

## Storm Data and Unusual Weather Phenomena - October 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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### IOWA, Southwest

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**MONONA COUNTY --- 2.4 SW ALBATON [42.15, -96.33], 2.6 NNE ALBATON [42.21, -96.28]**

10/04/13 17:02 CST	0	Tornado (EF2, L: 4.89 mi , W: 250 yd)
10/04/13 17:14 CST	0	Source: NWS Storm Survey

This tornado continued from Thurston County in northeast Nebraska and into Monona County . The damage in Monona County was generally confined to soft wood trees, but one farmstead did receive minor out building damage. The EF2 damage occurred as the tornado crossed 100th street were several power poles were snapped off at the base . The tornado then exited Monona County into Woodbury County .

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**MILLS COUNTY --- 2.9 SW PACIFIC CITY [41.02, -95.86], PACIFIC CITY [41.05, -95.82]**

10/04/13 17:21 CST	0	Hail (2.75 in)
10/04/13 17:28 CST	0	Source: Trained Spotter

Spotters and storm chasers reported hail ranging from nickel size to baseball size associated with a left-moving supercell tracking north northeast. The hail reportedly broke the vehicle windshield of the spotter northwest of Glenwood.

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**POTTAWATTAMIE COUNTY --- 1.6 E LAKE MANAWA [41.22, -95.82]**

10/04/13 17:40 CST	0	Hail (1.75 in)
10/04/13 17:40 CST	0	Source: Broadcast Media

Media reported hail up to golf ball size just southeast of Council Bluffs, while ham radio operators reported hail around quarter size.

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**MONTGOMERY COUNTY --- 0.9 SE RED OAK [41.01, -95.22]**

10/04/13 19:00 CST	0	Thunderstorm Wind (EG 52 kt)
10/04/13 19:00 CST	0	Source: Emergency Manager

Reports from Red Oak of a couple of trees and branches down due to the strong winds. The Red Oak AWOS, located near 1 mile west of town recorded a wind gusts to 55 mph.

The same powerful storm system that produced severe weather across eastern Nebraska on October 3rd remain in the area on the 4th. A strong area of low pressure moved from eastern Colorado into southern South Dakota during the day. As this occurred, a dry line was sweeping across central and into eastern Nebraska. A warm front continued to lift north into northeast Nebraska and western Iowa by late afternoon. With unseasonably warm and moist air in the region the atmosphere became strongly unstable. This instability coupled with a strong wind field associated with the powerful storm system and created an environment favorable for significant severe weather. Supercells developed near the intersection of the dry line and warm front over northeast Nebraska during the afternoon and tracked northeast. The supercells were responsible for large hail, damaging winds, and significant tornadoes. Other isolated thunderstorms developed south along the dry line into western Iowa producing very large hail and damaging winds during the evening of the 4th.

### NEBRASKA, East

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**ANTELOPE COUNTY --- OAKDALE [42.07, -97.97], 0.7 S OAKDALE [42.06, -97.97]**

10/02/13 15:25 CST	0	Hail (1.50 in)
10/02/13 15:35 CST	0	Source: COOP Observer

Hail started at dime size and grew to as large as half dollar size hail that covered the ground.

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**ANTELOPE COUNTY --- 1.2 NW NELIGH [42.14, -98.05], 1.0 WNW NELIGH [42.13, -98.05], 0.9 WNW NELIGH ARPT [42.12, -98.05], 0.2 SSW NELIGH [42.13, -98.03], 0.5 NNW NELIGH [42.14, -98.04]**

10/02/13 18:09 CST	0	Flash Flood (due to Heavy Rain)
10/02/13 19:09 CST	0	Source: Law Enforcement

Persistent heavy rainfall from slow moving thunderstorms produced flash flooding near the city of Neligh. Water flowed across US Highway 275 on the western side of the city, as well as across Nebraska Highway 14 on the south side of town. Several buildings, including the high school, sustained water damage from the flooding or heavy rain. Around 6 to 8 inches of rain was reported in and around the Neligh area from this storm.

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**GAGE COUNTY --- 1.1 W BEATRICE [40.27, -96.75]**

10/03/13 01:15 CST	0	Thunderstorm Wind (MG 53 kt)
10/03/13 01:15 CST	0	Source: AWOS

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A wind gust to 61 mph was recorded at the Beatrice Airport. Local law enforcement indicated only a few small branches to around 1 inch in diameter were downed in town.

**Warm and humid air returned to eastern Nebraska on October 2nd ahead of a cold front that was moving through eastern South Dakota to central Nebraska. As instability increased during the afternoon along and ahead of the cold front thunderstorms developed. Widespread severe weather was not observed, but isolated large hail occurred in northeast Nebraska. The thunderstorms formed into a line during the evening and slowly moved southeast producing heavy rain and isolated flash flooding. The line of thunderstorms also produced at least one report of damaging wind in southeast Nebraska overnight.**

**SALINE COUNTY --- 0.5 W WILBER [40.48, -96.96], 6.8 NE WESTERN [40.48, -97.12]**

10/03/13 19:14 CST	0	Hail (2.75 in)
10/03/13 19:40 CST	0	Source: Storm Chaser

Several reports of large hail, some very large, were received from about 6 miles northeast of Western to in and around Wilber. Emergency management reported hail up to 2 inches in diameter from Wilber to near 6 miles west of Wilber, while a storm chaser reported hail to 2.75 inches in diameter to the northeast of Western to just north of Wilber.

**SALINE COUNTY --- FRIEND [40.65, -97.28]**

10/03/13 21:01 CST	0	Hail (1.00 in)
10/03/13 21:01 CST	0	Source: Trained Spotter

**LANCASTER COUNTY --- 1.9 E BENNET [40.68, -96.46], 1.6 ESE HICKMAN [40.59, -96.64]**

10/03/13 21:08 CST	0	Tornado (EF2, L: 11.19 mi , W: 300 yd)
10/03/13 21:34 CST	0	Source: NWS Storm Survey

This tornado touched down 2.5 miles southwest of Hickman near the Stagecoach Lake State Recreation area. It then moved through the Wagon Train Lake State Recreation area where it strengthened to EF2 intensity. It continued to track to the northeast, moving about 1 miles south of Bennet before ending 1 mile northwest of Palmyra. The strength of this tornado was rated EF2 based on the property damage near the Wagon Train Lake State Recreation and based on property damage just west of Palmyra. The intensity was EF1 south of Bennet. Otherwise the tornado strength was rated EF0 along the remainder of the track. The entire track of this tornado was 16.5 miles.

**SALINE COUNTY --- 6.2 S DORCHESTER [40.56, -97.11]**

10/03/13 21:18 CST	0	Hail (1.00 in)
10/03/13 21:30 CST	0	Source: Emergency Manager

**OTOE COUNTY --- 4.5 WSW PALMYRA [40.68, -96.46], 2.7 N PALMYRA [40.74, -96.39]**

10/03/13 21:34 CST	0	Tornado (EF2, L: 4.08 mi , W: 300 yd)
10/03/13 21:39 CST	0	Source: NWS Storm Survey

This tornado initially touched down in Lancaster County where EF2 damage was produced. The tornado crossed in Otoe County around 2 miles east of Bennet. The tornado continued to around 1 mile northwest of Palmyra before lifting. The tornado produced damage consistent with EF2 as it crossed highway 20 to the west of Palmyra to farmsteads.

**SALINE COUNTY --- 0.5 W WILBER [40.48, -96.96], 2.7 WNW WILBER MUNI ARPT [40.48, -97.03]**

10/03/13 21:48 CST	0	Thunderstorm Wind (MG 56 kt)
10/03/13 21:53 CST	0	Source: Emergency Manager

A measured wind gust to 65 mph was recorded in Wilber. The wind downed large tree branches in the city of Wilber. The wind also downed power poles to the west of Wilber that resulted in many rural electrical customers in Saline County to lose power.

**CASS COUNTY --- 3.3 SSW ELMWOOD [40.78, -96.29], 2.9 E ELMWOOD [40.82, -96.23]**

10/03/13 21:55 CST	0	Tornado (EF0, L: 4.46 mi , W: 100 yd)
10/03/13 22:09 CST	0	Source: NWS Storm Survey

This tornado began 4.5 miles south of Elmwood where minor property damage was observed. The tornado tracked northeast for 4 miles ending 3.5 mile southeast of Elmwood. The tornado generally moved across open country and caused minor tree damage.

**CASS COUNTY --- 0.9 SE PLATTSMOUTH [41.01, -95.89]**

10/03/13 22:40 CST	0	Thunderstorm Wind (EG 52 kt)
10/03/13 22:40 CST	0	Source: Law Enforcement

Law enforcement and media reports indicated that numerous large tree limbs and power poles were downed from the strong winds associated with this line of thunderstorms.

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<b>SARPY COUNTY --- 0.9 SE AVERY [41.16, -95.92]</b>				
	10/03/13 22:50 CST		0	Hail (1.00 in)
	10/03/13 22:50 CST		0	Source: Trained Spotter
<p>A powerful storm system moved into the central Plains on the 3rd of October and allowed for low pressure developed over the western high Plains. Ahead of this low, unseasonably warm and humid air streamed north from the Gulf of Mexico. The combination of the warm humid air and the strong upper level storm system created an atmosphere of high instability and strong shear across parts of eastern Nebraska. As a warm front slowly lifted north into southeast Nebraska during the evening of the 3rd, isolated supercell thunderstorms developed. These storms were responsible for large hail, some significant, damaging winds, and a couple of tornadoes.</p>				
<b>STANTON COUNTY --- 7.8 SW STANTON [41.87, -97.34], 3.5 WSW STANTON [41.93, -97.29]</b>				
	10/04/13 15:32 CST		0	Tornado (EF0, L: 4.71 mi , W: 100 yd)
	10/04/13 15:42 CST		0	Source: Storm Chaser
<p>This tornado, captured by storm chasers, moved through rural Stanton County with no reported damage.</p>				
<b>ANTELOPE COUNTY --- 6.1 SSE ROYAL [42.25, -98.09], 1.9 ENE ROYAL [42.34, -98.10]</b>				
	10/04/13 15:48 CST		0	Tornado (EF2, L: 6.64 mi , W: 264 yd)
	10/04/13 16:01 CST		0	Source: Emergency Manager
<p>The tornado developed about 2 miles east, and 6 miles south of the city of Royal. The tornado moved in a nearly due north fashion passing to the east of the city. The tornado impacted several farmsteads during the greater than 6 mile path. Outbuildings, trees and power line damage was common along the path of the tornado.</p>				
<b>WAYNE COUNTY --- 4.4 WNW ALTONA [42.13, -97.08], 2.7 NNE WAYNE ARPT [42.26, -96.96]</b>				
	10/04/13 16:12 CST		0	Tornado (EF4, L: 10.77 mi , W: 2429 yd)
	10/04/13 16:36 CST	15	0	Source: NWS Storm Survey
<p>This violent tornado started 8 miles southwest of Wayne, Nebraska and flattened corn crops and tore off large limbs of some trees . Gaining strength as it headed northeast, the tornado struck a farmstead about 4.5 miles southwest of Wayne. Here barns and sheds were severely damaged or destroyed. The tornado became very wide at this point, nearly 1.25 miles wide. About 2 miles south of Wayne the tornado severely damaged a farmstead and then caused strong EF-3 damage to two homes along highway 15. The tornado then missed the downtown and residential district of Wayne and severely damaged a softball complex on the southeast side of town.</p> <p>The most significant damage occurred in the industrial part area on the east side of Wayne . Numerous metal building structures, some of them quiet large, sustained serious damage or were mangled into rubble. It was here the tornado was rated EF-3 with a couple of small pockets of low-end EF-4 damage. The tornado then crossed highway 35 and impacted the Wayne Municipal Airport. Two hangers were flattened. Some private aircraft were tumbled and ripped up. The automated weather observing station at the airport was also torn up. Continuing northeast, the tornado struck another farmstead and caused EF-2 damage to a home. Damage continued northeast at it tracked into Dixon County. The damage in the Wayne area was estimated at \$50 million.</p>				
<b>PAWNEE COUNTY --- 0.7 S STEINAUER [40.21, -96.23]</b>				
	10/04/13 16:18 CST		0	Hail (1.00 in)
	10/04/13 16:18 CST		0	Source: Trained Spotter
<p>There were also small limbs blown down at the spotter location, but winds were below severe limits.</p>				
<b>KNOX COUNTY --- 2.5 S CREIGHTON [42.43, -97.88], 0.4 NNW BAZILE MILLS [42.53, -97.90]</b>				
	10/04/13 16:20 CST		0	Tornado (EF3, L: 6.43 mi , W: 590 yd)
	10/04/13 16:36 CST		0	Source: Emergency Manager
<p>This EF3 tornado touched down approximately 2 miles southeast of Creighton. The tornado was initially weak with damage confined to softwood trees, irrigation systems, and siding and shingle damage. The tornado initially traveled north crossing highway 59 less than 1 mile to the east of the city of Creighton. The tornado made a direct impact to the Creighton Municipal Airport where 3 of the hangers received roof, garage and siding damage. There was also a storage building that lost a roof. The airport beacon was also lost during the tornado. Just to the south of the airport a building housing antique trackers was completely destroyed and was moved for 3 city blocks. The tornado then took a track to the northwest where a 10000 bushel grain bin was completely destroyed. There were also 5 other irrigation systems where destroyed as well as power poles snapped at their base. The tornado ended 1 mile north of Bazile Mills.</p>				
<b>OTOE COUNTY --- DUNBAR [40.67, -96.03]</b>				
	10/04/13 16:50 CST		0	Hail (1.50 in)
	10/04/13 16:50 CST		0	Source: Trained Spotter

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<b>THURSTON COUNTY --- 3.3 SW MACY [42.08, -96.39], 2.5 NNE MACY [42.15, -96.33]</b>				
	10/04/13 16:55 CST		0	Tornado (EF2, L: 7.29 mi , W: 250 yd)
	10/04/13 17:02 CST	2	0	Source: NWS Storm Survey

Tornado damage started in Thurston County approximately 3 miles southwest of Macy in rural areas. The tornado then tracked northeast through Macy. The tornado weakened in intensity as it tracked northeast from the edge of Macy across highway 75 and moved toward the Missouri River. The damage in Macy varied in width from 100 to 250 yards wide. There were a total of 6 homes that were considered to have received heavy damage or destroyed and can not be occupied. There were a total of 12 homes and 1 business that received at least minor damage. Numerous vehicles were damaged and there were two minor injuries. Outside of Macy, the majority of the damage was to trees but some farmsteads received minor damage to buildings.

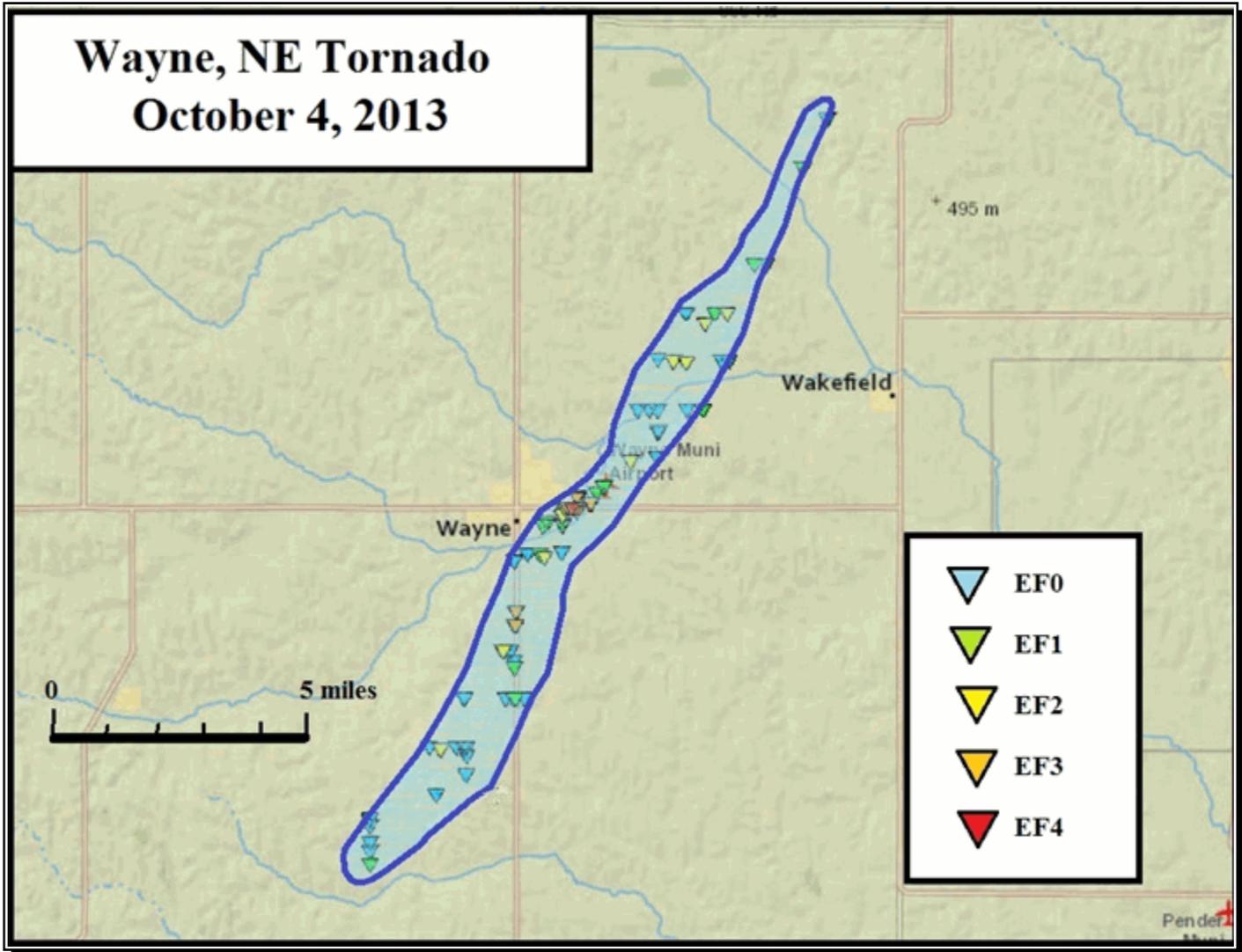
<b>CASS COUNTY --- 1.7 NW UNION [40.84, -95.92], 1.7 SE PLATTSMOUTH [41.00, -95.88]</b>				
	10/04/13 17:10 CST		0	Hail (2.75 in)
	10/04/13 17:24 CST		0	Source: Storm Chaser

Storm chasers and spotters reported hail that ranged from ping pong ball to baseball size hail associated with a left-moving supercell tracking to the north northeast.

The same powerful storm system that produced severe weather across eastern Nebraska on October 3rd remain in the area on the 4th. A strong area of low pressure moved from eastern Colorado into southern South Dakota during the day. As this occurred, a dry line was sweeping across central and into eastern Nebraska. A warm front continued to lift north into northeast Nebraska and western Iowa by late afternoon. With unseasonably warm and moist air in the region the atmosphere became strongly unstable. This instability coupled with a strong wind field associated with the powerful storm system and created an environment favorable for significant severe weather. Supercells developed near the intersection of the dry line and warm front over northeast Nebraska during the afternoon and tracked northeast. The supercells were responsible for large hail, damaging winds, and significant tornadoes. Other isolated thunderstorms developed south along the dry line into western Iowa producing very large hail and damaging winds during the evening of the 4th.

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*Map of the track of the Wayne, NE tornado of October 4th. The tornado reached EF-4 intensity on the east side of Wayne.*

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**LANCASTER COUNTY --- 0.9 NNW LINCOLN [40.81, -96.68], 1.1 S HAVELOCK [40.85, -96.62]**

10/30/13 07:17 CST	0	Hail (1.25 in)
10/30/13 07:22 CST	0	Source: Trained Spotter

Hail up to half dollar-size fell over parts of Lincoln. In some cases the hail covered the ground.

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**LANCASTER COUNTY --- 0.9 SW WAVERLY [40.91, -96.53]**

10/30/13 07:34 CST	0	Hail (1.00 in)
10/30/13 07:34 CST	0	Source: Trained Spotter

Hail quarter-size and perhaps slightly larger fell in the Waverly area.

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**CASS COUNTY --- MANLEY [40.92, -96.17]**

10/30/13 08:04 CST	0	Hail (1.00 in)
10/30/13 08:04 CST	0	Source: Trained Spotter

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**CASS COUNTY --- 0.9 SE PLATTSMOUTH [41.01, -95.89]**

10/30/13 08:18 CST	0	Hail (0.75 in)
10/30/13 08:18 CST	0	Source: Trained Spotter

**A strong upper level system that lifted out of the Rocky Mountains produced scattered thunderstorms across eastern Nebraska, a few**

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of which contained large hail, during the morning of Oct. 30th. The storms occurred north of nearly stationary front that was over northern Kansas.