

## Storm Data and Unusual Weather Phenomena - December 2009

| Location | Date/Time | Deaths & Injuries | Property & Crop Dmg | Event Type and Details |
|----------|-----------|-------------------|---------------------|------------------------|
|----------|-----------|-------------------|---------------------|------------------------|

### IOWA, Southwest

(IA-Z043) MONONA, (IA-Z055) HARRISON, (IA-Z056) SHELBY, (IA-Z069) POTTAWATTAMIE, (IA-Z079) MILLS, (IA-Z080) MONTGOMERY, (IA-Z090) FREMONT, (IA-Z091) PAGE

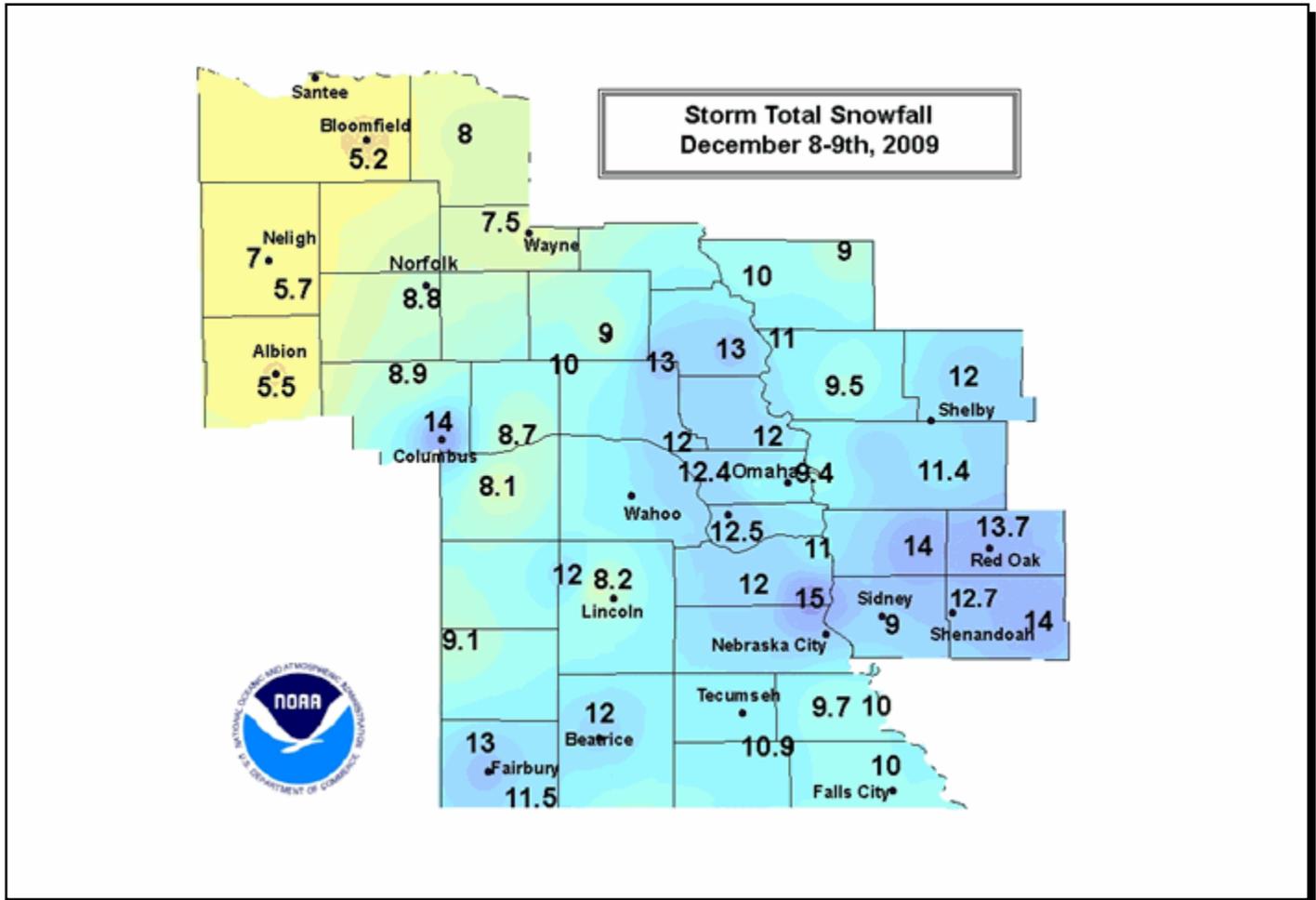
|                    |   |              |
|--------------------|---|--------------|
| 12/07/09 21:00 CST | 0 | Winter Storm |
| 12/09/09 10:00 CST | 0 |              |

(IA-Z043) MONONA, (IA-Z055) HARRISON, (IA-Z056) SHELBY, (IA-Z069) POTTAWATTAMIE, (IA-Z079) MILLS, (IA-Z080) MONTGOMERY, (IA-Z090) FREMONT, (IA-Z091) PAGE

|                    |   |          |
|--------------------|---|----------|
| 12/08/09 22:00 CST | 0 | Blizzard |
| 12/09/09 05:00 CST | 0 |          |

A large and relatively slow moving storm brought a prolonged winter storm and even, for a time, blizzard conditions to eastern Nebraska and western Iowa from late on Dec. 7th through the early morning hours of Dec. 9th. The storm was driven by an upper level disturbance that tracked from the west coast across the Rockies and deepened over the Mississippi River valley. The heaviest snow fell in advance of when the stronger winds arrived, mainly during the morning and afternoon of Dec. 8th. However, as the winds increased to 30 to 50 mph during the night of the 8th and early on the 9th, visibilities frequently dropped to near zero, especially in open areas. Considerable drifting snow also occurred, in many cases closing roads back shut almost as fast as they could be opened. This prompted many counties to pull snow plows off the roads for a while during the night of the 8th and 9th. Many schools were closed for 3 days because of the storm, due the forecast of heavy snow to begin on the 7th, poor visibilities and roads drifted shut on the 8th and still some closed roads and bitter cold wind chills which followed the storm on the 9th.

Total snowfall from the storm was 6 to 15 inches over most of eastern Nebraska and western Iowa. Higher amounts in eastern Nebraska included 15 inches in Union, 14 inches in Columbus, around 12 inches at the NWS in Valley, at Tekamah, Uehling, Steele City and Weeping Water. In western Iowa heavier amounts included 12 inches in Clarinda and Hastings and around 11 inches in Harlan, Red Oak and Little Sioux.



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| Location | Date/Time | Deaths & Injuries | Property & Crop Dmg | Event Type and Details |
|----------|-----------|-------------------|---------------------|------------------------|
|----------|-----------|-------------------|---------------------|------------------------|

*Snowfall totals for the December 7-9th storm.*

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(IA-Z056) SHELBY, (IA-Z069) POTTAWATTAMIE

|                    |   |           |
|--------------------|---|-----------|
| 12/23/09 09:00 CST | 0 | Ice Storm |
| 12/23/09 18:00 CST | 0 |           |

Warmer and more moist air spread north across eastern Nebraska and southwest Iowa in advance of a developing complex winter storm that was lifting out of the southern plains. This produced an ice storm that preceded a Winter Storm and eventual Blizzard that developed across the region. The heaviest ice accumulation, generally between a quarter and half of an inch, fell from Beatrice and Fairbury northwest toward Seward and also over western Iowa east through northeast of Omaha. Sections of eastern Nebraska from around Lincoln to Fremont and Omaha experienced some icing, but accumulations were mostly under 1/4 inch across those locations. President Obama granted disaster declarations for some counties hit by this storm and the one that followed a few days later.

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(IA-Z043) MONONA, (IA-Z055) HARRISON, (IA-Z056) SHELBY, (IA-Z069) POTTAWATTAMIE, (IA-Z079) MILLS, (IA-Z080) MONTGOMERY, (IA-Z090) FREMONT, (IA-Z091) PAGE

|                    |   |              |
|--------------------|---|--------------|
| 12/24/09 02:00 CST | 0 | Winter Storm |
| 12/27/09 02:00 CST | 0 |              |

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(IA-Z043) MONONA, (IA-Z055) HARRISON, (IA-Z056) SHELBY, (IA-Z069) POTTAWATTAMIE, (IA-Z079) MILLS, (IA-Z080) MONTGOMERY, (IA-Z090) FREMONT, (IA-Z091) PAGE

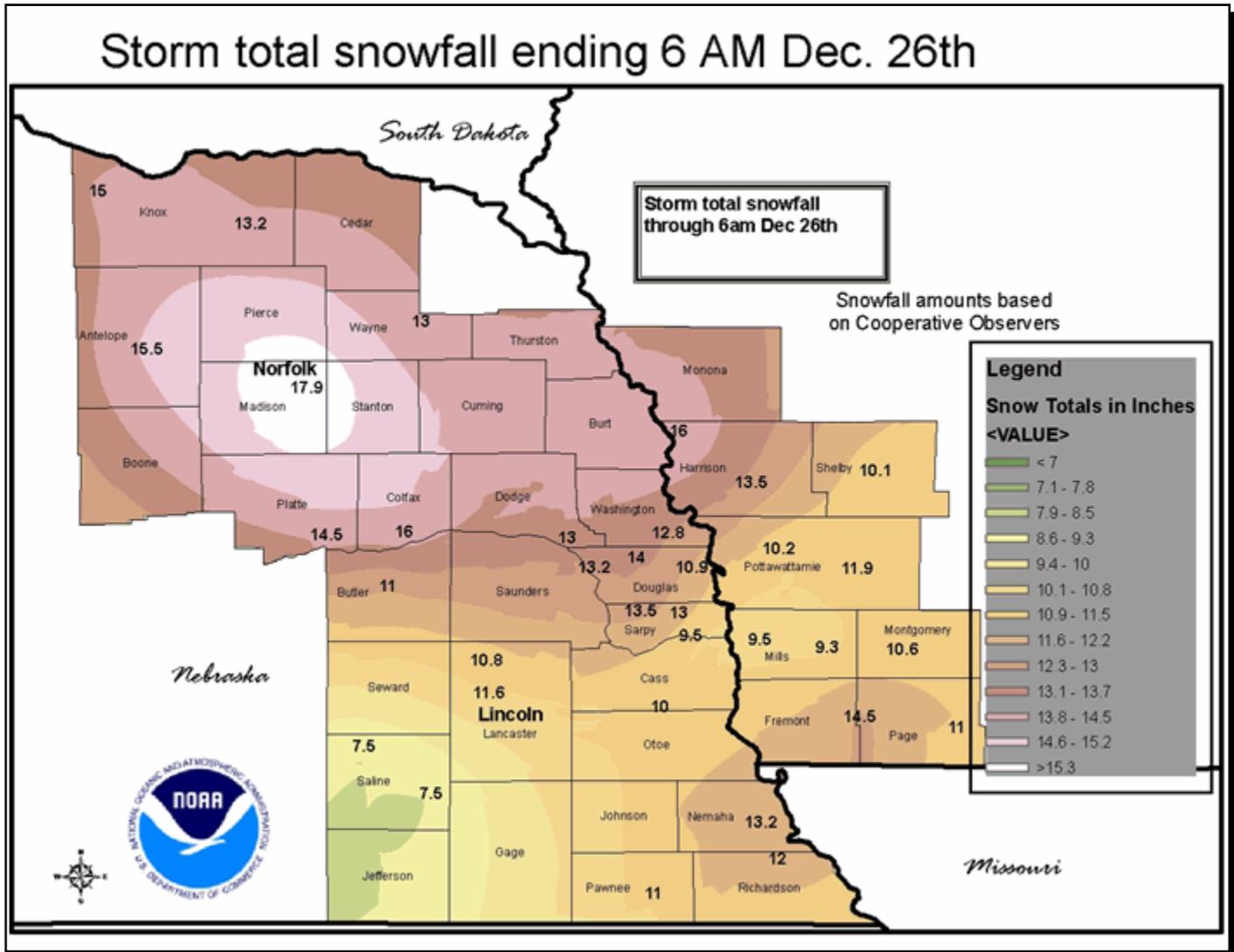
|                    |   |          |
|--------------------|---|----------|
| 12/24/09 15:00 CST | 0 | Blizzard |
| 12/25/09 10:00 CST | 0 |          |

The second winter storm of the month hit eastern Nebraska and southwest Iowa as a complex weather pattern brought a prolonged period of winter weather, including blizzard conditions, to the region around Christmas. Low pressure aloft in the southern plains lifted northeast into Missouri as another low pressure system dropped south out of Canada. These two systems then merged over the central United States and eventually pulled Atlantic moisture westward into the plains. Before they merged, the southern system pulled up gulf moisture and brought areas of freezing rain to southeast Nebraska and 3 to 5 inches of snow to northeast Nebraska on 12/23. The second system pulled down Arctic Air as north winds gusted between 40 and 50 mph over most of the region. This not only changed all the precipitation to snow on the 24th, but also brought blizzard conditions to much of eastern Nebraska and southwest Iowa Christmas Eve and much of Christmas Day as the systems merged. Snow and blowing snow and occasional blizzard or near-blizzard conditions then continued through much of the 26th.

Snowfall from the storm was 10 to 18 inches over most of eastern Nebraska and southwest Iowa. Heavier totals included around 18 inches in Norfolk, around 16 inches in Neligh and near Little Sioux Iowa, around 15 inches in Columbus, near Verdel Nebraska and Shenandoah Iowa, 14 inches near Gretna, Bennington and Logan Iowa and 13 inches at the NWS in Valley, near Auburn, Fremont, Ft. Calhoun, Wayne, Bloomfield, and Papillion. President Obama granted disaster declarations for many counties hit by this storm and the ice storm that hit a few days prior.

## Storm Data and Unusual Weather Phenomena - December 2009

|          |           |                   |                     |                        |
|----------|-----------|-------------------|---------------------|------------------------|
| Location | Date/Time | Deaths & Injuries | Property & Crop Dmg | Event Type and Details |
|----------|-----------|-------------------|---------------------|------------------------|



*Snowfall totals for the prolonged Christmas Winter Storm/Blizzard.*

### NEBRASKA, East

(NE-Z011) KNOX, (NE-Z012) CEDAR, (NE-Z015) THURSTON, (NE-Z016) ANTELOPE, (NE-Z017) PIERCE, (NE-Z018) WAYNE, (NE-Z030) BOONE, (NE-Z031) MADISON, (NE-Z032) STANTON, (NE-Z033) CUMING, (NE-Z034) BURT, (NE-Z042) PLATTE, (NE-Z043) COLFAX, (NE-Z044) DODGE, (NE-Z045) WASHINGTON, (NE-Z050) BUTLER, (NE-Z051) SAUNDERS, (NE-Z052) DOUGLAS, (NE-Z053) SARPY, (NE-Z065) SEWARD, (NE-Z066) LANCASTER, (NE-Z067) CASS, (NE-Z068) OTOE, (NE-Z078) SALINE, (NE-Z088) JEFFERSON, (NE-Z089) GAGE, (NE-Z090) JOHNSON, (NE-Z091) NEMAHA, (NE-Z092) PAWNEE, (NE-Z093) RICHARDSON

|                    |   |   |              |
|--------------------|---|---|--------------|
| 12/07/09 20:00 CST | 1 | 0 | Winter Storm |
| 12/09/09 05:00 CST |   |   |              |

Direct Fatalities: M??OU

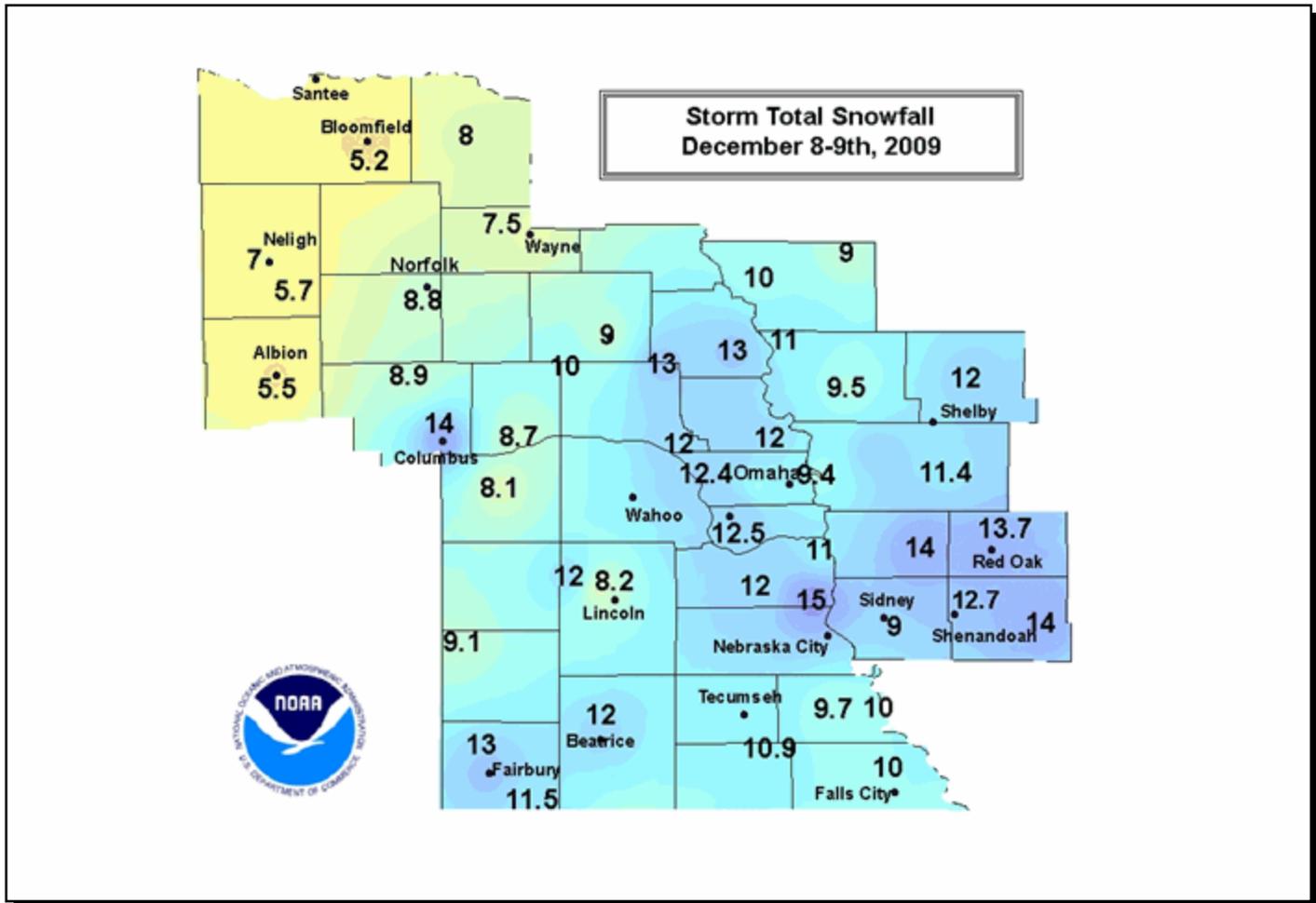
(NE-Z011) KNOX, (NE-Z012) CEDAR, (NE-Z015) THURSTON, (NE-Z016) ANTELOPE, (NE-Z017) PIERCE, (NE-Z018) WAYNE, (NE-Z030) BOONE, (NE-Z031) MADISON, (NE-Z032) STANTON, (NE-Z033) CUMING, (NE-Z034) BURT, (NE-Z042) PLATTE, (NE-Z043) COLFAX, (NE-Z044) DODGE, (NE-Z045) WASHINGTON, (NE-Z050) BUTLER, (NE-Z051) SAUNDERS, (NE-Z052) DOUGLAS, (NE-Z053) SARPY, (NE-Z065) SEWARD, (NE-Z066) LANCASTER, (NE-Z067) CASS, (NE-Z068) OTOE, (NE-Z078) SALINE, (NE-Z088) JEFFERSON, (NE-Z089) GAGE, (NE-Z090) JOHNSON, (NE-Z091) NEMAHA, (NE-Z092) PAWNEE, (NE-Z093) RICHARDSON

## Storm Data and Unusual Weather Phenomena - December 2009

| Location | Date/Time          | Deaths & Injuries | Property & Crop Dmg | Event Type and Details |
|----------|--------------------|-------------------|---------------------|------------------------|
|          | 12/08/09 19:00 CST |                   | 0                   | Blizzard               |
|          | 12/09/09 05:00 CST |                   | 0                   |                        |

A large and relatively slow moving storm brought a prolonged winter storm and even, for a time, blizzard conditions to eastern Nebraska and western Iowa from late on Dec. 7th through the early morning hours of Dec. 9th. The storm was driven by an upper level disturbance that tracked from the west coast across the Rockies and deepened over the Mississippi River Valley. The heaviest snow fell in advance of when the stronger winds arrived, mainly during the morning and afternoon of Dec. 8th. However, as north winds increased to 30 to 50 mph during the night of the 8th and early on the 9th, visibilities frequently dropped to near zero, especially in open areas. Considerable drifting snow also occurred, in many cases closing roads back shut almost as fast as they could be opened. This prompted many counties to pull snow plows off the roads for a while during the night of the 8th and early on the 9th. Many schools were closed for 3 days because of the storm; due the forecast of heavy snow to begin on the 7th, because of poor visibilities and roads that were drifted shut on the 8th and still some closed roads and bitter cold wind chills which followed the storm on the 9th. An elderly Omaha man was found dead during the evening of the 8th when he apparently had car trouble and returned to his apartment and was found dead sitting down in a chair outside.

Total snowfall from the storm was 6 to 15 inches over most of eastern Nebraska and western Iowa. Higher amounts in eastern Nebraska included 15 inches in Union, 14 inches in Columbus, around 12 inches at the NWS in Valley, at Tekamah, Uehling, Steele City and Weeping Water. In western Iowa heavier amounts included 12 inches in Clarinda and Hastings and around 11 inches in Hartlan, Red Oak and Little Sioux.



*Snowfall totals from the December 7th-9th storm.*

|   |                    |   |                 |
|---|--------------------|---|-----------------|
| (NE-Z011) KNOX, (NE-Z012) CEDAR, (NE-Z015) THURSTON, (NE-Z016) ANTELOPE, (NE-Z017) PIERCE, (NE-Z018) WAYNE, (NE-Z030) BOONE, (NE-Z031) MADISON, (NE-Z032) STANTON, (NE-Z042) PLATTE, (NE-Z043) COLFAX | 12/09/09 05:00 CST | 0 | Cold/Wind Chill |
|   | 12/09/09 12:00 CST | 0 |                 |

## Storm Data and Unusual Weather Phenomena - December 2009

| Location | Date/Time | Deaths & Injuries | Property & Crop Dmg | Event Type and Details |
|----------|-----------|-------------------|---------------------|------------------------|
|----------|-----------|-------------------|---------------------|------------------------|

Arctic air that spilled in behind an early December Winter Storm/Blizzard that hit eastern Nebraska combined with northwest winds of 15 to 25 mph and produced dangerously cold wind chill values. Wind chill values of 20 below to 25 below zero were observed during the morning hours of December 9th.

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(NE-Z065) SEWARD, (NE-Z078) SALINE, (NE-Z088) JEFFERSON, (NE-Z089) GAGE

|                    |   |           |
|--------------------|---|-----------|
| 12/23/09 04:00 CST | 0 | Ice Storm |
| 12/23/09 15:00 CST | 0 |           |

Warmer and more moist air spread north across eastern Nebraska and southwest Iowa in advance of a developing complex winter storm that was lifting out of the southern plains. This produced an ice storm that preceded a Winter Storm and eventual Blizzard that developed across the region. The heaviest ice accumulation, generally between 1/4 and 3/4 of an inch, fell from Beatrice and Fairbury northwest toward Seward and also over western Iowa east through northeast of Omaha. Sections of eastern Nebraska from around Lincoln to Fremont and Omaha experienced some icing, but accumulations were mostly under 1/4 inch across those locations. Several thousand people lost power from the storm a few days late when the Christmas 2009 blizzard struck with 40+ mph winds.

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(NE-Z011) KNOX, (NE-Z012) CEDAR, (NE-Z015) THURSTON, (NE-Z016) ANTELOPE, (NE-Z017) PIERCE, (NE-Z018) WAYNE, (NE-Z030) BOONE, (NE-Z031) MADISON, (NE-Z032) STANTON, (NE-Z033) CUMING, (NE-Z034) BURT, (NE-Z042) PLATTE, (NE-Z043) COLFAX, (NE-Z044) DODGE, (NE-Z045) WASHINGTON, (NE-Z050) BUTLER, (NE-Z051) SAUNDERS, (NE-Z052) DOUGLAS, (NE-Z053) SARPY, (NE-Z065) SEWARD, (NE-Z066) LANCASTER, (NE-Z067) CASS, (NE-Z068) OTOE, (NE-Z078) SALINE, (NE-Z088) JEFFERSON, (NE-Z089) GAGE, (NE-Z090) JOHNSON, (NE-Z091) NEMAHA, (NE-Z092) PAWNEE, (NE-Z093) RICHARDSON

|                    |   |              |
|--------------------|---|--------------|
| 12/24/09 02:00 CST | 0 | Winter Storm |
| 12/27/09 03:00 CST | 0 |              |

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(NE-Z011) KNOX, (NE-Z012) CEDAR, (NE-Z015) THURSTON, (NE-Z016) ANTELOPE, (NE-Z017) PIERCE, (NE-Z018) WAYNE, (NE-Z030) BOONE, (NE-Z031) MADISON, (NE-Z032) STANTON, (NE-Z033) CUMING, (NE-Z034) BURT, (NE-Z042) PLATTE, (NE-Z043) COLFAX, (NE-Z044) DODGE, (NE-Z045) WASHINGTON, (NE-Z050) BUTLER, (NE-Z051) SAUNDERS, (NE-Z052) DOUGLAS, (NE-Z053) SARPY, (NE-Z065) SEWARD, (NE-Z066) LANCASTER, (NE-Z067) CASS, (NE-Z068) OTOE, (NE-Z078) SALINE, (NE-Z088) JEFFERSON, (NE-Z089) GAGE, (NE-Z090) JOHNSON, (NE-Z091) NEMAHA, (NE-Z092) PAWNEE, (NE-Z093) RICHARDSON

|                    |   |          |
|--------------------|---|----------|
| 12/24/09 15:00 CST | 0 | Blizzard |
| 12/26/09 11:00 CST | 0 |          |

The second winter storm of the month hit eastern Nebraska and southwest Iowa as a complex weather pattern brought a prolonged period of winter weather, including blizzard conditions, to the region around Christmas. Low pressure aloft in the southern plains lifted northeast into Missouri as another low pressure system dropped south out of Canada. These two systems then merged over the central United States and eventually pulled Atlantic moisture westward into the plains. Before they merged, the southern system pulled up gulf moisture and brought areas of freezing rain to southeast Nebraska and 3 to 5 inches of snow to northeast Nebraska on 12/23. The second system pulled down Arctic Air as north winds gusted between 40 and 50 mph over most of the region. This not only changed all the precipitation to snow on the 24th, but also brought blizzard conditions to much of eastern Nebraska and southwest Iowa Christmas Eve and much of Christmas Day as the systems merged. Snow and blowing snow and occasional blizzard or near-blizzard conditions then continued through much of the 26th.

Snowfall from the prolonged winter storm was 10 to 18 inches over most of eastern Nebraska and southwest Iowa. Heavier totals included around 18 inches in Norfolk, around 16 inches in Neligh and near Little Sioux Iowa, around 15 inches in Columbus, near Verdel Nebraska and Shenandoah Iowa, 14 inches near Gretna, Bennington and Logan Iowa and 13 inches at the NWS in Valley, near Auburn, Fremont, Ft. Calhoun, Wayne, Bloomfield, and Papillion. The snow and strong winds drifted most rural roads shut and even made many highways impassable, especially in northeast Nebraska and sections of southeast Nebraska northwest through southwest of Lincoln where winds were a bit stronger. President Obama granted disaster declarations for many counties hit by this storm and the one in early January.

