

## **Survey Completed in Warren County...July 24, 2010**

### **National Weather Service Des Moines, IA**

...FINAL DAMAGE SURVEY RESULTS FOR WARREN COUNTY...

...TWO EF-1 TORNADOES IN THE INDIANOLA AREA...

TWO EF-1 TORNADOES AFFECTED THE CENTRAL PART OF WARREN COUNTY DURING THE EVENING OF JULY 23...2010. BELOW IS INFORMATION ON BOTH TORNADOES.

THANK YOU TO WARREN COUNTY EMERGENCY MANAGEMENT AND THE INDIANOLA FIRE DEPARTMENT FOR THEIR HELP IN THIS SURVEY.

...TORNADO NUMBER 1...

THE FOLLOWING IS A FINAL ASSESSMENT FOR THE DAMAGE THAT OCCURRED OVER WARREN COUNTY ON JULY 23...2010.

\* EVENT DATE: JULY 23...2010.

\* ESTIMATED START TIME: 803 PM CDT.

\* EVENT TYPE: (EF1) TORNADO

\* EVENT LOCATION: THE TORNADO TOUCHED DOWN NORTHWEST OF THE INTERSECTION OF HIGHWAY 92 AND COUNTY HIGHWAY R57...OR 4.7 MILES WEST OF DOWNTOWN INDIANOLA. THE TORNADO TRAVELED EAST FOR A DISTANCE OF 3.3 MILES. IT LIFTED NORTHEAST OF THE INTERSECTION OF WEST EUCLID AVENUE AND NORTH U STREET...OR 1.5 MILES WEST-NORTHWEST OF DOWNTOWN INDIANOLA. THE MOST SIGNIFICANT DAMAGE OCCURRED JUST BEFORE THE TORNADO LIFTED. THE WARREN COUNTY SHERIFFS DEPARTMENT REPORTED THAT THE TORNADO WAS ON THE GROUND ALONG ITS ENTIRE PATH.

\* PEAK WIND: 100 MPH.

\* AVERAGE PATH WIDTH: 150 YARDS.

\* PATH LENGTH: 3.3 MILES.

\* INJURIES: NONE.

\* FATALITIES: NONE.

\* DISCUSSION/DAMAGE: THE MOST SIGNIFICANT DAMAGE OCCURRED TO RESIDENCES NORTH OF WEST EUCLID AVENUE...ON THE NORTHWEST SIDE OF INDIANOLA. THE INDIANOLA FIRE DEPARTMENT REPORTED THAT 22 HOMES SUSTAINED SOME SORT OF DAMAGE...AND 5 OF THOSE HOMES SUSTAINED MAJOR DAMAGE. THE MAJOR DAMAGE INCLUDED UPLIFT OF THE ROOF DECKS AND SIGNIFICANT LOSS OF ROOFING MATERIAL AND STRUCTURES...COLLAPSE OF GARAGE WALLS AND DAMAGE TO THE WALLS OF THE HOMES. TWO TO THREE FOOT DIAMETER TREES WERE ALSO SNAPPED OR

BLOWN OVER. OUTSIDE THE CITY OF INDIANOLA...OTHER DAMAGE WAS NOTED ALONG COUNTY HIGHWAY R57...90TH AVENUE AND COUNTY HIGHWAY R63. DAMAGE AT THOSE LOCATIONS INCLUDED LOSS OF SOME ROOFING MATERIAL TO A METAL STORAGE BUILDING...A HIGHWAY SIGN BLOWN DOWN...AND SOME POWER POLES AND TREES SNAPPED OFF.

...TORNADO NUMBER 2...

THE FOLLOWING IS A FINAL ASSESSMENT FOR THE DAMAGE THAT OCCURRED OVER WARREN COUNTY ON JULY 23...2010.

\* EVENT DATE: JULY 23...2010

\* ESTIMATED START TIME: 815 PM CDT.

\* EVENT TYPE: (EF1) TORNADO

\* EVENT LOCATION: THE TORNADO TOUCHED DOWN SOUTHWEST OF THE INTERSECTION OF JERSEY STREET AND 146TH LANE...OR 1.8 MILES EAST-NORTHEAST OF DOWNTOWN INDIANOLA. THE TORNADO TRAVELED EAST-NORTHEAST FOR A DISTANCE OF 0.3 MILES. IT LIFTED NORTHWEST OF THE INTERSECTION OF JERSEY STREET AND 150TH AVENUE...OR 2.1 MILES EAST-NORTHEAST OF DOWNTOWN INDIANOLA.

\* PEAK WIND: 90 MPH.

\* AVERAGE PATH WIDTH: 100 YARDS.

\* PATH LENGTH: 0.3 MILES.

\* INJURIES: NONE.

\* FATALITIES: NONE.

\* DISCUSSION/DAMAGE: THIS TORNADO HAD A RELATIVELY SHORT TRACK. THE MOST SIGNIFICANT DAMAGE INCLUDED THE INWARD AND OUTWARD COLLAPSE OF OVERHEAD DOORS TO A GARAGE AND METAL OUTBUILDING...AS WELL AS SOME TREES SNAPPED OFF.

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FOR REFERENCE...THE ENHANCED FUJITA TORNADO SCALE CLASSIFIES TORNADOES INTO THE FOLLOWING CATEGORIES:

EF0...WIND SPEEDS 65 TO 85 MPH.

EF1...WIND SPEEDS 86 TO 110 MPH.

EF2...WIND SPEEDS 111 TO 135 MPH.

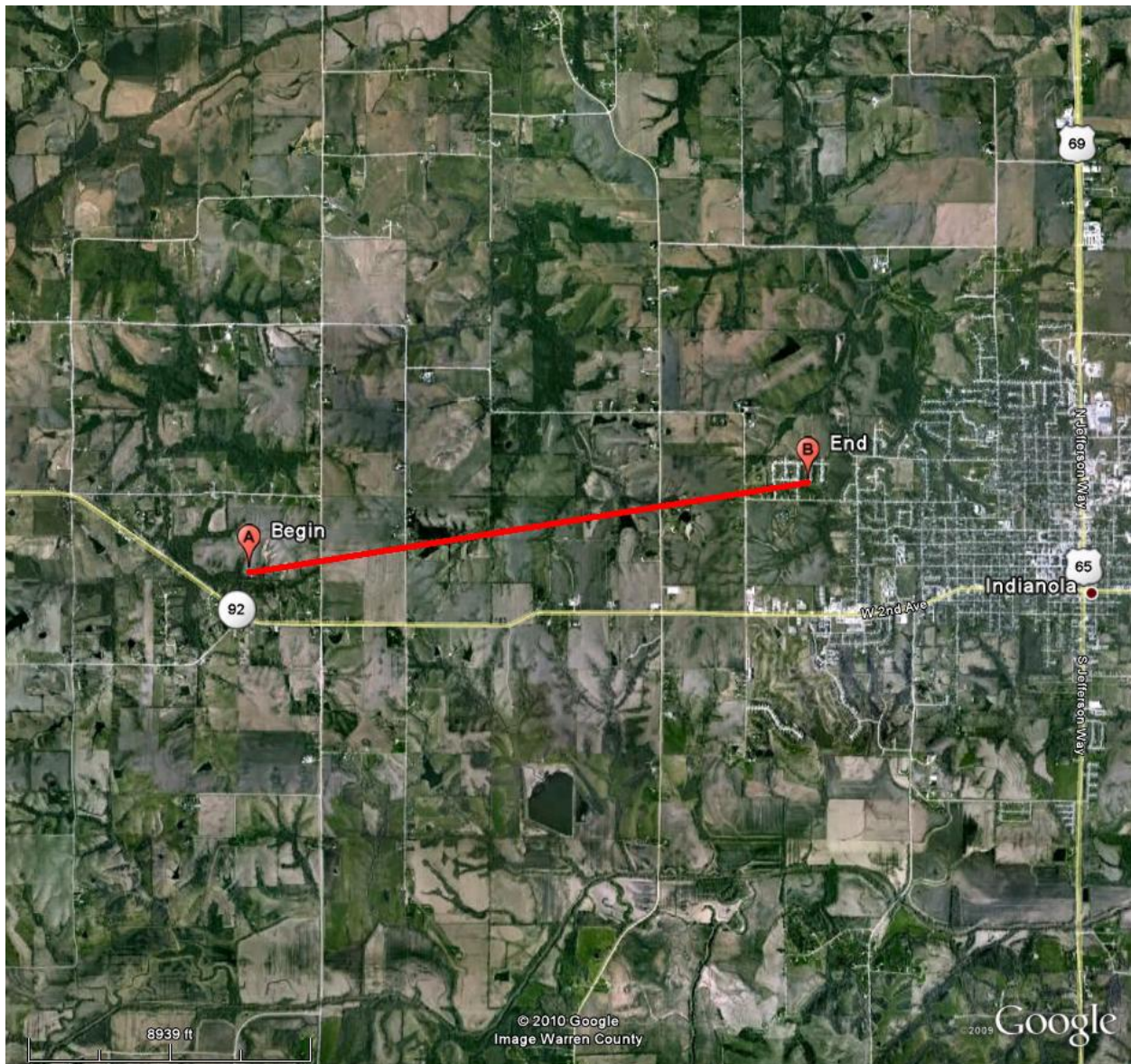
EF3...WIND SPEEDS 136 TO 165 MPH.

EF4...WIND SPEEDS 166 TO 200 MPH.

EF5...WIND SPEEDS GREATER THAN 200 MPH.

**See the following pages for maps and photos concerning both tornadoes.**

## Tornado #1



**Figure 1.** Map of tornado #1 track. The City of Indianola is at the right center of the map.



**Figure 2.** Damage to the roof and siding of a house north of West Euclid Avenue.



**Figure 3.** Damage to a house north of West Euclid Avenue.



**Figure 4.** Damage to a garage belonging to a house north of West Euclid Avenue.

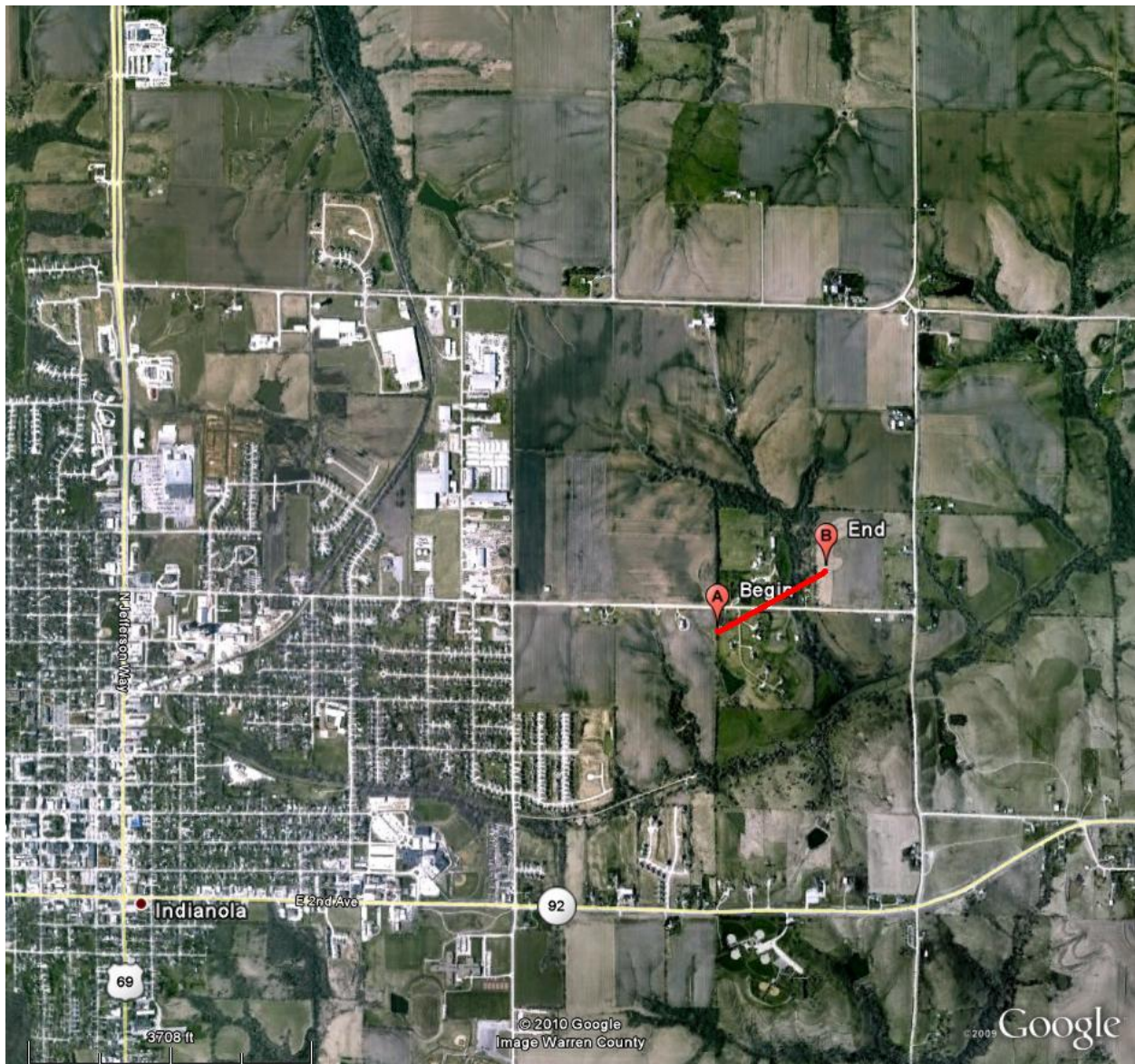


**Figure 5.** Damage to a metal storage building along County Highway R57.



**Figure 6.** Power line pole snapped off along 90th Avenue.

## Tornado #2



**Figure 7.** Map of tornado #2 track. The City of Indianola is at the lower left part of the map.



**Figure 8.** Damage to a garage belonging to a house south of Jersey Street.



**Figure 9.** Tree snapped off south of Jersey Street.