



National Weather Service Des Moines



June 12, 2013 Tornado Event Summary

Updated on February 23, 2014

Note: This data is subject to change

Overview:

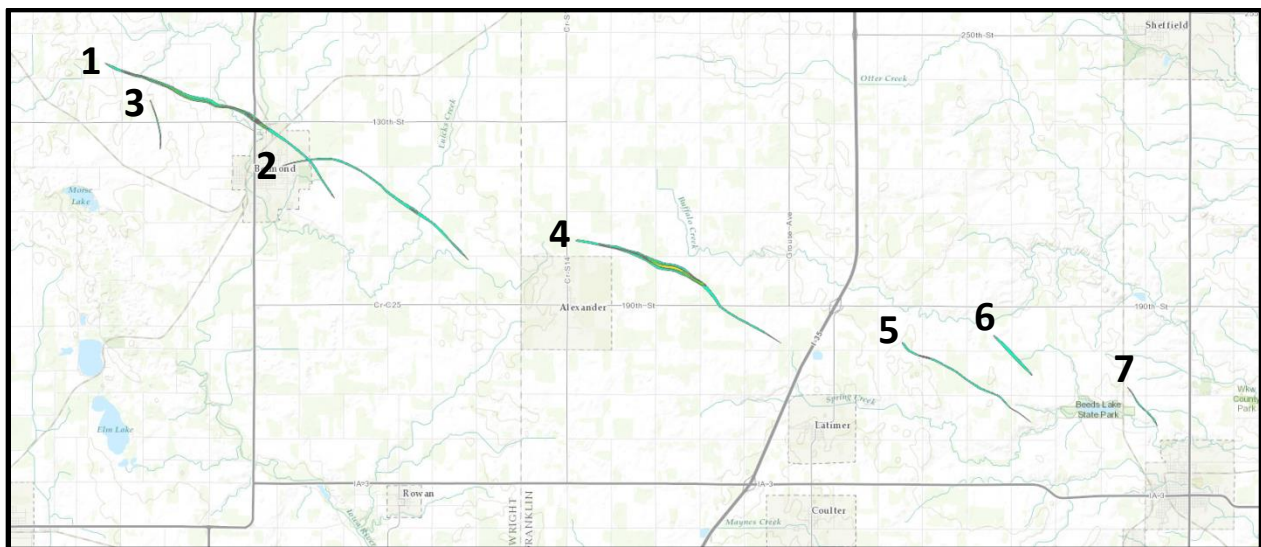
- **Jan/Feb 2014:** Based on a renewed review of photo and video evidence from the Hampton area, it has been concluded that there was an additional tornado that touched down in conjunction with another tornado to the SW. Also, new photo evidence matched with reconnaissance satellite imagery taken after the event revealed a small tornado to the west of Belmond that formed around 4:20pm. This brief tornado lasted a few minutes and is believed to have rotated anti-cyclonically. The total number of tornadoes has been raised from five to seven.

On the afternoon of June 12, 2013, a thunderstorm produced a series of tornadoes over Franklin and Wright counties. The strongest of these tornadoes hit the north end of Belmond, producing strong EF-3 damage to two businesses and homes. This storm went on to produce six additional tornadoes over the next hour. One of these tornadoes skirted eastern Belmond but otherwise the other tornadoes stayed out in open country and damaged a number of farmsteads. These were a unique breed of tornadoes that contained both supercellular and landspout characteristics. Their lifecycle and genesis (no mid-level mesocyclone) resembled that of a landspout, but the strength, longevity, and cyclic nature of the tornadoes is more along the lines of a supercell. Other severe thunderstorms developed across north central Iowa that evening, with hail up to the size of golf balls reported in Bremer County. These storms congealed into a large, slow moving complex by sunset and produced flash flooding in Worth, Mitchell, Floyd, and Cerro Gordo counties.

Event Facts:

Number of Tornadoes across North Central Iowa: 7

EF-0 Tornadoes: 3 EF-1 Tornadoes: 2 EF-2 Tornadoes: 1 EF-3 Tornadoes: 1



Overview map with the tornado tracks

Tornado 1: 4.3 miles NW of Belmond

This tornado touched down a little over four miles northwest of Belmond just after 4:00pm, initially damaging a machine shed. It strengthened to an EF-2 as it tracked over a farmstead two miles NW of Belmond. Still tracking SE, the tornado heavily damaged a home and several businesses along US HW 69 north of town where high end EF-3 wind speeds were estimated. The tornado then continued to the southeast and weakened to an EF-0 as it skirted the northeast side of town and crossed the city airstrip. At the airstrip, the tornado bisected the path of another tornado ("Tornado 2") that had touched down less than 10 minutes beforehand. As the tornado crossed 140th St, it quickly roped out and dissipated.

Tornado Strength: EF-3

Estimated Time: 4:08pm to 4:27pm

Event Location: 4.3 miles NW of Belmond to 1.8 miles ESE of Belmond

Peak Wind Speed: 155 mph

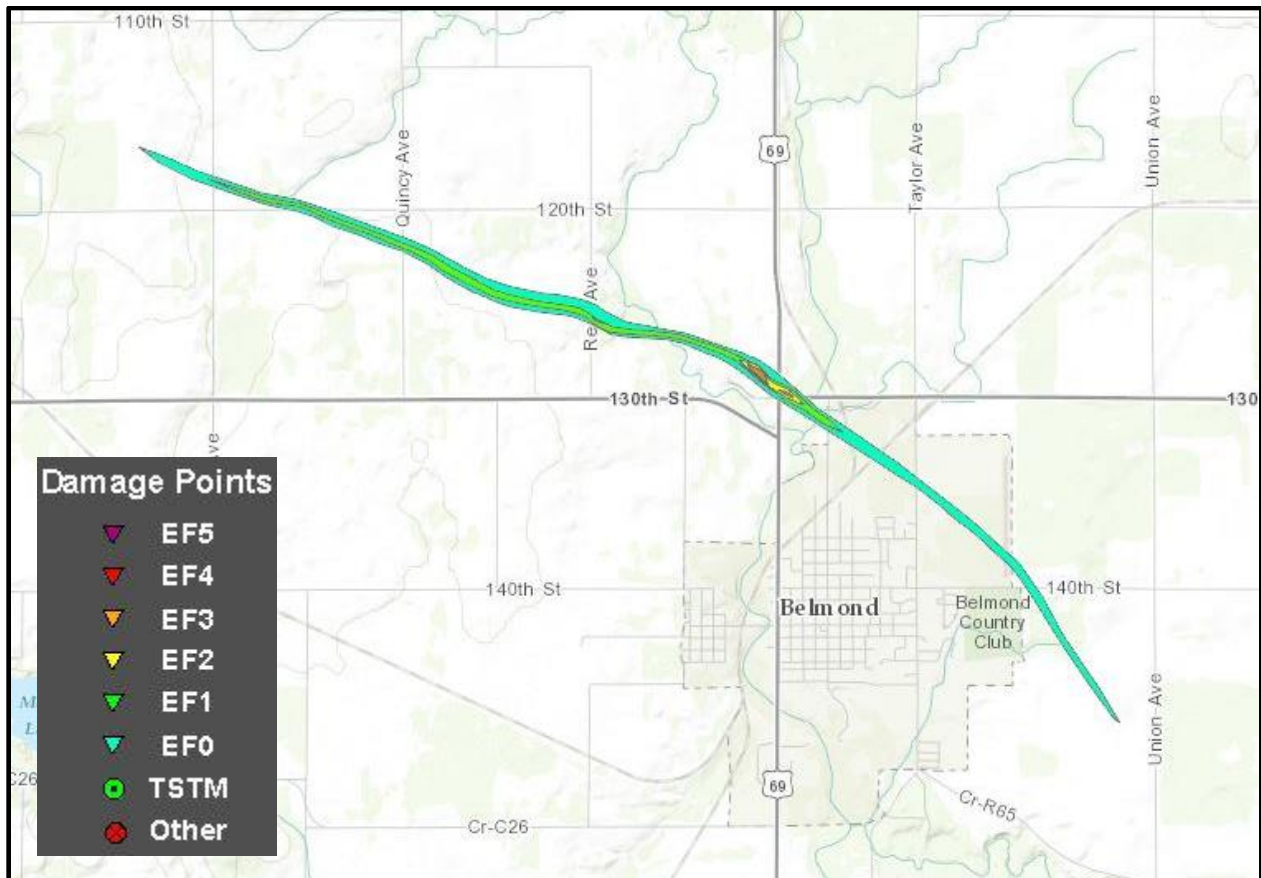
Path Length: 6.2 miles

Average Path Width: 200 yards

Injuries: 0

Fatalities: 0

Tornado 1 Path Map:





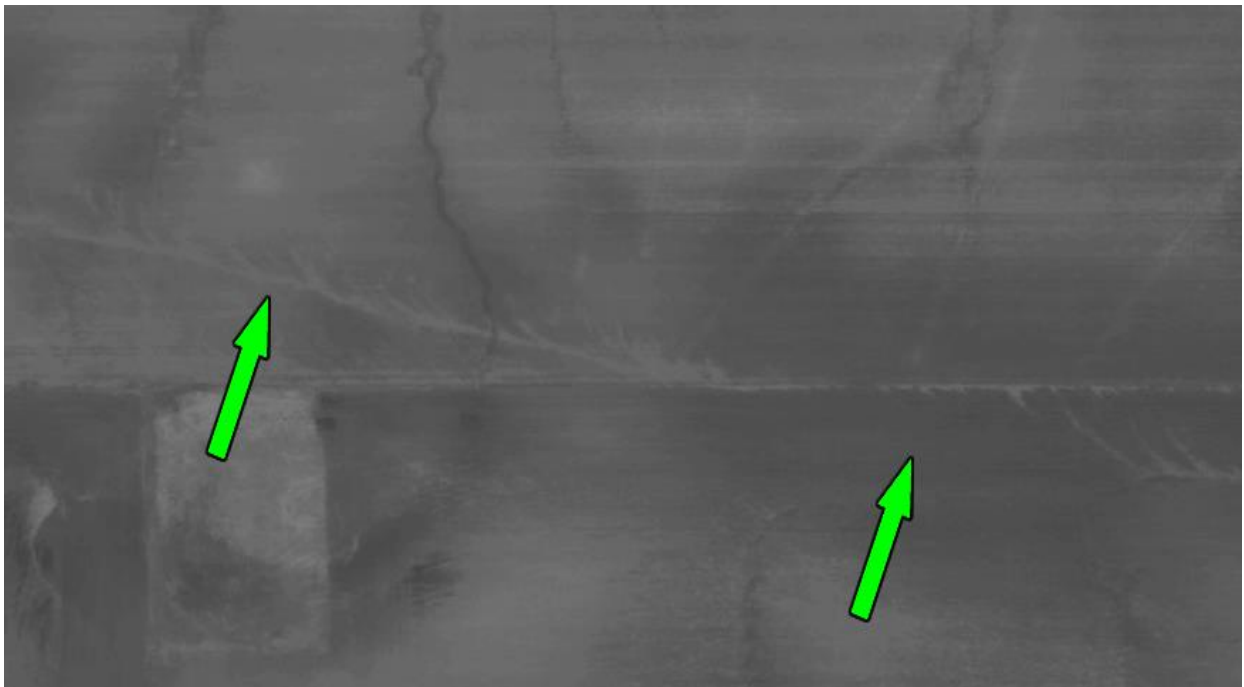
An older house was detached from its cinder block foundation and destroyed on the north side of Belmond. Many trees were uprooted and flattened in this area as well.



A warehouse was destroyed and partially swept from its foundation on the north side of Belmond.



Aerial shot of the damage on the north side of Belmond along US Highway 69. Many of the structures in the photos above are shown in this aerial shot. Photo by Adam Frederick.



High resolution black and white satellite imagery of cyclonic swirls associated with the tornado as it travelled through a farm field NW of Belmond (green arrows).

Tornado 2: 0.6 miles East of Belmond

This tornado formed on the east side of Belmond at 4:19pm and knocked a weather mesonet station off the roof of the elementary school. The weak tornado then tracked eastward across the city airstrip before turning southeast and crossing 140th St. a mile east of town. Strengthening to an EF-1, the tornado heavily damaged a grove of trees before weakening and eventually dissipating 5 miles SE of Belmond.

Tornado Strength: EF-1

Estimated Time: 4:19pm to 4:32pm

Event Location: 0.6 miles E of Belmond to 5.2 miles SE of Belmond

Peak Wind Speed: 103 mph

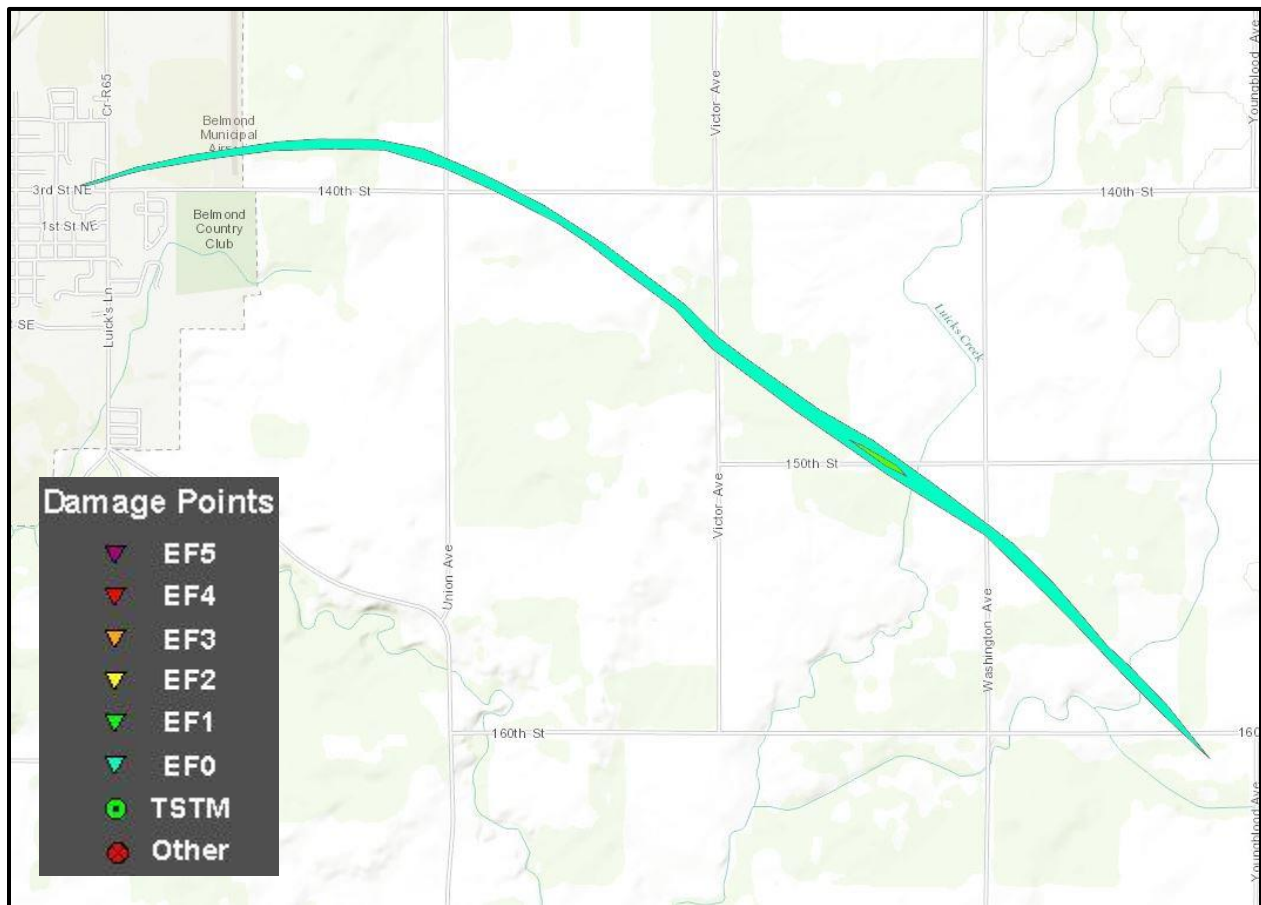
Path Length: 5.0 miles

Average Path Width: 100 yards

Injuries: 0

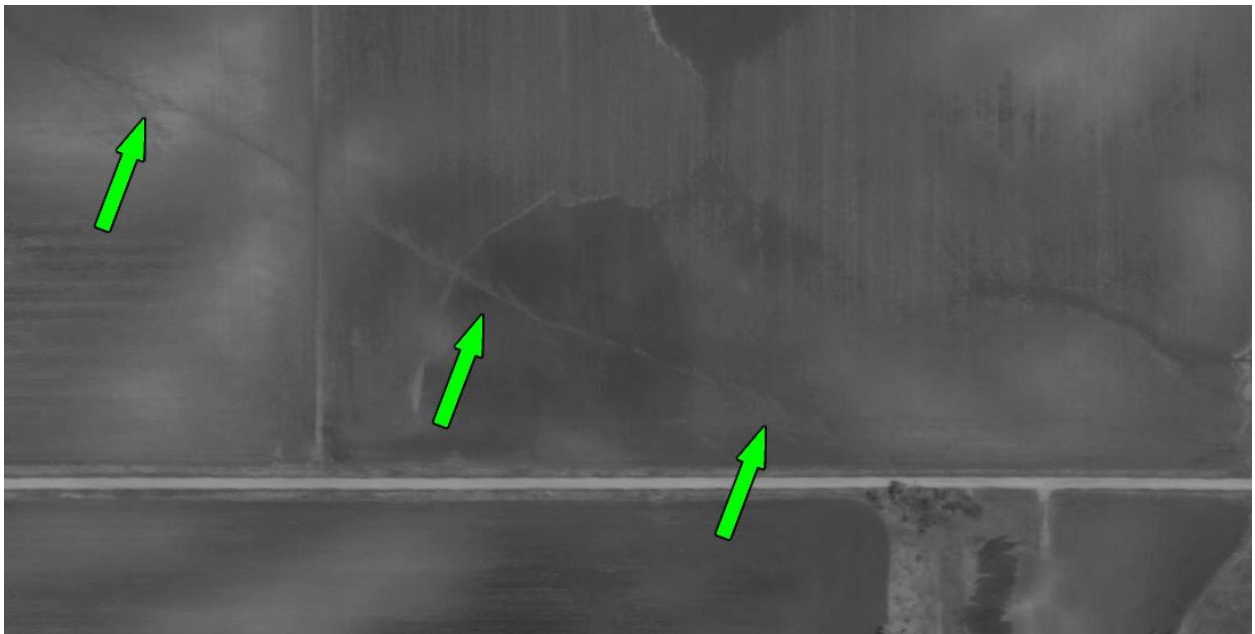
Fatalities: 0

Tornado 2 Path Map:





Trees heavily damaged about 3.5 miles southeast of Belmond.



High resolution black and white satellite imagery of cyclonic swirls associated with the tornado as it travelled through a farm field SE of Belmond (green arrows). The trees in the photo above are at the bottom right of this image.

Tornado 3: 3.0 Miles NW of Belmont

This tornado formed as a larger EF-3 tornado was passing through the NE side of Belmont. This tornado tracked to the SSE across open farm land before dissipating. The track was determined based on photographs of the tornado and satellite imagery of the area. The location of the tornado in the storm, track direction, and streaks in satellite imagery suggest that this tornado rotated anti-cyclonically.

Tornado Strength: EF-0

Estimated Time: 4:21pm to 4:24pm

Event Location: 3.0 miles NW of Belmont to 2.4 miles WNW of Belmont

Peak Wind Speed: 70 mph

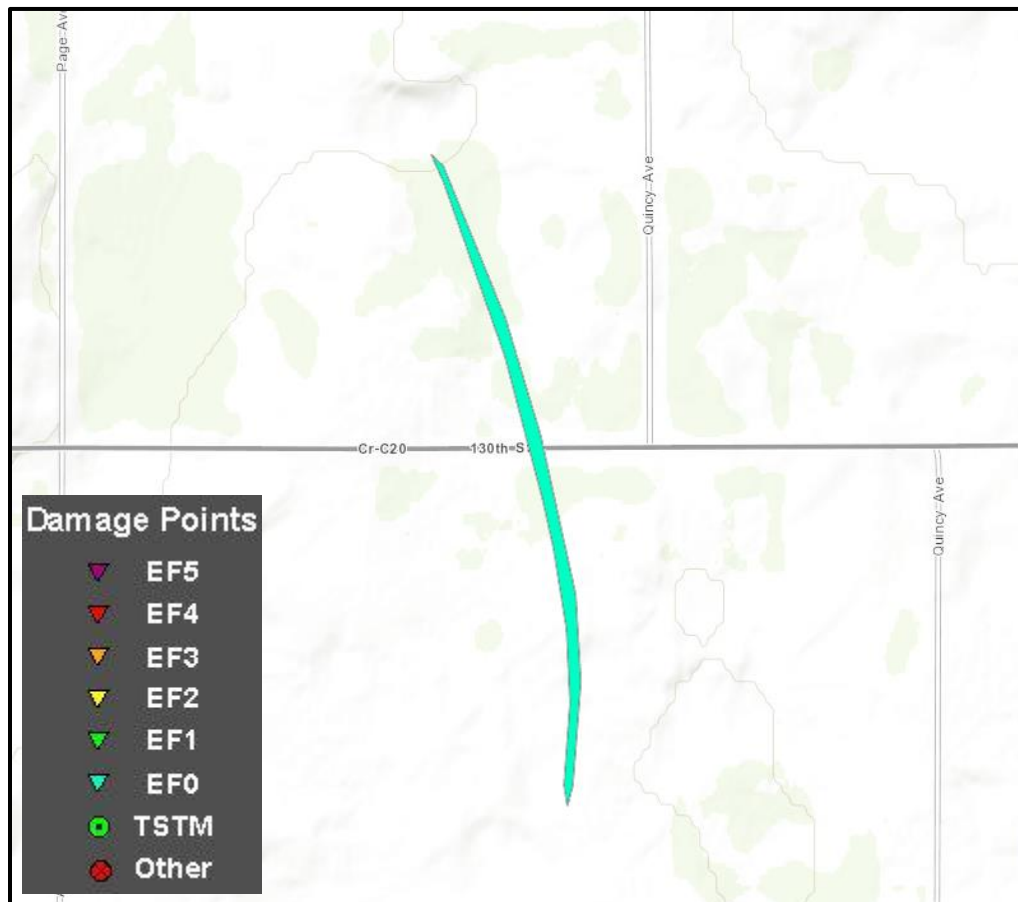
Path Length: 1.14 miles

Average Path Width: 50 yards

Injuries: 0

Fatalities: 0

Tornado 3 Path Map:



Tornado 4: 1.5 Miles NNE of Alexander

This tornado formed as the EF-1 to the west was roping out and dissipating. It heavily damaged several farms while straight-line winds produced an even wider damage path to the south of the tornado. The tornado then turned more towards the SE and weakened, dissipating just before reaching Interstate 35.

Tornado Strength: EF-2

Estimated Time: 4:32pm to 4:44pm

Event Location: 1.5 Miles NNE of Alexander to 2 miles NW of Latimer

Peak Wind Speed: 112 mph

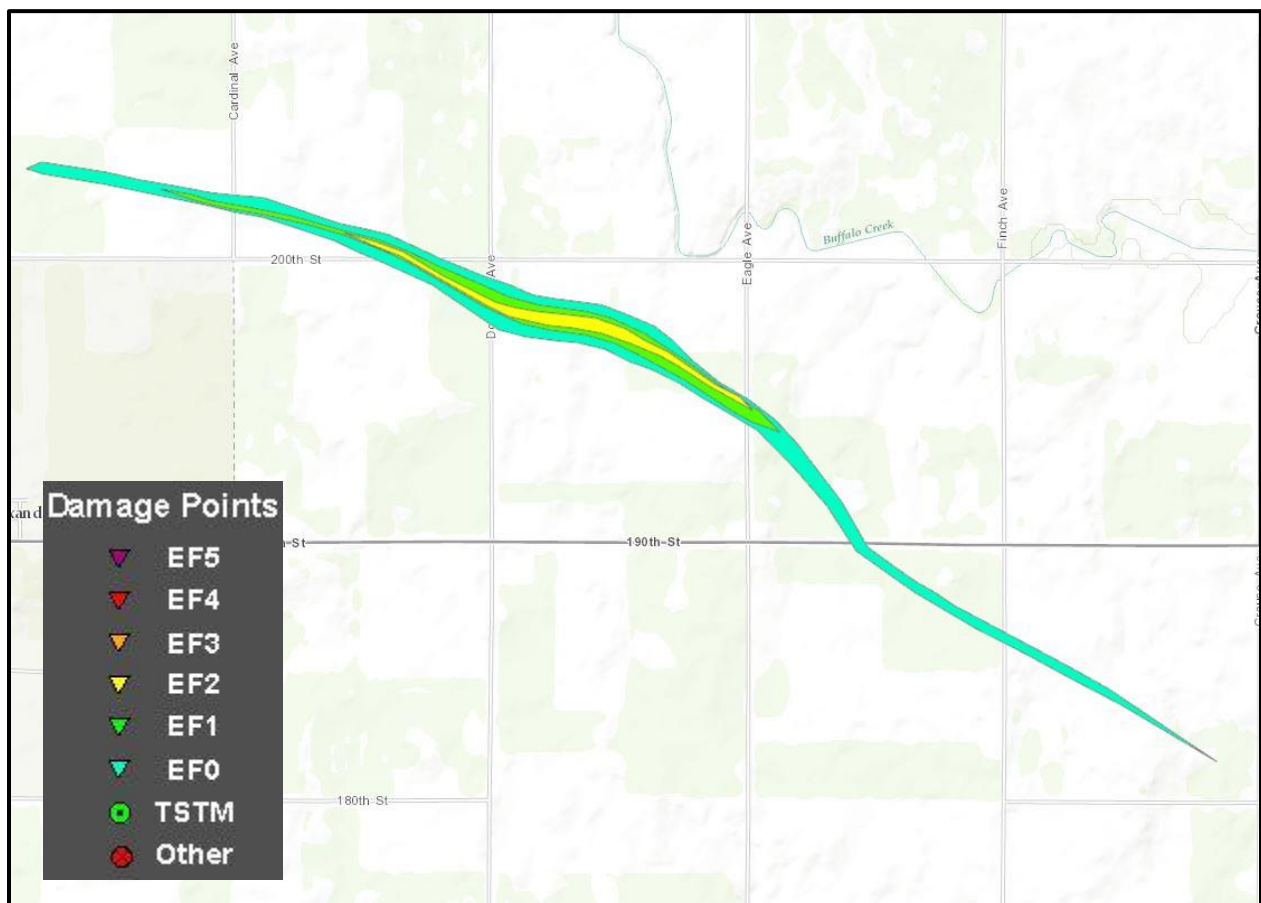
Path Length: 5.2 miles

Average Path Width: 200 yards

Injuries: 0

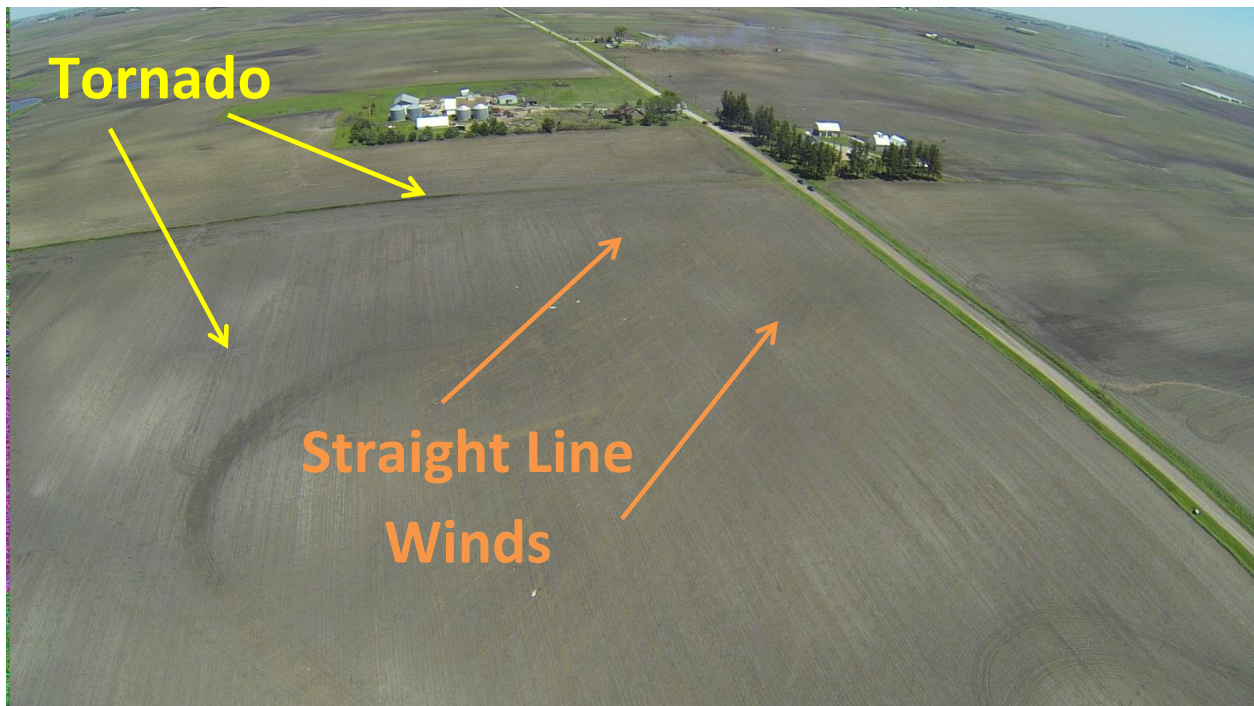
Fatalities: 0

Tornado 4 Path Map:





A destroyed barn near the beginning of the track north of Alexander. Photo by Tim McCleary



Aerial view of the track as it headed towards another farmstead. The tornado path shows up as the swirls in the field on the left side of the photo while straight-line winds show up in the fields on the right. Image provided by Adam Frederick.

Tornado 5: 2.5 Miles NE of Latimer

This small EF-1 tornado formed 2.5 miles NE of Latimer and damaged a barn roof and about a dozen trees on two farmsteads. It then weakened and dissipated about 3.8 miles NW of Hampton.

Tornado Strength: EF-1

Estimated Time: 4:46pm to 4:55pm

Event Location: 2.8 miles NE of Latimer to 3.8 miles NW of Hampton

Peak Wind Speed: 90 mph

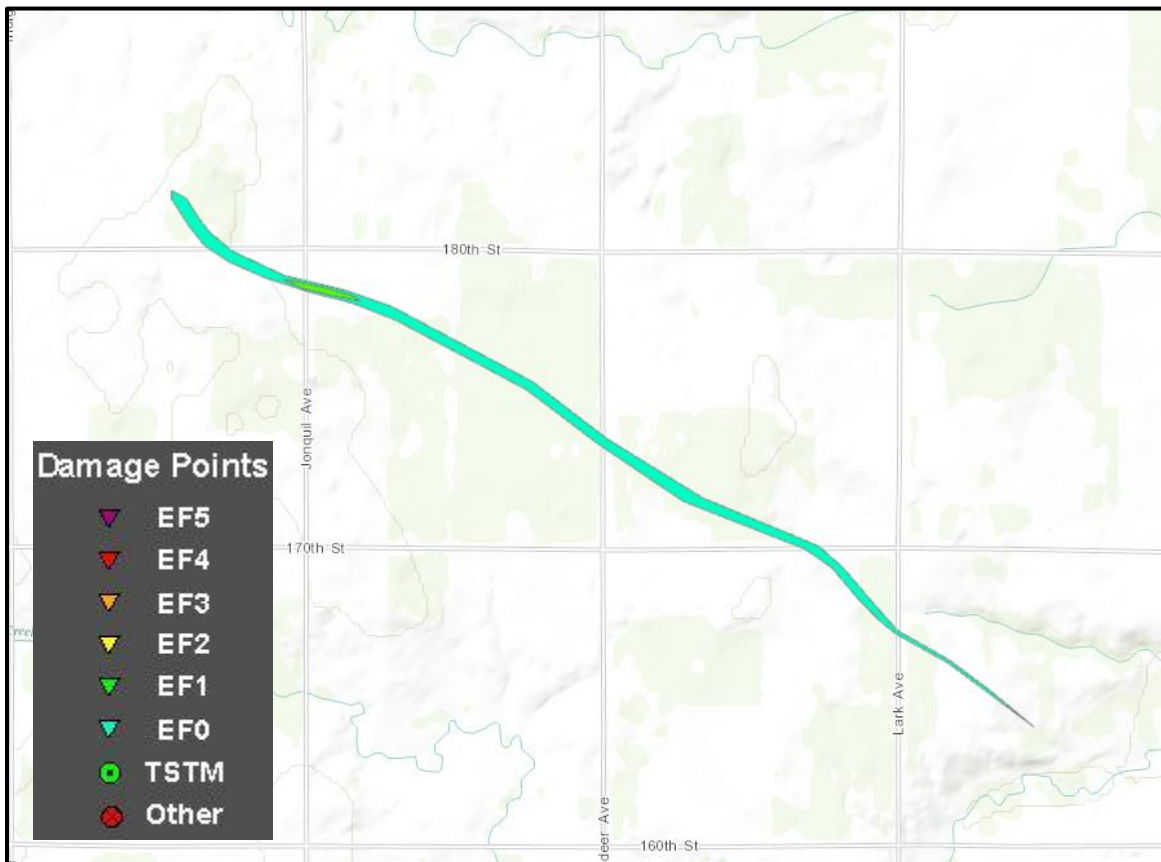
Path Length: 3.48 miles

Average Path Width: 50 yards

Injuries: 0

Fatalities: 0

Tornado 5 Path Map:





Trees snapped off in the area of EF-1 damage about 3 miles NE of Latimer.

Tornado 6: 5.7 Miles NW of Hampton

This brief EF-0 tornado travelled through open fields NW of Hampton and caused no reported damage. It touched down while Tornado #5 was nearing the end of its track and dissipated less than a minute after Tornado #5 roped out. This tornado was widely photographed and captured by at least five different video cameras.

Tornado Strength: EF-0

Estimated Time: 4:53pm to 4:56pm

Event Location: 5.7 miles NW of Hampton to 4.4 miles NW of Hampton

Peak Wind Speed: 75 mph

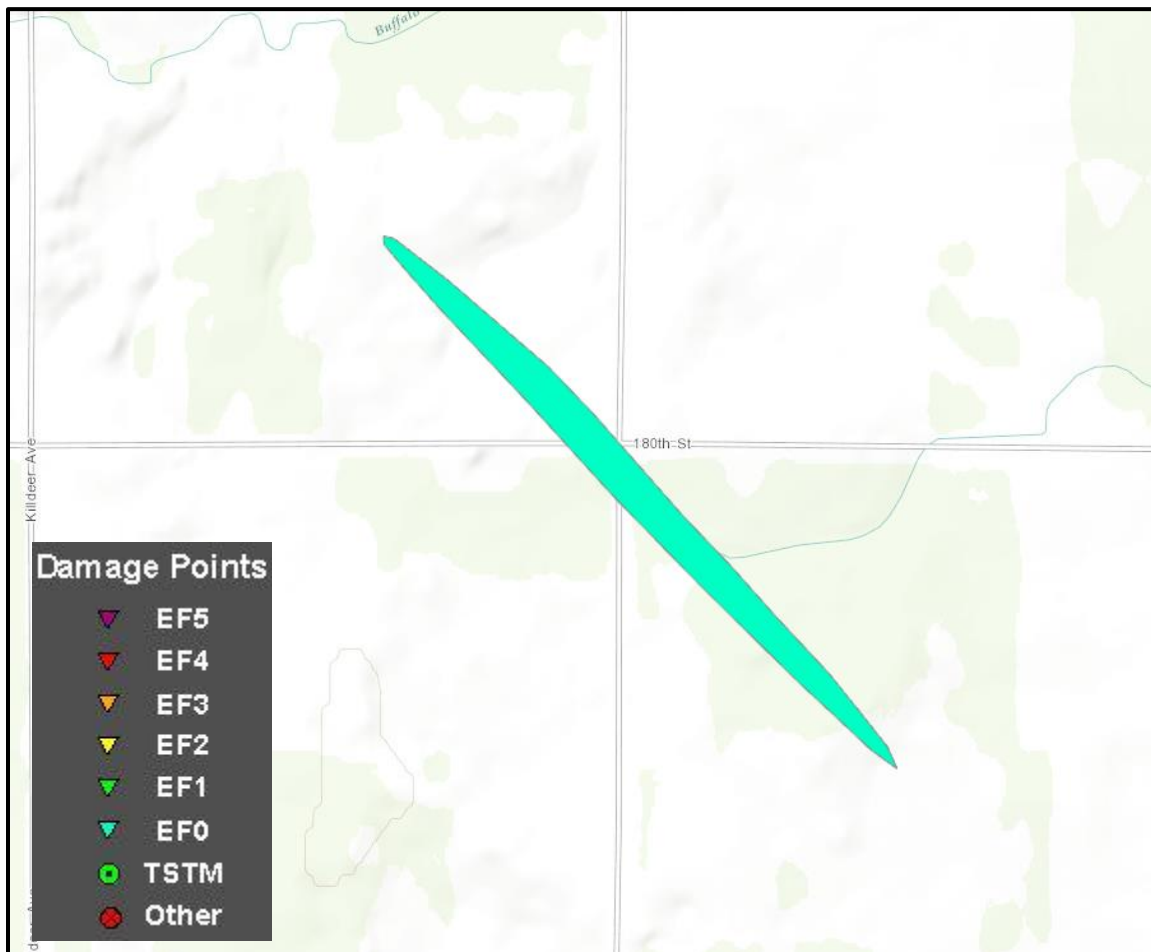
Path Length: 1.28 miles

Average Path Width: 125 yards

Injuries: 0

Fatalities: 0

Tornado 6 Path Map:



Tornado 7: 2.6 Miles NW of Hampton

This brief EF-0 tornado lightly damaged a barn roof and some trees northwest of Hampton

Tornado Strength: EF-0

Estimated Time: 4:56pm to 4:59pm

Event Location: 2.6 miles NW of Hampton to 1.6 miles NW of Hampton

Peak Wind Speed: 75 mph

Path Length: 1.1 miles

Average Path Width: 50 yards

Injuries: 0

Fatalities: 0

Tornado 7 Path Map:

