXX.X       XX.XX               (Optional text)


EXPLANATORY TEXT BETWEEN HYDROMETEOROLOGICAL TYPES/HYDROMET TYPE B/

LOCATION ELEVATION  HYDROMET  WATER     COMMENTS
                    Data 2    EQUIV


STATE 1
...Geopolitical Descriptor 1...

CITY ELEVATION     XXX.X      XX.XX     (Optional text)

$$

Name/Initials/Fcstr ID                                  (Optional)
```

Note 1: The "Geopolitical Descriptor" can be any commonly used geographical or political designation such as counties, boroughs, parishes, zones, mountains, valleys, metropolitan areas, etc. The WFO determines which descriptor to use for the PNS.

Note 2: Elevation, in feet, is optional and may be appended to the end of the geopolitical descriptor.

Note 3: Comments may include, but are not limited to, time of the report, latitude/longitude of the reporting site, etc.

Note 4: Hydromet Type begins in column 31. Water Equivalent begins in column 43, and Comments begin in column 51.

Note 5: WFOs may continue to use the free-form text product until such time as nationally supported software for the more structured product shown above is available.

3.3.5.3 Hydrometeorological Format (without water equivalent)

```
         1         2         3         4         5         6
1234567890123456789012345678901234567890123456789012345678901234567890123456789

Product Format                                          Description of Entry

NOaaii cccc ddhhmm                                      (WMO Heading)
PNSxxx                                                  (AWIPS ID)
stZ001-005>015-ddhhmm-                                  (UGC:Z & Product expiration
time)

PUBLIC INFOMRATION STATEMENT                            (MND)
                                        -or-
APPROPRIATE HEADER INFORMATION
National Weather Service City ST                        (Issuing office)
time AM/PM time zone day mon dd yyyy                    (Issuance time and date)

EXPLANATORY TEXT /HYDROMET TYPE A

LOCATION ELEVATION              HYDROMET    COMMENTS
                                 Data 1

STATE 1

...Geopolitical Descriptor 1...

CITY ELEVATION                  XXX.X       OPTIONAL TEXT

...Geopolitical Descriptor 2...

CITY1 ELEVATION                 XXX.X       OPTIONAL TEXT
CITY2                           XXX.X       OPTIONAL TEXT

STATE 2
...Geopolitical Descriptor 1...

CITY                            XXX.X       OPTIONAL TEXT
EXPLANATORY TEXT BETWEEN HYDROMETEOROLOGICAL TYPES /HYDROMET TYPE B
LOCATION ELEVATION              HYDROMET    COMMENTS
                                Data 2

STATE 1
...Geopolitical Descriptor 1...

CITY ELEVATION                  XXX.X       OPTIONAL TEXT

$$

Name/Initials/Fcstr ID                                  (Optional)
```

Note 1: The “Geopolitical Descriptor” can be any commonly used geographical or political designation such as counties, boroughs, parishes, zones, mountains, valleys, metropolitan areas, etc. The WFO determines which descriptor to use for the PNS.

Note 2: Elevation, in feet, is optional and may be appended to the end of the geopolitical descriptor.

Note 3: Comments may include, but are not limited to, time of the report, latitude/longitude of the reporting site, etc.

Note 4: Hydromet Type begins in column 31. Comments begin in column 51.

Note 5: WFOs may continue to use the free-form text product until such time as nationally supported software for the more structured product shown above is available.

3.3.5.4 Hydrometeorological Format (with date/time of measurement and no water equivalent)

```
         1         2         3         4         5         6
1234567890123456789012345678901234567890123456789012345678901234567890123456789

Product Format                                        Description of Entry

NOaaii cccc ddhhmm                                    (WMO Heading)
PNSxxx                                                (AWIPS ID)
stZ001-005>015-ddhhmm-                                (UGC:Z & Product expiration time)


PUBLIC INFORMATION STATEMENT                          (MND)
                                              -or-
APPROPRIATE HEADER INFORMATION
National Weather Service City ST                    (Issuing office)
time AM/PM time zone day mon dd yyyy                (Issuance time and date)

EXPLANATORY TEXT /HYDROMET TYPE A/

LOCATION         RM          TOTAL TIME/DATE OF COMMENTS
                 SNOWFALL          MEASUREMENT
                 (INCHES)

STATE 1
...Geopolitical    Descriptor1...

CITY ELEVATION           XXX.X     XXX  XM MM/DD  (Optional Text)

...Geopolitical    Descriptor2...

CITY1 ELEVATION          XXX.X     XXX  XM MM/DD  (Optional Text)
CITY2                    XXX.X     XXX  XM MM/DD  (Optional Text)

STATE 2
...Geopolitical    Descriptor1...

CITY                     XXX.X     XXX  XM MM/DD  (Optional Text)

$$

Name/Initials/Fcstr ID                              (Optional)
```

Note 1: The “Geopolitical Descriptor” can be any commonly used geographical or political designation such as counties, boroughs, parishes, zones, mountains, valleys, metropolitan areas, etc. The WFO determines which descriptor to use for the PNS.

Note 2: Elevation, in feet, is optional and may be appended to the end of the geopolitical descriptor.
Note 3: Comments may include, but are not limited to, time of the report, latitude/longitude of the reporting site, etc.

Note 4: Hydromet Type begins in column 22. Comments begin in column 47.

Note 5: WFOs may continue to use the free-form text product until such time as nationally supported software for the more structured product shown above is available.

3.4 Updates, Amendments, and Corrections

Modifications are made to the generic PNS as needed. The appropriate terms "Updated" or "Corrected" preceded by three dots (...) will be appended to the product identification line in the MND header. As an important aid to users, a brief (usually one-line) reason for the update or correction should be added.

4 Weather Summary (Product Category RWS)

4.1 Mission Connection

The Weather Summary (RWS) provides a brief narrative for a sub-state region, an entire state or a multi-state region. This narrative includes recent past weather (up to 24 hours in the past), present weather and forecast conditions (up to 24 hours in the future but may extend up to 72 hours). The emphasis should be on past and current weather. WFOs (or Weather Service Offices (WSOs)), in coordination with their local users and Regional Headquarters, will determine the regional extent of this product and which WFOs (or WSOs) will issue sub-state, state or multi-state product(s).

4.2 Issuance Guidelines

4.2.1 Creation Software

The RWS may be composed using the AWIPS text editor or any other text editor.

4.2.2 Issuance Criteria

The RWS is a routine product.

4.2.3 Issuance Time

The RWS should be issued based on user requirements, generally mid-morning and/or early to mid-evening.

4.2.4 Valid Time

The RWS is generally valid up to 24 hours from the product issuance time.

4.2.5 Product Expiration Time

The RWS product expiration time may be up to 12 hours after issuance time.

4.2.6 Event Expiration Time

The RWS does not have an event expiration time.

4.3 Technical Description

4.3.1 UGC Type

The RWS will use UGC Zone (Z) coding. The RWS may have several summaries grouped geographically. If grouped summaries are used, each summary should include a UGC header assigned for the public forecast zones within that grouping. The partitioning should be determined

by the WFO with the concurrence of the Regional Headquarters.

4.3.2 MND Broadcast Instruction Line
The RWS does not contain a MND Broadcast Instruction Line.

4.3.3 MND Product Type Line
The RWS MND Weather Summary For "Sub- State Region," "State," or "Multi-State Region," where "Sub-State Region," "State" or "Multi-State Region" are replaced appropriately.

4.3.4 Content
The RWS may contain the entire range of meteorological variables (e.g., sky condition, weather, wind, temperature, snow depth, tides, water temperature, etc.). Record and/or near-record temperatures, precipitation, heat, etc., should be mentioned. The synoptic features causing the weather may be mentioned but only in the very simplest, nontechnical terms.

4.3.5 Format
The RWS is a free-form text product.

Product Format	Description of Entry
AWaai cccc ddhhmm	(WMO Heading)
RWSxxx	(AWIPS ID)
stZ001-005>015-ddhhmm-	(UGC:**Z** & Product expiration time)
Weather Summary for "Sub-State Region," "State" or "Multi-State Region" ,"	(MND)
National Weather Service City ST	(Issuing office)
Time AM/PM Time Zone Day Mon dd yyyy	(Issuing time and date)
[TEXT]	
$$	(UGC Delimiter)
Name/Initials/Fcstr ID	(Optional)

Note: The "xxx" in this product is either a modernized three-letter WFO identifier or a two-letter state abbreviation followed by a "space."

4.4 Updates, Amendments, and Corrections
As needed, based upon user needs.

5 Weather Roundup (Product Category RWR)

5.1 Mission Connection
The Weather Roundup (RWR) provides routine, standardized hourly observations for a sub-state region, an entire state or a multi-state region. Standardized observations are those that meet the criteria defined in NWSI 10-1302, "Instrument Requirements and Standards for the NWS Surface Observing Programs (Land)". WFOs, in coordination with their local users and Regional Headquarters, will determine the regional extent of this product and which WFOs will issue sub-state, multi-state or state products.

5.2 Issuance Guidelines

5.2.1 Creation Software
The RWR can be automatically composed and transmitted by use of a standard applications program that decodes the surface aviation observations (RiverPro) or created by the AWIPS (or any other) text editor.

5.2.2 Issuance Criteria
The RWR is a routine product.

5.2.3 Issuance Time
The RWR should be issued at least hourly. Some observations are available a few minutes before the hour while others are not available until shortly after the hour. Thus, WFOs may run the application just before the hour for fast dissemination of early observations and again shortly after the hour when the rest of the observations are available.

5.2.4 Valid Time
The RWR is generally valid for one hour from the product issuance time.

5.2.5 Product Expiration Time
The RWR product expiration time is generally one hour after issuance time.

5.2.6 Event Expiration Time
The RWR does not have an event expiration time.

5.3 Technical Description

5.3.1 UGC Type
Public Forecast Zones. Each RWR may have several groups of observations. Each group of observations should include a UGC header assigned for the public forecast zones within that grouping. The partitioning should be determined by the WFO, with the concurrence of the Regional Headquarters.

5.3.2 MND Broadcast Instruction Line
The RWR does not contain a MND Broadcast Instruction Line.

5.3.3 MND Product Type Line
The RWR MND is “WEATHER ROUNDUP FOR ‘SUB-STATE REGION,’ ‘STATE,’ or ‘MULTI-STATE REGION’” where “SUB-STATE REGION,” “STATE,” or “MULTI-STATE REGION” are replaced appropriately.

5.3.4 Content
The RWR may contain the entire range of meteorological variables (e.g., sky condition, weather, temperature, dew point, relative humidity, wind, atmospheric pressure, etc.). In remarks, Wind Chill Index will be abbreviated “WCI” and Heat Index will be abbreviated “HX.” Below zero values for temperature, dew point, and WCI will be preceded by a minus (-) sign. If the satellite cloud cover product is unavailable, reports from unaugmented Automated Surface Observing

System (ASOS) stations will show "FAIR" for the sky/weather condition when there are few or no clouds (i.e., scattered or less) below 12,000 feet with no significant weather and/or obstructions to visibility. A note explaining the meaning of "FAIR" should appear after the MND header of all RWRs.

5.3.5 Format

The RWR is a tabular product.

Product Format	Description of Entry
ASaa4i cccc ddhhmm	(WMO Heading)
RWRxxx	(AWIPS ID)
stZ001-005>015-ddhhmm-	(UGC:**Z** & Product expiration time)
Weather Summary for "Sub-State Region," "State" or "Multi-State Region" ,"	(MND)
National Weather Service City ST	(Issuing Office)
time AM/PM time zone day mon dd yyyy	(Issuing time and date)
[TEXT]	
$$	(UGC Delimeter)
NOTE..."FAIR" INDICATES FEW OR NO CLOUDS BELOW 12,000 FEET WITH NO SIGNIFICANT WEATHER AND/OR OBSTRUCTIONS TO VISIBILITY.	
Name/Initials/Fcstr ID	(Optional)

Note: The "xxx" in this product is either a modernized three-letter WFO identifier or a two-letter state abbreviation followed by a "space."

5.4 Updates, Amendments, and Corrections

As needed, based upon user needs.

6 Maximum/Minimum Temperature and Precipitation Table (Product Category RTP)

6.1 Mission Connection

The Maximum/Minimum Temperature and Precipitation Table (RTP) provides the maximum/minimum temperatures and precipitation totals for a sub-state region, an entire state or a multi-state region. The RTP table is used by national centers and local media.

The 0030 UTC and 1230 UTC issuances will contain specific time frames for temperature extremes (see 6.3.5.1.4 Format Summary Table); however, precipitation will be for a 24-hour period ending at the top of the synoptic hour. RTP tables for other times will generally contain extremes for a 24-hour period for both temperatures and precipitation ending at a specific time or for a calendar day (defined as midnight to midnight local time).

Only those stations that meet the criteria defined in NWSI 10-1302, "Instrument Requirements and Standards for the NWS Surface Observing Programs (Land)" will be included in the RTP product. In general, surface aviation (METAR) observations and cooperative (COOP) observing stations qualify for use in the RTP. WFOs, in coordination with their local users and Regional

Headquarters, will determine the regional extent of this product and which WFOs will issue sub-state, multi-state or state product(s).

6.2 Issuance Guideline

6.2.1 Creation Software
The river product formatter (Riverpro) in the WFO Hydrologic Forecast System (WHFS) should be used to compose the RTP. Other software may be used as long as the proper product format is followed.

6.2.2 Issuance Criteria
The RTP is a routine product.

6.2.3 Issuance Time
The RTP should be issued at least twice daily: in the morning around 1230 hours UTC and in the afternoon/evening around 0030 hours UTC. WFOs may issue additional products to capture "calendar day" values as reports become available.

6.2.4 Valid Time
The RTP is generally valid up to 12 hours from the product issuance time.

6.2.5 Product Expiration Time
The RTP does not have a product expiration time.

6.2.6 Event Expiration Time
The RTP does not have an event expiration time.

6.3 Technical Description

6.3.1 UGC Type
The RTP does not use UGC coding.

6.3.2 MND Broadcast Instruction Line
The RTP does not contain a MND Broadcast Instruction Line.

6.3.3 MND Product Type Line
The RTP MND is Max/Min Temperature and Precipitation Table for "Sub-State Region," "State" or "Multi-State Region" where "Sub-State Region," "State" or "Multi-State Region are replaced appropriately.

6.3.4 Content
Maximum and minimum temperatures (in degrees Fahrenheit) and 24-hour precipitation totals (in inches) will be included. Weather elements such as current weather, snowfall and snow depth may be included, but any additional information should be kept to a minimum. WFOs may list the highest and lowest temperatures for their region or area at the bottom of the report. WFOs should clearly identify the valid time period for the reported data at the top of the text.

6.3.5 Format

The RTP is a tabular product and will use Standard Hydrometeorological Exchange Format (SHEF) coding for ease in automated software processing. The SHEF ".BR" report code will be used (see NWS Manual 10-944, "Standard Hydrometeorological Exchange Format Manual").

```
Product Format                                              Description of Entry
ASaa6i cccc ddhhmm                                          (WMO Heading)
RTPxxx                                                      (AWIPS ID)

Max/Min Temperature and Precipitation Table for             (MND)
"Sub-State Region," "State" or "Multi-State Region"

National Weather Service City ST                            (Issuing Office)
Time AM/PM time zone Day Mon dd yyyy                        (Issuing time and date)

.BR locid mmdd tz DHhh/TAIRZX/DHhh/TAIRZN/PPDRZZ/SFDRZZ/SDIRZZ
                                                            (SHEF turn-on code)

    [TEXT]

.End                                                        (SHEF turn-off code)

These data are preliminary and have not undergone final quality control by the
National Centers for Environmental Information (NCEI - formerly the National
Climatic Data Center or NCDC).  Therefore, these data are subject to revision.
Final and certified climate data can be accessed at www.ncdc.noaa.gov.

$$

Name/Initials/Fcstr ID                                      (Optional)
```

Note 1: The "xxx" in this product is either a modernized three-letter WFO identifier or a two-letter state abbreviation followed by a "space." The "locid" is the three through eight alphanumeric character SHEF location identifier.

Note 2: Reports will be grouped according to time zone of the observing station. Therefore, if a WFO includes observations from observing stations in two (or more) separate time zones, the RTP report will be formatted in two (or more) sections such that each section contains observations from only one (1) time zone.

Note 3: Specific time periods and elements included will be listed at the top of the product.

Note 4: Reporting stations may be grouped together by geographical area. These areas will be determined by the issuing WFO.

Note 5: "BR" turns on SHEF coding. Any lines following the ".BR" line which are not SHEF encoded (for example, column headers) will contain a colon (":") as the first character.

Note 6: Each station in the RTP will include the following elements:

a. SHEF location identifier (locid) – three through eight alphanumeric characters followed by a colon.
b. Station name.
c. Station elevation (optional). If included, the station elevation will be reported in the same section as the station name and elevation will be followed by a colon. Otherwise, the station name will be followed by a colon. (The station name and

elevation are not SHEF encoded. In SHEF, values between colons are processed as a remark by the SHEF decoder.)

d. Observation time (COOP stations only), based on the value used in the original observation, followed by a solidus ("/").

e. Observed weather elements, each separated by a solidus. "M" will be used to indicate missing data that is normally reported by the station. If the station does not normally report this element (e.g., high/low temperature at a precipitation-only station), this field will be left blank.

Note 7: ".END," listed on a single line at the end of the observation table, turns off the SHEF coding.

Note 8: WFOs will include the following phrase at the end of the product:
"These data are preliminary and have not undergone final quality control by the National Centers for Environmental Information (NCEI - formerly the National Climatic Data Center or NCDC). Therefore, these data are subject to revision. Final and certified climate data can be accessed at www.ncdc.noaa.gov."

6.3.5.1 SHEF Element Codes
The SHEF element codes will vary depending on the issuance time, source of observation, and specific reporting period.

6.3.5.1.1 For METAR observations included in the morning issuance around 1230 UTC:
.BR locid mmdd tz DH00/TAIRZX/DHhh/TAIRZP/PPDRZZ/SFDRZZ/SDIRZZ for Standard Time
or
.BR locid mmdd tz DH01/TAIRZX/DHhh/TAIRZP/PPDRZZ/SFDRZZ/SDIRZZ for Daylight Time

DH00/DH01 represents midnight Local Standard Time for TAIRZX, and DHhh represents 12 UTC reported in Local Time for the remaining elements.

Create a separate SHEF .BR section using the format in 6.3.5.1.4 if COOP data are reported in the 1230 UTC RTP table.

6.3.5.1.2 For METAR observations included in the evening issuance around 0030 UTC:
.BR locid mmdd tz DHhh/TAIRZS/TAIRZI/PPDRZZ/SFDRZZ/SDIRZZ where DHhh corresponds to 00 UTC reported in Local Standard Time.

Create a separate SHEF .BR section using the format in 6.3.5.1.4 if COOP data are reported in the 0030 UTC RTP table.

6.3.5.1.3 For locally required issuances (e.g., COOP data):
.BR locid mmdd tz DHhh/TAIRZX/TAIRZN/PPDRZZ/SFDRZZ/SDIRZZ where DHhh represents 7 AM Local Time for 24-hour morning reports and 7 PM Local Time for 24-hour evening reports.

Create a separate SHEF .BR section using the formats in 6.3.5.1.1 or 6.3.5.1.2. if METAR data are reported in RTP tables outside of 1230 UTC and 0030 UTC.

6.3.5.1.4 Format Summary Table

Report Time and Source	SHEF Parameter Code	Elements Included
Morning issuance (1230 UTC) - METAR data	tz	E for Eastern Time, C for Central Time, etc.
	DH00 / DH01	For yesterday's high temperature reported at midnight Local Standard Time (e.g. Use DH00 for Standard Time and DH01 for Daylight Time)
	TAIRZX	High temperature past calendar day
	DHhh	For reporting low temperature and precipitation elements, hh corresponds to 12 UTC in Local Time (e.g. 07 for Eastern Time Zone, 06 for Central Time Zone, etc.)
	TAIRZP	Low temperature past 12 hours
	PPDRZZ	Precipitation last 24 hours
	SFDRZZ (optional)	Snowfall last 24 hours (optional)
	SDIRZZ (optional)	Snow depth (optional)
Evening issuance (0030 UTC) - METAR data	tz	E for Eastern Time, C for Central Time, etc.
	DHhh	DDhh corresponds to 00 UTC
	TAIRZS	High temperature past 18 hours
	TAIRZI	Low temperature past 18 hours
	PPDRZZ	Precipitation last 24 hours
	SFDRZZ (optional)	Snowfall last 24 hours (optional)
	SDIRZZ (optional)	Snow depth (optional)

Locally required issuances - COOP data	tz	E for Eastern Time, C for Central Time, etc.
	DHhh	hh corresponds to 7 AM or 7 PM Local Time
	TAIRZX	High temperature past 24 hours
	TAIRZN	Low temperature past 24 hours
	PPDRZZ	Precipitation past 24 hours
	SFDRZZ (optional)	Snowfall last 24 hours (optional)
	SDIRZZ (optional)	Snow depth (optional)

6.4 Updates, Amendments, and Corrections

As needed, based upon user needs. WFOs will identify amendments or corrections per standard SHEF code. This manual is posted on-line on a website managed by the Field Support and Infrastructure Team within the Office of Central Processing.

APPENDIX A - WFO Statements, Summaries, Tables Product Examples

Table of Contents: Page

1. Introduction. This section contains examples of WFO statements, summaries and tables.

2. Public Information Statement.

A. General Awareness Information: Equipment Outage (Generic Format)

```
NOUS41 KCTP 241059
PNSCTP
PAZ025-241500-

Public Information Statement
National Weather Service State College PA
659 AM EDT Wed Jul 24 2019

...Maintenance on NOAA Weather Radio this morning...

The NOAA Weather Radio serving Altoona and surrounding towns W N G 5 8 9 will be
off the air periodically this morning for routine maintenance.  The scheduled
weekly test should still be transmitted between 11 AM and Noon.  The radio should
be back to normal broadcast transmissions by early afternoon.

$$
```

B. General Awareness Information: Weather Safety/Awareness Week (Generic Format)

```
NOUS43 KIND 171000
PNSIND
INZ001>092-171400-

Public Information Statement
National Weather Service Indianapolis IN
600 AM EDT Sun Mar 17 2019

This week is severe weather preparedness week in Indiana.  Everyone has a
critical role in safety during severe weather.  We will discuss roles of key
players and planning for severe weather.

Though severe weather can happen any time of the day or year, it occurs most
often from April to July.

National Weather Service offices train volunteers called Skywarn Spotters who
report what thunderstorms are producing.  These reports are correlated with radar
data and aid meteorologists in the warning process.  Local National Weather
Service web sites identify Skywarn spotter training dates and locations.

Television and radio stations are key players in weather safety by broadcasting
National Weather Service watches and warnings.  They also provide weather hazard
safety information in program specials and outreach functions.  The media also
carry recovery efforts after disasters.  Stations also relay the statewide
tornado drill warning.

Newspapers are involved too by promoting severe weather preparedness week and
carrying stories of damaging or significant weather events.

State and county homeland security agencies also prepare for severe weather.
These officials plan for and respond to disasters and coordinate recovery
efforts.  County homeland security also helps arrange National Weather Service
Skywarn spotter training and supports medical facilities, schools and businesses
with weather safety procedures.
```

State, county and local highway, law enforcement, fire department and emergency response agencies as well as the American Red Cross and other volunteer organizations also plan for and respond to weather emergencies. The Indiana State Police disseminates National Weather Service watches and warnings to the counties. Many law enforcement and fire department personnel receive Skywarn spotter training, participate in storm spotting, and aid citizens when disasters occur. These people are the first on scene after a disaster.

Schools, the private sector and members of the general public also play an important role in severe weather preparedness. That role is to know how weather may threaten, to have a plan of action, to exercise the plan, and then to follow the plan when severe weather strikes. Everyone must remain aware of the potential for severe weather, actively monitor weather information sources and take action when warnings are issued or storms threaten.

On Monday, we will cover hazardous weather outlooks and watches and what everyone should do long before any hazardous weather occurs.

$$

C. Damage Survey (single tornado event)

NOUS42 KTBW 191910
PNSTBW
FLZ052-151-251-201915-

Public Information Statement
National Weather Service Tampa Bay Ruskin FL
310 PM EDT Sat Oct 19 2019

...NWS Damage Survey for 10/18/19 Tornado Event...

.Overview...Tropical Storm Nestor produced a series of tornadoes late Friday night, over localized areas of west central Florida..

.Tornado...

Rating:	EF-2
Estimated Peak Wind:	120 mph
Path Length /statute/:	9 miles
Path Width /maximum/:	0.3 miles
Fatalities:	0
Injuries:	0
Start Date:	10/18/2019
Start Time:	1059 PM EDT
Start Location:	Carillon Lakes / Polk County / FL
Start Lat/Lon:	28.0049 / -82.0328
End Date:	10/18/2019
End Time:	1129 PM EDT
End Location:	Lakeland / Polk County / FL
End Lat/Lon:	28.1244 / -82.0195

Survey Summary: Preliminary estimates have damage to around 50 homes. Several homes in the Mt. Tabor neighborhood were damaged and 2 of these sustained EF2 damage. The tornado showed signs of weakening and appeared to be lifting as it moved north from the Mt. Tabor area and damaged the roof at Kathleen Middle

```
School.  Also, the tornado lifted a camper onto a residence near the middle
school.

&&

EF Scale: The Enhanced Fujita Scale classifies tornadoes into the following
categories:

EF0...Weak......65 to 85 mph
EF1...Weak......86 to 110 mph
EF2...Strong....111 to 135 mph
EF3...Strong....136 to 165 mph
EF4...Violent...166 to 200 mph
EF5...Violent...>200 mph

NOTE:
The information in this statement is preliminary and subject to change pending
final review of the event and publication in NWS Storm Data.

$$
```

D. Damage Survey (single tornado event – update)

```
NOUS44 KBMX 081932
PNSBMX
ALZ011>015-017>050-090745-

Public Information Statement
National Weather Service Birmingham AL
232 PM CDT Mon Apr 8 2019

...NWS Damage Survey for 04/08/19 Tornado Event – Update 1...

.Update...added information for Blount County tornado.

.Overview...An isolated storm developed overnight and moved through North Central
Alabama.  This storm split several times and produced at least one tornado and
maybe more.  We will update this statement as more information comes back from
the survey team.

.Tornado #1 Graves Cemetery Road Tornado, Blount County...

Rating:                 EF1
Estimated Peak Wind:    90 mph
Path Length /statute/:  6.3 miles
Path Width /maximum/:   1175 yards
Fatalities:             0
Injuries:               0

Start Date:             04/08/2019
Start Time:             05:44 AM CDT
Start Location:         3 ESE Blountsville / Blount County / AL
Start Lat/Lon:          N/A / N/A

End Date:               04/08/2019
End Time:               05:53 AM CDT
End Location:           2 SSW Brooksville / Blount County / AL
End Lat/Lon:            N/A / N/A
```

```
Survey Summary:
Not available at this time.

&&

EF Scale: The Enhanced Fujita Scale classifies tornadoes into the following
categories:

EF0...Weak......65 to 85 mph
EF1...Weak......86 to 110 mph
EF2...Strong....111 to 135 mph
EF3...Strong....136 to 165 mph
EF4...Violent...166 to 200 mph
EF5...Violent...>200 mph

NOTE:
The information in this statement is preliminary and subject to change pending
final review of the event and publication in NWS Storm Data.

$$
```

E. Damage Survey (combination of tornadoes and thunderstorm wind events)

```
NOUS43 KMPX 230205
PNSMPX
MNZ041>045-047>070-073>078-082>085-091>093-WIZ014>016-023>028-242100-

Public Information Statement
National Weather Service Twin Cities/Chanhassen MN
857 PM CDT Mon Jul 22 2019

...NWS Damage Survey for 07/19/2019 Tornado Event...

.Overview...Two tornadoes embedded within a large swath of straight line winds
occurred Friday, July 19th across Polk and Barron counties.  While many trees
were damaged across both counties, it was clear given the tree fall pattern which
resulted from straight line winds and which were the result of tornadoes.

.Upper Turtle Lake Tornado...

Rating:                EF-0
Estimated Peak Wind:   75 mph
Path Length /statute/: 0.8 miles
Path Width /maximum/:  50 yards
Fatalities:            0
Injuries:              0

Start Date:            7/19/2019
Start Time:            5:44 PM CDT
Start Location:        3ENE of Village of Turtle Lake/Barron County/WI
Start Lat/Lon:         45.4128 / -92.0854

End Date:              7/19/2019
End Time:              5:50 PM CDT
End Location:          3ENE of Village of Turtle Lake/Barron County/WI
End Lat/Lon:           45.4066 / -92.0743

A brief EF0 tornado caused uprooted and downed trees alongside damage to roof
panels of outbuildings on a farmstead 2.9 miles northeast of the Village of
```

```
Turtle Lake, Wisconsin on Friday evening.  Maximum winds were estimated to be 75
miles per hour.


.Horseshoe Lake Tornado...

Rating:                 EF-1
Estimated Peak Wind:    90 mph
Path Length /statute/: 3.0 miles
Path Width /maximum/:  1/3 mile
Fatalities:             0
Injuries:               0

Start Date:             7/19/2019
Start Time:             5:36 PM CDT
Start Location:         3NW of Village of Turtle Lake / Polk County / WI
Start Lat/Lon:          45.4321 / -92.1811

End Date:               7/19/2019
End Time:               5:49 PM CDT
End Location:           3NE of Village of Turtle Lake / Barron County / WI
End Lat/Lon:            45.4373 / -92.1210

An EF1 tornado uprooted and downed trees in a concentrated path beginning 3.3
miles northwest of the Village of Turtle Lake Wisconsin on Friday evening, ending
3 miles northeast of the Village of Turtle Lake.  Maximum winds were estimated to
be 90 mph with a path length of 3 miles, and a max width of 1/3 mile.

&&

EF Scale: The Enhanced Fujita Scale classifies tornadoes into the following
categories.

EF0...Weak......65 TO 85 mph
EF1...Weak......86 TO 110 mph
EF2...Strong....111 TO 135 mph
EF3...Strong....136 TO 165 mph
EF4...Violent...166 TO 200mph
EF5...Violent.  >200mph

.Polk and Barron County Thunderstorm Wind Damage...

In addition to the two tornadoes, widespread straight line winds raked across
northern and eastern Polk County and most of Barron County.  Most of the damage
was to trees, although some light structural damage was also noted.  Trees fell
toward the east southeast, which is consistent with the strong west northwest
wind.  Maximum wind was estimated at 90 mph given the tree damage and a measured
gust of 84 mph in Cushing, WI (Polk County).  The same weather station measured a
sustained 73 mph wind for 5 minutes.

&&

NOTE:
The information in this statement is preliminary and subject to change pending
final review of the event and publication in NWS Storm Data.

$$
```

F. Damage Survey (multiple tornadoes – update on one specific entry)

436
NOUS44 KFWD 232357 CCA
PNSFWD
TXZ091>095-100>107-115>123-129>135-141>148-156>162-174-175-240900-

Public Information Statement
National Weather Service Fort Worth TX
359 PM CDT Wed Oct 23 2019

...NWS Damage Survey for 10/20/2019 Tornado and Thunderstorm Wind Event - Update 3...

.Update...Corrected west to east at end of first tornado summary. Updated survey information for the Ellis County, TX tornadoes including summary and path length and width. All events were placed in chronological order.

.Overview...Severe thunderstorms erupted on the evening of October 20, 2019 across North Texas ahead of a powerful storm system. A couple of supercells produced tornadoes across parts of the North Texas, including the Dallas/Fort Worth Metroplex. The highest rated tornado, an EF-3, struck portions of Dallas County, but a high-end EF-2 tornado occurred in Garland. A total of 9 tornadoes have been surveyed. Additional surveys may be needed this week.

.Las Colinas to Richardson Tornado...

Rating:	EF-3
Estimated Peak Wind:	140 mph
Path Length /statute/:	15.75 miles
Path Width /maximum/:	1300 yards
Fatalities:	0
Injuries:	N/A
Start Date:	10/20/2019
Start Time:	8:58 PM CDT
Start Location:	1.8 E of Las Colinas / Dallas County / TX
Start Lat/Lon:	32.87 / -96.91
End Date:	10/20/2019
End Time:	9:30 PM CDT
End Location:	3 E of Richardson / Dallas County / TX
End Lat/Lon:	32.96 / -96.68

Survey Summary: The tornado formed in northwest Dallas, near State Highway 348 and Luna Road, where large tree damage and minor roof damage was initially observed. This tornado tracked toward the east-northeast, crossing I-35E and impacted numerous commercial structures between this freeway and Harry Hines Blvd. Extensive damage to many businesses and residences, consistent with EF-1 and EF-2 intensity wind speeds, occurred near the intersection of Harry Hines Blvd and Walnut Hill Lane. As the tornado moved eastward, roughly coincident with Walnut Hill Lane, several gas stations, large commercial buildings, and churches, and at least one multi-story apartment complex sustained significant roof and exterior wall damage. This path of strong EF-1 and EF-2 damage continued east-northeast along Walnut Hill Lane through the Marsh Lane and Midway Road corridors. East of Marsh Lane, the tornado impacted more single-family residences, though commercial structures were still adversely affected at times. Severe damage to large hardwood trees, consistent with EF-1 intensity winds, was observed throughout the damage path from Marsh Lane to US HWY 75.

Intermittent EF-1 and EF-2 damage also occurred to a number of residences in this area. Many of these damaged homes were large and/or well-established structures that sustained either partial or total roof loss, accompanied by minor exterior wall damage. This damage was consistent with 110-125 mph tornado winds.Within one concentrated region of EF-2 damage along Northaven Road west of US HWY 75, a particular single-family home was surveyed with total roof loss, and multiple collapsed exterior walls. The survey team determined that this damage was consistent with low-end EF-3 intensity winds of approximately 140 mph. This was the only structure that was assigned an EF-3 rating for this tornado.

The tornado continued eastward, toward US HWY 75 and produced significant roof damage to several businesses near US HWY 75 including office low-rise buildings, a car dealership, and a Home Depot. Damage here was assigned an EF-2 intensity. The tornado crossed over the southern part of the Texas Instruments campus and then began to turn more northeastward and parallel Greenville Avenue. Tree and roof damage consistent with EF-1 occurred as it crossed I-635. Several glass windows were blown out at a mid-rise office building. The tornado crossed an apartment complex near Walnut Street and Greenville Avenue where dozens of units had sections of missing roof consistent with EF-1 damage of 95 to 110 mph. The tornado moved across the Cutters Point apartment complex where numerous units experienced significant roof loss consistent with 115 mph or EF-2 damage. Another low-rise office building saw numerous windows blown out on all sides. The tornado continued into the Richland Park, Lakes of Buckingham, Richland Meadows, and College Park residential subdivisions where widespread tree and roof damage consistent with 80 to 95 mph winds occurred. A few homes in this area saw complete or total roof loss where winds were estimated at 110 mph or EF-1. The tornado began to weaken and took a sharp turn to the north near Richardson Square where it tracked to the Huffhines Park areas. Mostly tree damage occurred here with winds estimated near 70 mph or EF-0. The track then turned to the east and became very narrow near Duck Creek with the tornado dissipating as it crossed Jupiter Rd. The tornado had a continuous track for 32 minutes, tracked for just over 15 miles, produced maximum winds of 140 mph, with a maximum width of three-quarters of a mile.

.Midlothian Tornado...

Rating:	EF-1
Estimated Peak Wind:	100 mph
Path Length /statute/:	2.83 miles
Path Width /maximum/:	350 yards
Fatalities:	0
Injuries:	N/A
Start Date:	10/20/2019
Start Time:	9:10 PM CDT
Start Location:	N Midlothian / Ellis County / TX
Start Lat/Lon:	32.50 / -96.99
End Date:	10/20/2019
End Time:	9:15 PM CDT
End Location:	NNE Midlothian / Ellis County / TX
End Lat/Lon:	32.49 / -96.95

Survey Summary: The tornado began near Highway 67 and 9th Street on the north side of Midlothian and traveled east for approximately 2.8 miles. Several church and retail buildings experienced blown out windows and roof damage. One of the buildings connected to the Lighthouse Church was heavily damaged with the collapse of the southward facing wall and much of the roof removed. Just to the

east of Highway 67, sheet metal was peeled on two buildings and metal roof purlins were bent on one. This damage was consistent with winds of 100 to 110 mph, and EF-1 intensity. The tornado weakened some as it headed east and crossed into a residential area south of Mockingbird Lane. Damage indicates the tornado intensified in the area of Morning Dove Lane and Pheasant Drive. Several homes experienced significant roof damage, uplift of the roof deck of at least one home, some windows blown out, a garage door collapsed, and several trees were uprooted. This type of damage was consistent with wind speeds of 100 to 110 mph, or EF-1 intensity. The tornado weakened before ending near Walnut Grove Road, but the end point of this tornado is still being investigated.

.Garland Tornado...

Rating:	EF-2
Estimated Peak Wind:	135 mph
Path Length /statute/:	2.48 miles
Path Width /maximum/:	265 yards
Fatalities:	0
Injuries:	N/A
Start Date:	10/20/2019
Start Time:	9:24 PM CDT
Start Location:	3 WSW Garland / Dallas County / TX
Start Lat/Lon:	32.90 / -96.68
End Date:	10/20/2019
End Time:	9:30 PM CDT
End Location:	Near Garland / Dallas County / TX
End Lat/Lon:	32.91 / -96.64

Survey Summary: The tornado started on Kenmore Street just north of West Miller Road where part of a Sears Facility warehouse was heavily damaged. A wide section of the metal roof was peeled off and subsequently the adjacent metal walls were also torn away. Some of the interior support columns and beams were bent, causing another part of the roof to collapse. In addition, an empty 18 wheeler was tipped over and a van was also on its side. The tornado then struck a newly built warehouse to the east of this facility where nearly the entire building collapsed. The interior support columns were bent to the ground in this facility as the pre-case concrete tilt-up walls collapsed to the east. The damage to these two facilities indicated high end EF-2 damage with winds of 135 mph. Damage from the second warehouse was blown into the adjacent neighborhood to the east across Shiloh Road and damaged some homes. The tornado also snapped and uprooted many trees and damaged many roofs and homes along its path through the residential area from Shiloh Road to Garland Avenue. Roof damage consisted of a combination of loss of decking and shingles. Some roofs were also damaged by fallen trees and other debris. One house in particular on the corner of Westway Avenue and Patricia Lane sustained damage to the garage which partially collapsed. Damage in this neighborhood was consistent of EF-0 and EF-1 damage. The tornado then moved across Garland Ave towards Central Park damaging more roofs and trees near Degge Circle, and then damaging baseball fields and fences at the park. The tornado continued northeast from the park causing minor damage as it weakened, dissipating near Avenue D and Santa Fe Street.

.Rowlett/Sachse Tornado...

Rating:	EF-1
Estimated Peak Wind:	100 mph
Path Length /statute/:	6.0 miles

Path Width /maximum/: 500 yards
Fatalities: 0
Injuries: N/A

Start Date: 10/20/2019
Start Time: 9:36 PM CDT
Start Location: Near Rowlett / Dallas County / TX
Start Lat/Lon: 32.92 / -96.57

End Date: 10/20/2019
End Time: 9:45 PM CDT
End Location: Lake Ray Hubbard / Dallas County / TX
End Lat/Lon: 32.98 / -96.50

Survey Summary: The onset of damage with this path began along Larkin Lane in Rowlett with a few trees and roofs damaged. The track continued east northeast with the greatest intensity of damage observed in the 4600 block of Hilcox Road just before President George Bush Turnpike (PGBT) where one home lost most of the roof and saw severe window damage and the garage exterior walls collapsed. Several metal outbuildings and barns on this and adjacent properties were also severely damaged or destroyed. Multiple trees were snapped or uprooted along with power poles collapsed.

The tornado moved over the east side of the PGBT where several houses and barns sustained significant roof damage or shingles removed. The damage track continued north/northeast near the Pleasant Valley neighborhood. A video shows this tornado as it was over Lake Ray Hubbard where it likely lifted before reaching the far shore.

.Ferris Tornado...

Rating: EF-0
Estimated Peak Wind: 85 mph
Path Length /statute/: 0.18 miles
Path Width /maximum/: 170 yards
Fatalities: 0
Injuries: 0

Start Date: 10/20/2019
Start Time: 9:42 PM CDT
Start Location: W Ferris / Ellis County / TX
Start Lat/Lon: 32.53 / -96.67

End Date: 10/20/2019
End Time: 9:44 PM CDT
End Location: W Ferris / Ellis County / TX
End Lat/Lon: 32.53 / -96.66

Survey Summary: A tornado touched down briefly near Main Street and Highway 45/Central Street in Ferris. A silo near 7th and Main Streets sustained damage and partially collapsed. There was roof damage to multiple business buildings south of 5th Street and along Main and Central Streets. A downed power pole and an uprooted tree were also noted in the same area. The damage was consistent with winds speeds between 75 and 85 mph, or EF-0 intensity. Sporadic wind damage was found across other potions of Ferris with damage mainly to trees and roofing.

.Rockwall Tornado...

Rating: EF-1
Peak Wind /Estimated/: 90 mph
Path Length /statute/: 1.96 miles
Path Width /maximum/: < 100 yards
Fatalities: 0
Injuries: N/A

Start Date: 10/20/2019
Start Time: 9:48 PM CDT
Start Location: West City of Rockwall/Rockwall County/TX
Start Lat/Lon: 32.93 / -96.48

End Date: 10/20/2019
End Time: 9:54 PM CDT
End Location: East City of Rockwall/Rockwall County/TX
End Lat/Lon: 32.94 / -96.45

Survey Summary: Wind damage was observed in Rockwall generally parallel with and north of US 66, from the eastern shore of Lake Ray Hubbard into northeastern Rockwall. The most intense damage was observed close to the lake, along Sunset Hill Drive where several homes sustained significant roof damage. As the damage path continued further east across SH 205 damage consisted of downed trees and fences and missing shingles on roofs. Based on eyewitness accounts and video footage, a tornado, with maximum rated wind speeds of 90 mph, or EF-1 has been confirmed. The tornado is believed to have developed over Lake Ray Hubbard with a path length of almost 2 miles.

.Kaufman Tornado...

Rating: EF-0
Estimated Peak Wind: 80 mph
Path Length /statute/: 0.04 miles
Path Width /maximum/: 50 yards
Fatalities: 0
Injuries: 0

Start Date: 10/20/2019
Start Time: 10:10 PM CDT
Start Location: 5 N of Kaufman / Kaufman County / TX
Start Lat/Lon: 32.67 / -96.32

End Date: 10/20/2019
End Time: 10:11 PM CDT
End Location: 5 N of Kaufman / Kaufman County / TX
End Lat/Lon: 32.67 / -96.32

Survey Summary: A tornado briefly formed approximately 5 miles north of Kaufman, partially removing a portion of metal roofing from a single-family residence. A large section of this roofing was blown back toward the southwest, into a powerline. A nearby power pole was also partially snapped. The tornado dissipated shortly after impacting this single residence.

.Elmo Tornado...

Rating: EF-1
Estimated Peak Wind: 105 mph
Path Length /statute/: 0.50 miles
Path Width /maximum/: 250 yards

Fatalities: 0
Injuries: 0

Start Date: 10/20/2019
Start Time: 10:39 PM CDT
Start Location: 3.5 miles SE of Elmo/Kaufman County/TX
Start Lat/Lon: 32.67 / -96.14

End Date: 10/20/2019
End Time: 10:41 PM CDT
End Location: 3.7 miles SE of Elmo/Kaufman County/TX
End Lat/Lon: 32.68 / -96.14

Survey Summary: A tornado formed in open country approximately 3.5 miles SE of Elmo. Moving northeastward, this tornado removed sheet metal from an outbuilding on ranch property. Immediately after crossing Kaufman County Road 314, the tornado intensified, snapping two power poles along CR 314 and impacting a single family residence and adjacent outbuildings. An adjacent metal barn was severely damaged, with the sheet metal roof almost completely removed and steel trusses severely bent.Several large trees on the property were snapped or sustained major trunk damage. A personal weather station on the roof of the home measured a wind gust of 100 mph during the tornado, and damage elsewhere on the property was consistent with 95-105 mph EF-1 intensity wind speeds. The tornado continued northeastward beyond the damaged residence for approximately 200 yards before dissipating. This tornado was spawned by the same supercell that produced the EF-0 tornado 5N of Kaufman, as well as damage observed farther SW near Midlothian, and NE toward Wills Point.

.Wills Point Tornado...

Rating: EF-0
Estimated Peak Wind: 78 mph
Path Length /statute/: 0.63 miles
Path Width /maximum/: 200 yards
Fatalities: 0
Injuries: N/A

Start Date: 10/20/2019
Start Time: 10:59 PM CDT
Start Location: 1.9 N of Wills Point/Van Zandt County/TX
Start Lat/Lon: 32.73 / -96.00

End Date: 10/20/2019
End Time: 11:04 PM CDT
End Location: 2 NE of Wills Point/Van Zandt County/TX
End Lat/Lon: 32.73 / -95.99

Survey Summary: A brief tornado touched down in Van Zandt County around 2300 CDT 10/20/19. The tornado formed 1/4 mile east of Van Zandt County Road 3801, tracking east through a neighborhood of manufactured homes along Van Zandt County Road 3849. The tornado was approximately 200 yards wide and was on the ground for a little more than 1/2 mile in its 5 minute lifespan. The tornado dissipated just east of Lake Dr., Highway 47. Multiple roofs sustained damaged, mainly on the south side of Van Zandt County Road 3849. Multiple sheds and carports were overturned and damaged. A few small trees were uprooted and tree branches were broken on numerous trees, all consistent with EF-0 damage between 70 and 78 mph.

.Stephenville Thunderstorm Wind Event...

```
Estimated Peak Wind:    80 mph
Path Length /statute/:  2.50 miles
Path Width /maximum/:   1.0 miles
Fatalities:             0
Injuries:               0

Start Date:             10/21/2019
Start Time:             12:15 AM CDT
Start Location:         1.25 W of Stephenville/Erath County/TX
Start Lat/Lon:          32.21 / -98.23

End Date:               10/21/2019
End Time:               12:20 AM CDT
End Location:           1.25 SE of Stephenville/Erath County/TX
End Lat/Lon:            32.21 / -98.18

Survey Summary: A line of severe thunderstorms moved across Erath County,
producing a pattern of downburst straight-line wind damage within the City of
Stephenville.  Minor tree damage, consistent with 50 mph winds, was first
observed approximately 3 blocks west of the Tarleton State University campus.
Wind damage increased on the Tarleton campus proper, highlighted by widespread
tree branch and trunk damage, and the partial removal of roofing material from a
multi-story dormitory building.  Maximum wind speeds at this dorm were estimated
at 75 mph, based on the severity of the damage.  Several other buildings on the
Tarleton campus also sustained minor damage.  East of campus, numerous trees
were damaged toward the downtown areas of Stephenville, and at least one porch
roof was detached from a single-family home.  The roof of the main fire station
in downtown Stephenville sustained major damage, as large sections of metal
roofing material were removed from the structure and deposited in the street.
Straight line wind speeds at this fire station were estimated to be 80 mph.
Adjacent businesses in the downtown area also received minor wind damage - mainly
to window glass and roof fascia.  Additional scattered tree damage was observed
just east through south of downtown Stephenville.  The downburst appeared to
dissipate near the intersection of US Highway 281 and US Highway 377 on the east
side of the city.

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EF Scale: The Enhanced Fujita Scale classifies tornadoes into the following
categories:

EF0...Weak.....65 to 85 mph
EF1...Weak.....86 to 110 mph
EF2...Strong....111 to 135 mph
EF3...Strong....136 to 165 mph
EF4...Violent...166 to 200 mph
EF5...Violent...>200 mph

NOTE:
The information in this statement is preliminary and subject to change pending
final review of the events and publication in NWS Storm Data.

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G. Damage Survey (thunderstorm wind event; downburst)

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NOUS41 KPHI 181750
PNSPHI
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DEZ001>004-MDZ008-012-015-019-020-NJZ001-007>010-012>027-PAZ054-
055-060>062-070-071-101>106-190600-

Public Information Statement
National Weather Service Mount Holly NJ
150 PM EDT Thu Jul 18 2019

...NWS Damage Survey for 07/19/2019 Thunderstorm Wind event...

.Stephenville Downburst Straight-line Wind Event...

Estimated Peak Wind:    80 mph
Path Length /statute/: 1.0 miles
Path Width /maximum/:  1.0 miles
Fatalities:            0
Injuries:              0

Start Date:            7/17/2019
Start Time:            8:15 PM EDT
Start Location:        Ewing Township / Mercer County / NJ
Start Lat/Lon:         40.2559 / -74.7828

End Date:              7/17/2019
End Time:              8:17 PM EDT
End Location:          Ewing Township / Mercer County / NJ
End Lat/Lon:           40.2594 / -74.7734

.Survey Summary...
A downburst associated with a thunderstorm ahead of a squall line produced
estimated wind gusts of 80 mph Wednesday evening in Ewing Township, NJ at around
815 pm EDT.  Damage from this straight-line wind event was bounded by the
following roads, Western Avenue, Sussex Street, Buttonwood Drive, and Ardsley
Avenue.  Up to 100 trees were damaged during this wind event, with between 10 and
20 large trees completely uprooted.  Three homes were damaged from fallen trees,
with one home destroyed.  The worst damage occurred in the vicinity of the
Pennington Road Fire Company on Route 31 (Pennington Road).

Over 4000 customers were without power after the storm due to damage to electric
lines and poles as a result of the wind and falling trees.  A second wind event
just 30 minutes later was associated with the trailing squall line.  This
produced estimated wind gusts in the 30 to 50 mph range with little or no
additional damage.

NWS Mount Holly would like to thank the Ewing Police Department for their
assistance with this survey, and the numerous area residents who provided
valuable eye-witness accounts and information.

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NOTE:
The information in this statement is preliminary and subject to change pending
final review of the events and publication in NWS Storm Data.

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H. Damage Survey Plans (Optional; Generic Format)

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NOUS41 KILN 281313
PNSILN
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OHZ034-035-061-062-290115-

Public Information Statement
National Weather Service Wilmington OH
913 AM EDT Tue May 28 2019

...NWS Damage Surveys Planned for 05/27/2019 Southwestern Ohio Tornado Event...

The National Weather Service office in Wilmington OH has storm survey teams
headed to Mercer, Montgomery, Pickaway, and Greene counties in Ohio.  Additional
teams will be sent as additional resources become available.  Storm surveys will
likely take several days.  The surveys are in relation to the severe
thunderstorms that moved through the area on May 27th and May 28th 2019.

A final assessment including results of the surveys are expected to be completed
and transmitted via a Public Information Statement over the next several days.

The storm survey information will also be available on our website at
http://www.weather.gov/iln

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I. Damage Survey Update (Optional; Generic Format)

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NOUS43 KMPX 172037
PNSMPX
MNZ041>045-047>070-073>078-082>085-091>093-291545-

Public Information Statement
National Weather Service Twin Cities/Chanhassen MN
340 PM CDT Wed July 17 2019

...NWS Damage Survey for 07/15/2019 Rusk County Storm Damage...

NWS surveyed damage that occurred from Monday's severe weather north and
northeast of Bruce, Wisconsin.  A Damage survey team was unable to find any
conclusive evidence that a tornado occurred.  More information will be assessed
and provided over the next few days.

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J. Precipitation Report Summary

a. Multi-day Storm Total Snowfall

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NOUS45 KLKN 110209
PNSLKN
NVZ030-031-033>041-111415-

Public Information Statement
National Weather Service Elko NV
709 PM PDT Fri Apr 10 2020

...Storm Total Snowfall 4/7/20 10 PM through 4/9/20 1 PM...

Snowfall Accumulations as of 4/9/20 10 PM

Humboldt County
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Site/Source	Elev	Snow (in)	Reference Location
Granite Peak/SNOTEL	7800	1.0	Paradise Valley 12 N
Lamance Creek/SNOTEL	6000	1.0	Paradise Valley 5 WNW
Summit Lake/SNOTEL	7649	1.0	Denio 40 SSW

Northern Elko County

Site/Source	Elev	Snow (in)	Reference Location
Bear Creek/SNOTEL	7800	2.0	Jarbidge 3 SSW
Big Bend/SNOTEL	6700	1.0	Mountain City 15 ESE
Columbia Basin/SNOTEL	6650	2.0	Mountain City 13 SSW
Fawn Creek/SNOTEL	7000	2.0	Mountain City 7 W
Fry Canyon/SNOTEL	6700	3.0	Mountain City 18 S
Jack Creek Upper/SNOTEL	7250	4.0	Tuscarora 20 NNE
Jacks Peak/SNOTEL	8420	3.0	Tuscarora 18 NE
Merritt Mountain/SNOTEL	7000	3.0	Mountain City 6 NE
Snowstorm Mountain/SNOTEL	7420	2.0	Midas 12 NW
Toe Jam/SNOTEL	7750	1.0	Tuscarora 6 W

Southwestern Elko County

Site/Source	Elev	Snow (in)	Reference Location
Lamoille 2 N/COOP	5750	T	Lamoille 1 NNW

Ruby Mountains And East Humboldt Range

Site/Source	Elev	Snow (in)	Reference Location
Corral Canyon/SNOTEL	8500	2.0	Jiggs 12 SE
Dorsey Basin/SNOTEL	8100	1.0	Deeth 13 SSE
Dry Creek/SNOTEL	6500	2.0	Deeth 14 SSE
Green Mountain/SNOTEL	8000	3.0	Jiggs 8 ESE
Lamoille #3/SNOTEL	7700	4.0	Lamoille 7 SE
Pole Canyon/SNOTEL	7700	2.0	Deeth 16 SE

Northern Lander And Eureka Counties

Site/Source	Elev	Snow (in)	Reference Location
Lewis Peak/SNOTEL	7400	4.0	Crescent Valley 15 WSW

Southern Lander And Eureka Counties

Site/Source	Elev	Snow (in)	Reference Location
Big Creek Summit/SNOTEL	8700	5.0	Kingston 6 NNW
Diamond Peak/SNOTEL	8000	1.0	Eureka 7 ENE
Eureka/COOP	6430	0.4.	Eureka
Vacarro Spring/SNOTEL	7860	8.0	Eureka 4 SSW

Northwestern Nye County

Site/Source	Elev	Snow (in)	Reference Location
Round Mountain 5.4W	5783	1.2	Round mountain 5.4W
Tonopah/COOP	6010	T.	Tonopah

White Pine County

Site/Source	Elev	Snow (in)	Reference Location
Berry Creek/SNOTEL	9100	8.0	McGill 10 ESE
Cave Mountain/SNOTEL	10510	9.0	Majors Place 10 NNW
Corduroy Flat/SNOTEL	8720	9.0	Duckwater 17 NE
Defiance Mines/SNOTEL	9200	10.0	Ely 11 S
Ely/Snow Observer	6487	2.1	Ely 1 SW
Ely 25.0 SSW/COCORAHS	5657	0.4	Preston
Ely 3.9 NE/COCORAHS	6259	0.5	Ely 3.9 NE
Kalamazoo/SNOTEL	7965	1.0	Mcgill 13 NE
Moorman Ranch/COOP	6539	3.0	Ruth 19 WNW
Ruth/COOP	6858	3.1	Ruth
Silver Creek/SNOTEL	8000	2.0	Baker 16 NW
Ward Mountain/SNOTEL	9200	12.0	Ely 10 SSW
Wheeler Peak/SNOTEL	10147	11.0	Baker 11 W
White River/SNOTEL	7440	3.0	Currant 15 NNE

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b. 24-hour Storm Total Snowfall and Water Equivalent

NOUS45 KSLC 161715
PNSSLC

Public Information Statement
National Weather Service Salt Lake City UT
1111 AM MDT Thu Apr 16 2020

...Preliminary Storm Information...

Below are precipitation and snow amounts accumulated over the past 24 hours along with wind reports for the current storm.

***** Precip Reports *****	Time	Snow	Precip
...Cache Valley/Utah Portion...			
North Logan - 4749 ft	8 AM Thu	5.5	0.40
Logan	7 AM Thu	2.8	
Providence - 4547 ft	7 AM Thu	1.5	0.15
Logan - 4805 ft	9 AM Thu	1.3	0.25
Providence - 4528 ft	7 AM Thu	1.3	0.09
Logan Radio - 4470 ft	7 AM Thu	1.0	0.12
Richmond - 4576 ft	7 AM Thu	0.8	0.29
Logan Campbell Hq - 4455 ft	10 AM Thu		0.25
Smithfield - 4760 ft	10 AM Thu		0.20
Logan - Cache Airport - 4446 ft	10 AM Thu		0.19
North Logan - 4875 ft	11 AM Thu		0.11
Mendon - 4524 ft	10 AM Thu		0.06
...Northern Wasatch Front...			
West Weber - 4248 ft	7 AM Thu	0.1	0.22
Fruit Heights - 4802 ft	7 AM Thu		0.38
Ogden Pioneer Power House - 4350 ft	10 AM Thu		0.30
Roy	8 PM Wed		0.29
Beus Canyon - 5100 ft	7 PM Wed		0.27
Farmington - 4239 ft	7 AM Thu		0.26
Hill Air Force Base - 4787 ft	10 AM Thu		0.19

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Ogden - Hinckley Airport - 4440 ft      10 AM Thu              0.17
Riverdale Rd at I-84 - 4415 ft          10 AM Thu              0.16
Garland 1 SE - 4328 ft                   6 AM Thu              0.16
Bountiful Bench - 5114 ft                6 PM Wed              0.16
West Haven - 4239 ft                     7 AM Thu              0.15
Thatcher - 4414 ft                       7 AM Thu              0.14
Great Salt Lake Minerals - 4212 ft      10 AM Thu              0.11
Tremonton - 4292 ft                      7 AM Thu              0.11
Brigham City - 4418 ft                   7 AM Thu              0.10
Bear River City 2.3 WNW - 4258 ft        8 AM Thu              0.08
I-15 at Plymouth - 4495 ft              10 AM Thu              0.06
Perry - 4491 ft                          8 AM Thu              0.06
Thatcher - 4292 ft                       6 AM Thu              0.06
Fremont Island - Miller Hill - 4700 ft  11 AM Thu              0.02
Centerville - 4220 ft                    9 AM Thu              0.02

***** Wind Reports *****                    Time     Windspeed

...Salt Lake and Tooele Valleys...
Vernon Hill - 5761 ft                    5 PM Wed     43 MPH

...Great Salt Lake Desert and Mountains...
Sr-30 at Curlew - 4766 ft                6 PM Wed     48 MPH
Hat Island - 4242 ft                     7 PM Wed     45 MPH
Baker Lab - 4294 ft                      6 PM Wed     45 MPH
I-80 at Mp 1 - 4270 ft                   6 PM Wed     43 MPH
Lakeside Mountain - 5039 ft              7 PM Wed     42 MPH
Locomotive Springs - 4242 ft             6 PM Wed     42 MPH
Target R - 4311 ft                       8 PM Wed     41 MPH
Interstate 80 - 4125 ft                  8 PM Wed     41 MPH
I-80 at Mp 29 - 4125 ft                  8 PM Wed     41 MPH
Causeway - 4246 ft                       6 PM Wed     41 MPH

...Wasatch Mountains I-80 North...
Ogden Peak - 9570 ft                     3 PM Wed     56 MPH
Peter Sinks Rim - 8434 ft                6 PM Wed     41 MPH

...Wasatch Mountains South of I-80...
Central Wasatch Peaks - 10994 ft        11 PM Wed     71 MPH
Central Wasatch Peaks - 11066 ft        10 PM Wed     58 MPH
Bunnells - 8800 ft                       7 AM Thu     43 MPH

...Western Uinta Basin...
Duchesne - 5826 ft                       4 PM Wed     44 MPH
Us-40 @ Starvation - 5720 ft             4 PM Wed     41 MPH
Roosevelt - 5171 ft                      2 PM Wed     41 MPH

...West Central Utah...
Tule Valley - 5135 ft                    5 PM Wed     42 MPH

...Central Utah Mountains...
Sr-72 At Hogan Pass - 8977 ft           10 PM Wed     45 MPH

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c. More than one Precipitation Type

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NOUS43 KBIS 030248
PNSBIS
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NDZ001>005-009>013-017>023-025-031>037-040>048-050-051-031448-

Public Information Statement
National Weather Service Bismarck ND
948 PM CDT Thu Apr 2 2020

...SNOWFALL REPORTS AS OF 9 PM CDT...

Location                      Amount Time/Date  Provider
5 SW Leith                     6.0 in    0551 PM 04/02   Public
4 SE Martin                    5.0 in    0508 PM 04/02   Public
Ellendale                      5.0 in    0126 PM 04/02   Emergency Mngr
Carson                         5.0 in    1141 AM 04/02   Emergency Mngr
Harvey                         4.5 in    1120 AM 04/02   Broadcast Media
Cathay                         4.0 in    0840 PM 04/02   Public
4 W Menoken                    4.0 in    1230 PM 04/02   Public
New Salem                      4.0 in    1115 AM 04/02   Trained Spotter
3 SSE Bismarck                 3.6 in    0137 PM 04/02   Official NWS Obs
3 SSE Bismarck                 2.9 in    1149 AM 04/02   Official NWS Obs
Glen Ullin                     2.3 in    1257 PM 04/02   Trained Spotter
8 NE Havelock                  2.0 in    0148 PM 04/02   Public

...FREEZING RAIN REPORTS AS OF 9 PM CDT...

Location                       Amount    Time/Date       Provider
Ellendale                      0.15 in   0612 AM 04/02   Emergency Mngr

Observations are collected from a variety of sources with varying equipment and
exposures. We thank all volunteer weather observers for their dedication.  Not
all data listed are considered official.

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d. Multiple States

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NOUS41 KALY 181448
PNSALY
CTZ001-013-MAZ001-025-NYZ032-033-038>043-047>054-058>061-063>066-082>084-
VTZ013>015-190248-

Public Information Statement
Spotter Reports
National Weather Service Albany NY
1048 AM EDT Sat Apr 18 2020

The following are unofficial observations taken during the past 8 hours for the
storm that has been affecting our region.  Appreciation is extended to highway
departments, cooperative observers, Skywarn spotters and media for these reports.
This summary also is available on our home page at weather.gov/albany

********************STORM TOTAL SNOWFALL********************

LOCATION          STORM TOTAL     TIME/DATE   COMMENTS
                     SNOWFALL           OF
                     /INCHES/   MEASUREMENT

CONNECTICUT

...Litchfield County...
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1 NW Goshen	4.5	645 AM	4/18	CoCoRaHS
Norfolk	4.4	800 AM	4/18	Co-Op Observer
Colebrook	4.1	733 AM	4/18	Co-Op Observer
1 NE Colebrook	4.1	700 AM	4/18	CoCoRaHS
3 SW New Hartford Ce	3.6	700 AM	4/18	CoCoRaHS
Bakersville	3.6	700 AM	4/18	Co-Op Observer
2 NNE Litchfield	3.5	745 AM	4/18	CoCoRaHS
Harwinton	2.2	444 AM	4/18	Public
4 ESE Canaan	1.5	700 AM	4/18	CoCoRaHS
2 WNW Warren	1.3	700 AM	4/18	CoCoRaHS
Warren	1.3	616 AM	4/18	Public
Lakeville	1.0	616 AM	4/18	Public

MASSACHUSETTS

...Berkshire County...

Otis	4.0	800 AM	4/18	Broadcast Media
3 S Sandisfield	3.9	945 AM	4/18	Trained Spotter
4 SE Lee	3.5	825 AM	4/18	CoCoRaHS
Savoy	3.3	1000 AM	4/18	Social Media
Pittsfield	2.5	652 AM	4/18	WeatherNet6
Clarksburg	2.0	1001 AM	4/18	WeatherNet6
1 NNW Cheshire	1.6	700 AM	4/18	CoCoRaHS
Cheshire	1.0	630 AM	4/18	Broadcast Media
NNE Stockbridge	1.0	600 AM	4/18	CoCoRaHS
Great Barrington	1.0	600 AM	4/18	Broadcast Media
Williamstown	0.5	930 AM	4/18	Social Media

NEW YORK

...Albany County...

Knox	3.5	1020 AM	4/18	WeatherNet6
Rensselaerville	3.2	614 AM	4/18	WeatherNet6
South Berne	3.0	554 AM	4/18	WeatherNet6
3 SSW Altamont	2.6	730 AM	4/18	CoCoRaHS
Alcove Dam	1.0	730 AM	4/18	Co-Op Observer
Alcove Reservoir	1.0	730 AM	4/18	Co-Op Observer
Albany Intl AP	0.5	800 AM	4/18	ASOS
Colonie	0.5	650 AM	4/18	WeatherNet6
Albany	0.2	800 AM	4/18	NWS Albany Office
NWS Albany	0.2	800 AM	4/18	CoCoRaHS

...Columbia County...

3 N Austerlitz	4.5	920 AM	4/18	Meteorologist
Austerlitz	3.0	909 AM	4/18	Elevation 1300 feet
Taghkanic	0.9	747 AM	4/18	WeatherNet6
1 SSW Livingston	0.8	730 AM	4/18	CoCoRaHS
Livingston	0.8	746 AM	4/18	WeatherNet6
Ancramdale	0.7	725 AM	4/18	WeatherNet6
N Ancramdale	0.5	700 AM	4/18	CoCoRaHS
Germantown	0.5	619 AM	4/18	WeatherNet6
2 E Chatham	0.3	734 AM	4/18	Trained Spotter

...Greene County...

Prattsville	3.8	944 AM	4/18	WeatherNet6
East Jewett	3.0	700 AM	4/18	Trained Spotter
1 E Greenville	2.5	700 AM	4/18	CoCoRaHS
Greenville Center	2.5	620 AM	4/18	WeatherNet6
3 E Freehold	1.8	700 AM	4/18	CoCoRaHS

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VERMONT

...Bennington County...
   5 NW Readsboro          3.3    958 AM  4/18  Public
   Woodford                2.5    718 AM  4/18  WeatherNet6
   Peru                    1.0    700 AM  4/18  Co-Op Observer
   1 NNE Landgrove         1.0    700 AM  4/18  CoCoRaHS
   Landgrove               1.0    559 AM  4/18  WeatherNet6
   3 ENE Manchester        0.7    700 AM  4/18  CoCoRaHS

...Windham County...
   Athens                  2.0    855 AM  4/18  Social Media
   SE West Halifax         2.0    717 AM  4/18  CoCoRaHS
   6 NW Westminster        1.5    700 AM  4/18  CoCoRaHS
   1 NNE Rockingham        1.0    800 AM  4/18  CoCoRaHS
   1 S Brattleboro         0.4    700 AM  4/18  CoCoRaHS

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e. 24-hour Rainfall Total

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NOUS42 KTAE 201406
PNSTAE
ALZ065>069-FLZ007>019-026>029-034-108-112-114-115-118-127-128-134-GAZ120>131-
142>148-155>161-210206-

Public Information Statement
National Weather Service Tallahassee FL
1006 AM EDT Mon Apr 20 2020

...PRECIPITATION REPORTS FOR THE PAST 24 HOURS...

Location                    Amount    Time/Date       Lat/Lon
2.4 SW Irwinville           2.36 in   0900 AM 04/20   31.63N/83.42W
Fitzgerald 4.3 N            2.03 in   0700 AM 04/20   31.77N/83.26W
1.9 S Philema               1.74 in   0945 AM 04/20   31.73N/84.02W
1.5 SE Crossroads           1.63 in   0900 AM 04/20   31.82N/84.97W
1.2 W Dickey                1.63 in   0900 AM 04/20   31.55N/84.68W
5.3 W Moody Afb             1.61 in   0845 AM 04/20   30.95N/83.27W
Jakin 10.7 NNW              1.57 in   0735 AM 04/20   31.23N/85.07W
Cedar Springs               1.54 in   0900 AM 04/20   31.18N/85.04W
De Funiak Springs 4.1 NNW   1.46 in   0800 AM 04/20   30.78N/86.14W
2.7 W Jordan Place          1.44 in   0930 AM 04/20   31.76N/84.25W
De Funiak Sprngs            1.41 in   0955 AM 04/20   30.73N/86.15W
Hosford 2.7 SW              1.36 in   0700 AM 04/20   30.35N/84.82W
Adel                        1.35 in   0904 AM 04/20   31.11N/83.43W
Enterprise                  1.34 in   0955 AM 04/20   31.30N/85.90W
Ft Rucker Shell             1.33 in   0958 AM 04/20   31.37N/85.85W
De Funiak Springs 12.5 NW   1.32 in   0800 AM 04/20   30.84N/86.28W
2.3 S Columbia              1.30 in   0900 AM 04/20   31.26N/85.11W
1.4 NE Hillsdale            1.30 in   0900 AM 04/20   31.48N/83.58W
Kinsey 2.2 E                1.29 in   0700 AM 04/20   31.29N/85.30W
Rehobeth 2.1 SSW            1.26 in   0800 AM 04/20   31.09N/85.46W
Moody Fire Weather          1.25 in   0918 AM 04/20   30.98N/83.18W
Tifton 2.0 ENE              1.24 in   0800 AM 04/20   31.48N/83.48W
Tifton 1.4 ENE              1.22 in   0700 AM 04/20   31.47N/83.49W
Geneva                      1.22 in   0800 AM 04/20   31.04N/85.87W
0.7 W Chipley               1.20 in   0800 AM 04/20   30.78N/85.55W
3.3 NW Hawkinstown          1.18 in   0845 AM 04/20   31.29N/84.49W
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Fountain 3.4 SSE            1.13 in   0727 AM 04/20    30.43N/85.40W
Adel 1.9 SSE                1.13 in   1200 AM 04/20    31.11N/83.41W
Starksville                 1.12 in   0945 AM 04/20    31.78N/84.14W
Enterprise 3.8 ESE          1.11 in   0800 AM 04/20    31.30N/85.79W
0.5 S Spring Creek          1.11 in   0900 AM 04/20    30.07N/84.33W
Kinston                     1.05 in   0958 AM 04/20    31.22N/86.17W
Camilla                     1.04 in   0904 AM 04/20    31.21N/84.24W
Dothan                      1.04 in   0953 AM 04/20    31.32N/85.45W
Albany                      1.02 in   0953 AM 04/20    31.53N/84.20W
3.7 SW Dawesville           1.02 in   0900 AM 04/20    30.88N/84.05W
Panama City Beach 0.3 SW    1.01 in   0700 AM 04/20    30.21N/85.86W

Observations are collected from a variety of sources with varying equipment and
exposures. We thank all volunteer weather observers for their dedication.  Not
all data listed are considered official.

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K. Service Change Notice

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NOUS41 KWBC 151745
PNSWSH

Service Change Notice 20-44
National Weather Service Headquarters Silver Spring MD
145 PM EDT Wed Apr 15 2020

To:  Subscribers
     -NOAA Weather Wire Service
     -Emergency Managers Weather Information Network
     -NOAAPort
     Other NWS Partners, Users and Employees

From:  Bruce Entwistle
       Chief, Aviation and Space Weather Services Branch
       Fiona Horsfall
       Chief, Climate Services Branch

Subject:  Cessation of Weather Observations and Suspension of TAF
and Climate Products for Bisbee-Douglas International Airport (KDUG)
in Arizona effective April 15, 2020, until further notice

Effective Wednesday, April 15, 2020, weather observations from the
Automated Surface Observation System (ASOS) at Bisbee-Douglas
International Airport (KDUG) will be suspended due to ongoing
construction at the equipment facility.  The date of a resumption in
service is not known.  An updated Service Change Notice will be sent
when service resumes.

Notification is shorter than required in NWS Instruction 10-1805 due
to the unforeseen need for immediate closure.
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Due to the cessation in the weather observation, the NWS office in Tucson, AZ, will suspend Terminal Aerodrome Forecast (TAF) service for Bisbee-Douglas International Airport. Daily and monthly climate reports for the site also will be suspended.

The following products are impacted:

Product Name	WMO Heading	AWIPS ID
Terminal Aerodrome Forecast	FTUS45 KTWC	TAFDUG
Daily Climate Report	CDUS45 KTWC	CLIDUG
Monthly Climate Report	CXUS55 KTWC	CLMDUG
Preliminary Climatological Data	CXUS55 KTWC	CF6DUG

For questions regarding this suspension, please contact:

Marc Singer
Meteorologist in Charge
NWS Tucson, AZ
520-670-5156 x222
marc.singer@noaa.gov

or

Ken Drozd
Warning Coordination Meteorologist
NWS Tucson, AZ
520-670-5156 x223
kenneth.drozd@noaa.gov

National Service Change Notices are online at:
https://www.weather.gov/notification/

NNNN

3. Weather Summary

a.

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AWUS84 KSJT 191509
RWSSJT

REGIONAL WEATHER SUMMARY
NATIONAL WEATHER SERVICE SAN ANGELO TX
1009 AM CDT Sun Apr 19 2020

Late this morning across West Central Texas, skies were mostly sunny across the
I-10 corridor and southeast Concho Valley, and partly to mostly cloudy elsewhere.
Temperatures were in the low 60s to low 70s, and winds were from the west to
southwest at 10 to 15 mph with gusts to 25 mph.

Here is the forecast summary for West Central Texas.  Temperatures will be warmer
today, with highs a few to several degrees above normal.  Dry weather will
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prevail Monday and Tuesday, with a chance for showers and a few thunderstorms
late Tuesday night and Wednesday.

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b.

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AWUS83 KTOP 201000
RWSKS
KSZ001>105-210000-
KANSAS STATE WEATHER SUMMARY
NATIONAL WEATHER SERVICE TOPEKA KS
500 AM CDT Mon Apr 20 2020

.Today...Partly cloudy east and south. Mostly clear northwest.  A slight chance
for thunderstorms northeast.  A chance for rain showers southeast.  Highs from
the upper 60s northwest to the upper 60s northeast.
.Tonight...Mostly clear northwest to partly cloudy northeast.  Lows from the
middle 30s southwest to the middle 40s southeast.
.Tuesday...Mostly sunny east and south.  Partly cloudy northwest.  Highs from the
middle 60s southwest to the upper 60s northwest.
.Tuesday Night...Mostly clear east and south. Partly cloudy northwest. A chance
for thunderstorms southeast. Lows from the middle 30s southwest to the upper 40s
southeast.

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4. Weather Roundup

a. Land Observations

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ASUS43 KEAX 201315
RWREAX

WEATHER ROUNDUP FOR EASTERN KANSAS AND NORTHWEST MISSOURI
NATIONAL WEATHER SERVICE KANSAS CITY/PLEASANT HILL MO
800 AM CDT MON APR 20 2020

KSZ040-057-103>105-MOZ028-029-037-043-201400-
...KANSAS CITY METROPOLITAN AREA...

CITY           SKY/WX    TMP DP  RH WIND       PRES   REMARKS
K.C. INTL      CLOUDY    49  41  74 CALM      29.87R
K.C. DOWNTOWN  CLOUDY    48  41  76 CALM      29.87F
LEES SUMMIT    PTSUNNY   50  40  68 E6        29.88S
OLATHE - IXD   FAIR      46  40  79 S7        29.87F
OLATHE - OJC   PTSUNNY   47  40  76 SW6       29.87F
LAWRENCE       PTSUNNY   50  44  80 CALM      29.87R

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MOZ001>008-011>017-020>025-030>033-038>040-044>046-053-054-201400-
...NORTHERN AND CENTRAL MISSOURI...

CITY           SKY/WX    TMP DP  RH WIND       PRES   REMARKS
ST. JOSEPH     FAIR      45  42  89 CALM      29.87S
MOSBY          PTSUNNY   43  41  93 CALM      29.89S
HARRISONVILLE  PTSUNNY   48  41  76 N7        29.91F
WHITEMAN AFB   MOSUNNY   46  46  98 CALM      29.85R
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CLINTON         FAIR       48   45   87 CALM       29.90R
SEDALIA         FAIR       50   40   68 CALM       29.89R
MARSHALL          N/A     N/A  N/A  N/A MISG         N/A
CHILLICOTHE       N/A      44   41   89 CALM       29.88R
KIRKSVILLE      CLOUDY     44   38   79 E3         29.85R

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MOZ041-047>049-056>058-063>065-088>090-097-201400-
...EASTERN AND SOUTHERN MISSOURI...

CITY            SKY/WX     TMP DP   RH WIND        PRES   REMARKS
ST. LOUIS INTL FAIR        50   36   58 W3         29.86R
SPIRIT OF STL  FAIR        45   40   82 SW3        29.86R
COLUMBIA        FAIR       50   39   66 S3         29.87R
JEFFERSON CITY FAIR        44   38   79 CALM       29.88R
MEXICO          FAIR       45   37   76 CALM       29.87R
HANNIBAL        FAIR       50   32   50 CALM       29.86R
ROLLA           FAIR       50   41   71 CALM       29.87R
LEBANON         FAIR       52   37   58 SE3        29.89R
OSAGE BEACH     FAIR       44   40   85 CALM       29.90R
SPRINGFIELD     FAIR       49   45   86 S7         29.86R
BRANSON         MOSUNNY    50   50  100 CALM       29.90R
JOPLIN          FAIR       50   48   93 CALM       29.89R FOG
WEST PLAINS     FAIR       52   44   74 NE3        29.89
SIKESTON        FAIR       52   45   76 NW3        29.86R

$$

IAZ060-094-KSZ022-034>040-054-083-096-NEZ052-066-093-201400-
...KANSAS...SOUTHEAST NEBRASKA AND IOWA...

CITY            SKY/WX     TMP DP   RH WIND        PRES   REMARKS
TOPEKA          FAIR       50   44   80 CALM       29.86S
MANHATTAN       FAIR       51   46   83 SW7        29.85R
EMPORIA         FAIR       50   46   86 SE8        29.87F
OTTAWA          PTSUNNY    50   48   93 S10        29.86F
CHANUTE         FAIR       53   40   61 NE3        29.89R
SALINA          FAIR       48   41   76 S6         29.86S
WICHITA         FAIR       51   45   79 CALM       29.87R
OMAHA           PTSUNNY    45   40   82 N8         29.86R
LINCOLN         FAIR       43   36   76 CALM       29.87R
FALLS CITY      PTSUNNY    44   40   85 CALM       29.85S
LAMONI          PTSUNNY    46   37   71 CALM       29.85R
DES MOINES      CLOUDY     44   38   79 SW6        29.84R

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b. Land and Buoy Observations

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ASHW40 PHFO 201344
RWRHI

WEATHER ROUNDUP FOR HAWAII
NATIONAL WEATHER SERVICE HONOLULU HI
300 AM HST MON APR 20 2020

THIS IS AN AUTOMATED REPORT THAT HAS NOT BEEN QUALITY CONTROLLED.
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NOTE..."FAIR" INDICATES FEW OR NO CLOUDS BELOW 12,000 FEET WITH NO SIGNIFICANT WEATHER AND/OR OBSTRUCTIONS TO VISIBILITY.

* - THESE SITES REPORT LIMITED FIELDS
# - BUOY DATA PROVIDED BY PACIFIC ISLANDS OCEAN OBSERVING SYSTEM.

HIZ001>004-201400-
KAUAI-NIIHAU-

CITY	SKY/WX	TMP	DP	RH	WIND	PRES	REMARKS
LIHUE APT	FAIR	67	64	90	W9	30.01F	
PORT ALLEN*	N/A	66	N/A	N/A	NE7	N/A	
POIPU*	N/A	64	N/A	N/A	N2	N/A	
PRINCEVILLE*	N/A	66	N/A	N/A	SW3	N/A	
KOKOLE POINT*	NOT AVBL						
MOLOAA DAIRY*	N/A	64	63	94	CALM	N/A	
WAIMEA HTS*	N/A	N/A	N/A	N/A	VRB3	N/A	
PUU OPAE*	N/A	61	57	88	NE3	N/A	
PUU LUA*	NOT AVBL						
MAKAHA RIDGE*	N/A	63	59	88	S1	N/A	

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HIZ005>011-201400-
OAHU-

CITY	SKY/WX	TMP	DP	RH	WIND	PRES	REMARKS
HONOLULU	FAIR	71	62	73	N5	30.01F	
KALAELOA	FAIR	67	64	90	NE3	30.02F	
KANEOHE MCB	FAIR	76	66	71	CALM	29.99F	
WHEELER FIELD	FAIR	64	64	99	CALM	30.01F	
BELLOWS*	N/A	66	N/A	N/A	SW3	N/A	
KAHUKU*	N/A	66	N/A	N/A	NE1	N/A	
WHEELER*	N/A	63	N/A	N/A	VRB1	N/A	
WAIANAE HARBOR	N/A	73	N/A	N/A	E5	N/A	
DILLINGHAM*	N/A	64	64	100	CALM	N/A	
KAHUKU TRN*	N/A	66	64	94	CALM	N/A	
KAWAILOA*	NOT AVBL						
KII*	N/A	70	66	88	S3	N/A	
MAKUA RANGE*	N/A	68	64	88	E5	N/A	
OAHU FOREST NW	N/A	64	N/A	N/A	CALM	N/A	
SCHOFIELD BRK*	N/A	61	59	94	SW1	N/A	
SCHOFIELD S*	NOT AVBL						
WAIANAE VLY*	NOT AVBL						
KUAOKALA*	N/A	70	64	83	S6	N/A	
HONOULIUULI*	NOT AVBL						
MOKUOLOE IS*	N/A	72	N/A	N/A	S1	N/A	
PALEHUA*	N/A	63	63	100	SW2	N/A	
WAIAWA PHB*	NOT AVBL						

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HIZ012>013-201400-
MOLOKAI-

CITY	SKY/WX	TMP	DP	RH	WIND	PRES	REMARKS
MOLOKAI AIRPT	FAIR	63	59	87	CALM	30.03F	
KALAUPAPA	NOT AVBL						
MAKAPULAPAI*	N/A	64	61	88	S2	N/A	
MOLOKAI 1*	NOT AVBL						
PUU ALII*	N/A	53	53	100	CALM	N/A	

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HIZ016-201400-
KAHOOLAWE-

CITY           SKY/WX    TMP DP  RH WIND       PRES     REMARKS
KAHOOLAWE*     NOT AVBL
HAKIOAWA*      NOT AVBL
HONOKANAIA*    NOT AVBL
KANELOA*         N/A     70  63  78 NE7G14     30.09F
KEALIALALO*    NOT AVBL
LUA MAKIKA*    NOT AVBL
$$

HIZ014>015-201400-
LANAI-

CITY           SKY/WX    TMP DP  RH WIND       PRES     REMARKS
LANAI CITY     FAIR      62  32  32 E5         30.07F
LANAI 1*       NOT AVBL
$$

HIZ017>028-201400-
MAUI-

CITY           SKY/WX    TMP DP  RH WIND       PRES     REMARKS
KAHULUI        MOCLDY    67  61  81 SE5        30.01F
KAPALUA-W MAUI NOT AVBL
HANA AIRPORT   MOCLDY    66  64  94 S3         30.04S
HANA*            N/A     68 N/A N/A VRB1        N/A
HALEAKALA SUMM   N/A     46  25  42 NW5         N/A     VSB 0
MAALAEA BAY*   NOT AVBL
HALEAKALA*     NOT AVBL
KAUPO GAP*     NOT AVBL
KULA 1*          N/A     51  33  50 E3          N/A
$$

HIZ023>026-201400-
BIG ISLAND OF HAWAII COAST AND LOWER SLOPES-

CITY           SKY/WX    TMP DP  RH WIND       PRES     REMARKS
KAILUA KONA    FAIR      74  62  66 E5         29.99F
HILO           FAIR      69  56  62 SW8        30.03F
HONOKAA*       NOT AVBL
KAWAIHAE MWT*  NOT AVBL
KAWAIHAE*        N/A     73 N/A N/A NE3        29.98
SOUTH POINT*     N/A     63 N/A N/A N8          N/A
UPOLU AIRPORT*   N/A     68 N/A N/A SE8         N/A
KAMUELA*       MOSUNNY   54  50  87 E8         30.09F
HAKALAU*         N/A     46  37  71 SW5         N/A
KALOKO-HONOKO*   N/A     72  63  73 E3         29.99F
PALI 2*          N/A     55  54  94 VRB7        N/A
KEALAKOMO*       N/A     72  61  68 VRB6        N/A
KAUPULEHU*       N/A     64  57  77 SE6         N/A
KAPAPALA*        N/A     57  57 100 NW5         N/A
LOWER KAHUKU*    N/A     52  50  93 VRB1        N/A
PUHE CS*         N/A     72  61  68 NE3         N/A
PUHO CS*         N/A     72  60  64 E3          N/A
PTA KEAMUKU*     N/A     55  54  94 S9G15       N/A
WAIKOLOA*        N/A     64  55  72 E6G15       N/A
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HIZ027>028-201400-
BIG ISLAND OF HAWAII INTERIOR AND SUMMMITS-

CITY	SKY/WX	TMP	DP	RH	WIND	PRES	REMARKS
BRADSHAW FIELD	FAIR	50	36	58	E12	30.28F	
MK VISITOR CEN	N/A	50	23	34	NE6	N/A	
MAUNA KEA*	NOT AVBL						
MAUNA LOA*	NOT AVBL						
MAUNA LOA 1*	NOT AVBL						
PTA KIPUKA*	N/A	45	43	93	E3	N/A	
PTA RANGE 17*	N/A	48	45	87	E3	N/A	
PTA WEST*	N/A	50	48	93	SE8	N/A	
NENE CABIN*	N/A	52	37	58	N5	N/A	
AHUMOA*	N/A	53	35	51	NE3	N/A	
PTA PORTABLE*	NOT AVBL						
PUU MALI*	N/A	55	36	47	SE2G9	N/A	

$$

HIC003-201400-
NORTHWEST ISLANDS-

CITY	SKY/WX	TMP	DP	RH	WIND	PRES	REMARKS
MIDWAY ISLAND	CLOUDY	64	52	63	NW6	30.10F	
MIDWAY NOS*	N/A	64	N/A	N/A	MISG	30.08F	
FRENCH FRIGATE	NOT AVBL						

$$

PHZ110>124-180-201400-
BUOY REPORTS

STATION/POSITION	TIME (UTC)	TEMP AIR (F)	TEMP SEA (F)	WIND DIR/SP/G (DEG/KT/KT)	PRES (MB)	WAVE HT/PER (FT/S)	SWELL HT/DIR (FT/D)
BUOY 51101	1200	75	77	210/ 6/ 8	1015.4		
BUOY 51100	NOT AVBL						
BUOY 51002	1200	76	78	90/ 12/ 16	1015.5		
BUOY 51003	1200		79	80/ 8/ 10	1017.0		
BUOY 51004	1200	74	77	70/ 14/ 19	1015.1		
WAIMEA BAY#	1200		76		N/A	5/14	5/310
MOKAPU POINT#	1200		77		N/A	3/14	2/ 40
LANAI#	1200		79		N/A	4/13	3/270
BARBERS PT#	1200		78		N/A	6/14	5/290
PAUWELA#	1200		75		N/A	6/14	5/310
HILO#	1146		77		N/A	5/15	3/330
KANEOHE BAY#	1200		76		N/A	3/14	2/330
KANEOHE BAY 2#	NOT AVBL						
HANALEI#	1200		78		N/A	7/13	7/310
KAHULUI HARBOR	NOT AVBL						
HONOLULU HARBOR	NOT AVBL						
PEARL HARBOR#	1200		77		N/A	2/14	2/170
KILO NALU	NOT AVBL						
HILO HARBOR	NOT AVBL						
MOKUOLOE	NOT AVBL						
NAWILIWILI	NOT AVBL						
WHOTS BUOY	NOT AVBL						
BUOY 51028	NOT AVBL						

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5. Max/Min Temperature and Precipitation Table

a. 1230 UTC issuance

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ASUS63 KDMX 171216
RTPDMX

Max/Min Temperature and Precipitation Table for Central Iowa
National Weather Service Des Moines IA
716 AM CDT Fri Apr 17 2020

.BR DMX 0417 C DH01/DC2004170714/TAIRZX/DH07/TAIRZP/PP/SF/SD
:
: Values represent highs yesterday...12-hour lows...
: and 24-hour precipitation ending at  7 AM Central Time
:
:                             Max   Min                Snow
:      Location              Temp  Temp   Pcpn   Snow Depth
:
LWD  : Lamoni ASOS         :  37 /  31 /  1.12 /      /
AMW  : Ames ASOS           :  42 /  29 /  0.13 /      /
DSM  : Des Moines ASOS     :  39 /  31 /  0.29 /  3.8 /   3
DMX  : NWS Johnston*       :  40 /  30 /  0.19 /  4.2 /   4
MIW  : Marshalltown ASOS   :  42 /  29 /  0.13 /      /
EST  : Estherville ASOS    :  40 /  27 /  0.00 /      /
FOD  : Fort Dodge AWOS     :  43 /  30 /     T /      /
MCW  : Mason City ASOS     :  43 /  32 /  0.00 /      /
ALO  : Waterloo ASOS       :  46 /  33 /     T /    T /   0
OTM  : Ottumwa ASOS        :  40 /  31 /  0.08 /      /
:
:* Cooperative weather observation site
:
:
: Other Automated Locations
:
: ...North Central Iowa...
AXA  : Algona AWOS         :  39 /  32 /  0.00 /      /
CAV  : Clarion AWOS        :  41 /  30 /  0.00 /      /
FXY  : Forest City AWOS    :  41 /  32 /  0.00 /      /
HPT  : Hampton AWOS        :  43 /  32 /  0.00 /      /
:
: ...West Central Iowa...
ADU  : Audubon AWOS        :  43 /  28 /  0.07 /      /
CIN  : Carroll AWOS        :  41 /  27 /  0.04 /      /
DNS  : Denison AWOS        :  41 /  28 /  0.02 /      /
:
: ...Central Iowa...
IKV  : Ankeny AWOS         :  39 /  32 /  0.00 /      /
BNW  : Boone AWOS          :  41 /  30 /  0.00 /      /
GGI  : Grinnell AWOS       :   M /   M /     M /      /
IFA  : Iowa Falls AWOS     :  45 /  30 /  0.00 /      /
TNU  : Newton AWOS         :  41 /  32 /  0.04 /      /
PRO  : Perry AWOS          :  40 /  29 /  0.01 /      /
NSSI4: Prairie City/NS NWR:  41 /  31 /  0.00 /      /
EBS  : Webster City AWOS   :  43 /  30 /  0.00 /      /
:
: ...Southwestern Iowa...
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AIO  : Atlantic AWOS      :  37 /  28 /  0.14 /      /
:
: ...South Central Iowa...
TVK  : Centerville AWOS   :  34 /  32 /  0.15 /      /
CNC  : Chariton AWOS      :  36 /  32 /  0.07 /      /
CSQ  : Creston AWOS       :  36 /  30 /  0.12 /      /
OXV  : Knoxville AWOS     :  39 /  32 /  0.22 /      /
SSFI4: Lucas/Stephens SF  :  37 /  31 /  0.04 /      /
I75  : Osceola AWOS       :  36 /  32 /  0.12 /      /
PEA  : Pella AWOS         :  40 /  32 /  0.00 /      /
:
: ...Southeastern Iowa...
OOA  : Oskaloosa AWOS     :  43 /  34 /  0.08 /      /
:
.END

These data are preliminary and have not undergone final quality control /QC/ by
the National Centers for Environmental Information (NCEI - formerly National
Climatic Data Center or NCDC).  Therefore, these data are subject to revision.
Final and certified climate data can be accessed at www.ncdc.noaa.gov.

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b. 0030 UTC issuance (including treatment of missing or unreported data)

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000
ASUS64 KBMX 140008
RTPBMX
:  Temperature and Precipitation Table
:  National Weather Service Birmingham AL
:   706 PM CDT Mon Apr 13 2020

:
:  High Last 12 Hours. Low Last 18 Hours. Precip Last 24 Hours.
:  Readings as of 04/13/00Z or 7PM Local.
:
.B BHM 0413 C DH18 /TX/TN/PP
:
:  Station           ID     Hi   Lo   Pcpn
:
: ASOS Sites
:Anniston           :ANB    MM / MM /   MM
:Birmingham Intl    :BHM    64 / 55 / 2.36
:Calera             :EET    65 / 56 / 0.51
:Montgomery         :MGM    78 / 61 / 1.91
:Troy               :TOI    82 / 64 /   MM
:Tuscaloosa         :TCL    63 / MM / 0.00
:
: AWOS Sites
:Alexander City     :ALX    70 / 58
:Auburn             :AUO    75 / 59
:Bessemer           :EKY    64 / 54
:Demopolis          :DYA    66 / 54
:Gadsden            :GAD    65 / 55
:Haleyville         :1M4    57 / 46
:Marion Vaiden Field:A08    68 / 56
:Pell City          :PLR    66 / 57
:Selma              :SEM    73 / 59
:Sylacauga          :SCD    69 / 54
```

```
:
: Climate and Forestry Stations
:Marion Junction    :MAJA1    70 / 56 / 0.58
:Mtn. Longleaf RAWS :LGLA1    69 / 55 / 2.00
:Oakmulgee RAWS     :OKMA1    68 / 55 / 0.55
:Shoal Creek RAWS   :SHLA1    67 / 57 / 1.72
:Tuskegee RAWS      :TKGA1    77 / 60 / 1.53
:
.END
```

c. Locally required issuance (with elevation data)

```
ASUS66 KOTX 191830
RTPOTX
Max/Min Temperature and Precipitation Table for Eastern Washington and Northern
Idaho
National Weather Service Spokane, WA
1130 AM PDT Sun Apr 19 2020

High Temp Yesterday. 18 Hour Low Temperature up to 11 AM Sunday.
Precipitation and Snowfall past 24 hours up to 11 AM Sunday.

.BR OTX 0419 PS DH00/TAIRZX/DH10/TAIRZP/PPDRZZ/SFDRZZ/SDIRZZ
:                                  Max   Min   24 HR   24 HR  Snow
:ID      Station          Elev     Temp  Temp  Pcpn    Snow   Depth
65S   : Bonners Ferry AP  2337 :     50 /  32 /       /      /
S10   : Chelan Airport    1260 :     70 /  48 /       /      /
COE   : Coeur d`Alene AP  2318 :     62 /  36 /       /      /
DEW   : Deer Park         2117 :     63 /  29 /  0.00 /      /
EPH   : Ephrata           1259 :     70 /  42 /  0.00 /      /
LWS   : Lewiston          1436 :     70 /  44 /  0.00 /      /
S52   : Methow Valley AP  1706 :        /     /       /      /
MWH   : Moses Lake        1181 :     72 /  41 /  0.00 /      /
MLP   : Mullan Pass       6150 :     42 /  32 /  0.01 /      /
OMK   : Omak              1301 :     71 /  42 /  0.00 /      /
PUW   : Pullman           2551 :     61 /  40 /  0.00 /      /
SZT   : Sandpoint Airport 2126 :     55 /  32 /       /      /
SFF   : Spokane Felts     1953 :     66 /  38 /  0.00 /      /
GEG   : Spokane Intl      2356 :     64 /  38 /    T  /      /
EAT   : Wenatchee AP      1255 :     68 /  46 /  0.00 /      /
.END

High Temperature, Low Temperature, Precipitation and Snowfall past 24 hours up to
11 AM Sunday.

NOTE: These locations report temperatures once every 24 hours.  In some weather
situations reported low temperatures may reflect conditions for the previous day.

.BR OTX 0419 PS DH10/TAIRZX/TAIRZN/PPDRZZ/SFDRZZ/SDIRZZ
:                               Obs     Max   Min  24 hr  24 hr  Snow
:ID    Station          Elev   Time    Temp Temp Pcpn     Snow   Depth
ASNW1: Asotin           3403 : DH0700/     /     / 0.00 /0.0 /  0
BONI1: Bonners Ferry    2075 : DH0620/  53 /  33 / 0.09 /  0.0 /   0
BDDW1: Boundary Dam     1837 : DH0700/  61 /  30 / 0.00 /  0.0 /   0
CLNW1: Chelan           1120 : DH0800/  68 /  46 / 0.00 /      /
COWI1: Coeur d`Alene    2133 : DH0800/  60 /  38 / 0.00 /  0.0 /   0
DVPW1: Davenport        2440 : DH0800/  62 /  31 /   T  /  0.0 /   0
HLDW1: Holden Village   3220 : DH0800/  57 /  32 /   T  /  0.0 /  40
LMGW1: LaCrosse McGrgr  1476 : DH0700/     /     /   T  /  0.0 /   0
```

```
MZAW1: Mazama           2170 : DH1000/  67 /  41 / 0.00 /  0.0 /   0
NAPI1: Naples           1998 : DH0720/  50 /  28 / 0.08 /      /
NHPW1: Northport        1304 : DH0700/  63 /  30 / 0.00 /  0.0 /   0
NEZI1: Nezperce         2135 : DH0700/  62 /  38 / 0.00 /  0.0 /   0
OMAW1: Omak W.W.T.P.     840 : DH0800/     /     / 0.00 /      /
PTLI1: Potlatch         2755 : DH0700/  61 /  35 / 0.03 /  0.0 /
PRDI1: Prichard 3 ESE   2485 : DH0700/  61 /  33 / 0.00 /      /
RSLW1: Rosalia          2400 : DH0730/  66 /  37 /   T  /      /
STEW1: Stehekin         1270 : DH0800/  69 /  46 / 0.00 /  0.0 /   0
TKTW1: Tonasket 11 NE   3434 : DH0800/  59 /  36 / 0.00 /  0.0 /   0
WLDW1: Wilbur           2253 : DH0941/  64 /  31 / 0.03 /  0.0 /   0
.END

These data are preliminary and have not undergone final quality control by the
National Centers for Environmental Information (NCEI - formerly National Climatic
Data Center or NCDC).  Therefore, these data are subject to revision.  Final and
certified climate data can be accessed at www.ncdc.noaa.gov.
```

d. Locally required issuance (Dual Time Zone)

```
ASUS63 KBIS 201235
RTPBIS

Regional Temperature and Precipitation Summary
National Weather Service Bismarck ND
735 AM CDT Mon Apr 20 2020

:
:VALUES REPRESENT YESTERDAYS HIGHS...AND THIS MORNINGS LOWS
:THROUGH 7 AM CDT...AND PRECIPITATION FOR 24 HOURS ENDING AT
:7 AM CDT. ASOS SITES ARE AUTOMATED AND MAY UNDER-ESTIMATE
:WINTER PRECIP.
:
:.............................................................
:       STATION             MAX  / MIN  / 24-HR  / SNOW / SNOW
:        NAME               TEMP / TEMP / PRECIP / FALL / DEPTH
:.............................................................
: CENTRAL TIME ZONE STATIONS
.BR BIS 0420 C DH01/TAIRZX/DH07/TAIRZP/PPDRZZ/SFDRZZ/SDIRZZ
BIS  : Bismarck ASOS      :  58  /  38  /  0.00 /   0.0 /  0
JMS  : Jamestown FAA      :  54  /  39  /  0.00 /    M  /  M
MOT  : Minot FAA          :  58  /  40  /  0.00 /    M  /  M
XWA  : Williston Basin Air:  57  /  36  /  0.00 /    M  /  M
N60  : Garrison ASOS      :  55  /  36  /  0.00 /    M  /  M
MIB  : Minot Air Force Bas:  57  /  36  /  0.00 /    M  /  M
.END
: MOUNTAIN TIME ZONE STATIONS
.BR BIS 0420 M DH00/TAIRZX/DH06/TAIRZP/PPDRZZ/SFDRZZ/SDIRZZ
DIK  : Dickinson Theodore :  55  /  36  /  0.00 /   M  /   M
HEI  : Hettinger ASOS     :  55  /  28  /  0.00 /   M  /   M
.END
:
.BR BIS  0420  C DH06/TX/TN/PP/SF/SD
:
: COOPERATIVE OBSERVATIONS
: VALUES ARE FOR THE PREVIOUS 24 HOURS
: CENTRAL TIME ZONE STATIONS
JTWN8:  Jamestown Hosp    :  54  /  25  /  0.00 /   0.0 /    0
LFDN8:  Lansford          :   M  /   M  /  0.00 /   0.0 /    0
```

```
WLWN8:  Willow City       :  56  /  19  /  0.00 /     M /    M
.END
:
.BR BIS  0420  M DH06/TX/TN/PP/SF/SD
:
: MOUNTAIN TIME ZONE STATIONS
.BR BIS  0420  M DH06/TX/TN/PP/SF/SD
.END
```

e. Airport and Cooperative Observer Reports

```
Max/Min Temperature and Precipitation Table for
Eastern IA/Northwestern IL/Northeastern MO
National Weather Service Quad Cities IA/IL
816 AM CDT Mon Apr 20 2020

Values represent highs yesterday...lows over the last 12 hours
and 24-hour precipitation ending at 7 AM central time.

.BR DVN 0420 C DH01/TAIRZX/DH07/TAIRZP/PPDRZZ/SFDRZZ/SDIRZZ
:
:                            Max   Min           Snow   Snow
:ID     Location             Temp  Temp   Pcpn   Fall   Depth
:
:ASOS Sites
BRL  : Burlington Arpt    :  63 /  33 /  0.00 /    M /   M
CID  : Cedar Rapids Arpt  :  59 /  27 /  0.00 /    M /   M
DVN  : Davenport Arpt     :  63 /  30 /  0.00 /  0.0 /   0
DBQ  : Dubuque Arpt       :  57 /  27 /  0.00 /  0.0 /   0
IOW  : Iowa City Arpt     :  63 /  32 /  0.00 /    M /   M
MLI  : Quad City Arpt     :  64 /  30 /  0.00 /  0.0 /   0
:
:AWOS Sites--Data provided by NWS part ers
CWI  : Clinton Arpt       :  60 /  31 /       /      /
FFL  : Fairfield Arpt     :  61 /  32 /       /      /
FSW  : Fort Madison Arpt  :  63 /  37 /       /      /
FEP  : Freeport Arpt      :  58 /  28 /       /      /
IIB  : Independence Arpt  :  59 /  26 /       /      /
EOK  : Keokuk Arpt        :  63 /  36 /       /      /
MQB  : Macomb Arpt        :  64 /  32 /       /      /
MXO  : Monticello Arpt    :  59 /  27 /       /      /
MPZ  : Mt Pleasant Arpt   :  63 /  34 /       /      /
MUT  : Muscatine Arpt     :  63 /  34 /       /      /
SQI  : Sterling Arpt      :  63 /  29 /       /      /
VTI  : Vinton Arpt        :  61 /  31 /       /      /
AWG  : Washington Arpt    :  63 /  32 /       /      /
.END

Cooperative Observations
Values are for the previous 24 hours
.BR DVN 0420 C DH07/TAIRZX/TAIRZN/PPDRZZ/SFDRZZ/SDIRZZ
:
:       Station           Obs     Max   Min           Snow  Snow
:ID     Name              Time    Temp  Temp   Pcpn   Fall  Depth
:
:Northeast Iowa...
:
DLDI4: Dubuque L&D11      : DH0600/  57 /  34 /  0.00 /  0.0 /   0
SNYI4: Stanley            : DH0700/  58 /  20 /  0.00 /  0.0 /   0
```

```
:
:East Central Iowa...
:
AMOI4: Anamosa 3SSW       : DH0600/  59 /  29 /  0.00 /  0.0 /   0
BLVI4: Bellevue L&D12     : DH0600/  58 /  30 /  0.00 /  0.0 /   0
DVNI4: Davenport NWS      : DH0700/     /     /  0.00 /  0.0 /   0
ICYI4: Iowa City          : DH0700/  62 /  29 /  0.00 /  0.0 /   0
MKTI4: Maquoketa          : DH0700/  59 /  29 /  0.00 /  0.0 /   0
MCLI4: Monticello         : DH0714/     /     /  0.00 /      /
MSTI4: Muscatine 2N       : DH0700/  60 /  35 /  0.00 /  0.0 /   0
VNTI4: Vinton             : DH0700/  57 /  26 /  0.00 /  0.0 /   0
WLBI4: Williamsburg       : DH0700/  59 /  28 /  0.00 /  0.0 /   0
:
:Southeast Iowa...
:
COJI4: Columbus Jct       : DH0700/     /     /  0.00 /  0.0 /   0
DNNI4: Donnellson         : DH0700/  64 /  37 /  0.00 /      /
EOKI4: Keokuk L&D19       : DH0600/  62 /  38 /  0.00 /  0.0 /   0
WSHI4: Washington         : DH0700/  63 /  30 /  0.00 /      /
:
:Northwest Illinois...
:
ALEI2: Aledo              : DH0700/  62 /  33 /  0.00 /  0.0 /   0
EZBI2: Elizabeth 5S       : DH0630/  59 /  27 /  0.00 /      /
FEEI2: Freeport           : DH0700/  60 /  29 /  0.00 /  0.0 /   0
ILNI2: Illinois City L&D16: DH0600/  62 /  36 /  0.00 /  0.0 /   0
KEWI2: Kewanee 1E         : DH0700/  61 /  29 /  0.00 /  0.0 /   0
MTCI2: Mount Carroll      : DH0730/  61 /  27 /  0.00 /  0.0 /   0
NBOI2: New Boston L&D17   : DH0600/  60 /  37 /  0.00 /      /
PTNI2: Princeton          : DH0700/  63 /  32 /  0.00 /  0.0 /   0
RCFI2: Rock Falls         : DH0700/     /     /  0.00 /  0.0 /   0
:
:Western Illinois...
:
AUGI2: Augusta            : DH0539/     /     /  0.00 /  0.0 /   0
GLDI2: Gladstone L&D18    : DH0600/  61 /  39 /  0.00 /  0.0 /   0
MQBI2: Macomb             : DH0700/     /     /  0.00 /      /
:
:Northeast Missouri...
:
MMPM7: Memphis            : DH0600/  63 /  36 /  0.00 /  0.0 /   0
.END

These data are preliminary and have not undergone final quality
control; therefore, these data are subject to revision. Final and
certified climate data can be accessed at the National Centers for
Environmental Information (NCEI - formerly NCDC) at
www.ncdc.noaa.gov.

$$
```