National Weather Service
Storm Data and Unusual Weather Phenomena

January 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

IOWA, Central

IAZ005>007-016>017-024>028-036>039-050 **Kossuth - Winnebago - Worth - Hancock - Cerro Gordo - Humboldt - Wright - Franklin - Butler - Bremer - Hamilton - Hardin - Grundy - Black Hawk - Tama**

01	**0800CST 2300CST**	**0**	**0**	**75K**		**Ice Storm**

A strong frontal boundary was located east-northeast to west-southwest across central Missouri during the early morning hours of the 1st. Low pressure moved northeast along the front as the front lifted slowly north into Iowa by the evening. Very warm air was located south of the front with temperatures warming into the 50s and 60s, along with dew point readings in the 50s. Temperatures at 850 mb over the south half to three quarters of Iowa rose to +9 C. Surface temperatures to the north of the front were generally in the 20s and did not warm above freezing as the front lifted north. Low level winds of 40 to 50 kts pushed warm and moist air over the cold dome, producing freezing rain over much of Iowa. At the onset, all of the precipitation was in the form of freezing rain. Much of the south half of Iowa saw temperatures warm above freezing during the day. A glaze of a few hundredths of an inch to a tenth of an inch or so was common over all of the CWA. Heavier rainfall occurred over the north and northeast sections of the CWA with reports of one quarter to two thirds of an inch of icing. Travel was difficult as the rain adhered to the road surfaces quite easily with surface temperatures in the 20s.

IAZ075-082>086-092>097 **Mahaska - Union - Clarke - Lucas - Monroe - Wapello - Taylor - Ringgold - Decatur - Wayne - Appanoose - Davis**

03	**0100CST 1100CST**	**0**	**0**	**300K**		**Ice Storm**

Another round of freezing rain moved into Iowa during the early morning hours of the 3rd. Warm air remained in place aloft with 850 mb temperatures in the +5 to +7 C. range. A low level jet of 30 knots pushed warm air over the top of the cool dome and produced a large area of freezing rain and ice pellets. An upper level disturbance moved northeast into the area to enhance the lift. At the surface, there wasn't a great deal to talk about with a stationary front to the south. It was a case of warm air advection or over running. Freezing rain glazed over roads, trees, and power lines with temperatures in the 20s during the event. Roads became very slick, causing some travel problems. Some tree limbs were reported down, causing power lines to come down as well in scattered areas of southern Iowa. The hardest hit was in the Ottumwa area.

IAZ004>007-015>017-023>028-033>039-044>050-057>062-070>075-081>086-092>097 **Emmet - Kossuth - Winnebago - Worth - Palo Alto - Hancock - Cerro Gordo - Pocahontas - Humboldt - Wright - Franklin - Butler - Bremer - Sac - Calhoun - Webster - Hamilton - Hardin - Grundy - Black Hawk - Crawford - Carroll - Greene - Boone - Story - Marshall - Tama - Audubon - Guthrie - Dallas - Polk - Jasper - Poweshiek - Cass - Adair - Madison - Warren - Marion - Mahaska - Adams - Union - Clarke - Lucas - Monroe - Wapello - Taylor - Ringgold - Decatur - Wayne - Appanoose - Davis**

04	**1700CST**	**0**	**0**	**510K**		**Heavy Snow**
06	**0400CST**					

The seasons first major winter storm hit Iowa from late in the afternoon of the 4th into the predawn hours of the 6th. The storm was a long and drawn out storm with a series of short waves lifting northeast across the area in a broad southwest flow aloft. Deep moisture was available for the system with a tropical connection in place. The main mechanism for the precipitation was isentropic lift. During the early stages of the storm a considerable amount of warm air was drawn in over cool polar air at the surface. The result was a mixture of freezing rain, ice pellets, and snow over the southeast third of the CWA during the first 6 to 12 hours of the event. Much of the snow fell in two rounds, though snowfall occurred during the entire period. The first came during the late evening of the 4th and early morning of the 5th and layed down a swath of several inches of new snow. The second round came as low pressure formed along a stationary front to the south of Iowa. Initially, the snow was the result of the warm air advection ahead of the low, then the deformation snow fell in the wake of the low. The heaviest snow fell during the evening of the 5th, with another several inches of new snowfall. The heaviest snow amounts fell from west central Iowa, from around Audubon, east through Ames, to near Waterloo.

In this band, snowfall amounts in the 10 to 18 inch range were common. Some of the heavier snowfall included 17.5 inches in Bremer County at Denver, 16.5 inches northeast of Ames in Story County, 16 inches in Bremer County at Frederika, 15 inches in Roland in Story County, and 14.6 inches in Polk County at Johnston. To the south of the heavy snow band, icing was a common problem. Much of Iowa south of Interstate 80 received at least some icing with one tenth of an inch or more common. Over the

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IOWA, Central

south two tiers of Iowa Counties, one quarter to as much as three quarters of an inch of ice accumulated before the freezing rain changed to snow. Travel was hazardous across the state with many roads snow blocked and the Iowa D.O.T. recommending no travel. Nearly every school district in the CWA cancelled classes on the 5th and numerous other activities were cancelled or postponed. Winds during the storm were generally in the 20 to 25 MPH range with some higher gusts to around 35 MPH. There were reports of some blowing snow in open areas and considerable drifting occurred at all locations.

Davis County

8 S Bloomfield **12** **1140CST** **0** **0** **Hail(0.88)**

A strong storm system in the mid and upper levels of the atmosphere lifted northeast across the central U.S. during the day on the 12th. Very warm and moist air lifted north over a layer of cool air at the surface bringing the seasons first case of elevated convection. Dew points in the low 60s were pushed over the cool dome on a 60 kt low level jet. Thunderstorms erupted north of the approaching warm front. One of the storms became severe as it moved into southeast Iowa and produced quarter size hail south of Bloomfield in Davis County.

IAZ006>007-016>017-026>028-037>039-049>050 **Winnebago - Worth - Hancock - Cerro Gordo - Franklin - Butler - Bremer - Hardin - Grundy - Black Hawk - Marshall - Tama**

21 **2315CST** **0** **0** **60K** **Blizzard**
22 **1100CST**

Low pressure dropped southeast out of the Canadian Prairie Provinces and into the lower Great Lakes. The low itself was not all that deep, about 1005 mb, however there was very strong dynamics associated with it. At 500 mb, a strong short wave dived southeast into the central U.S. on a 110 kt jet. As the low passed and a 1044 mb Arctic high pressure area built into the area, strong winds overspread Iowa from the west. Sustained winds of 40 to 45 MPH were common in the blizzard area, with gusts in the 55 to 65 MPH range. The winds caused considerable blowing and drifting snow with visibilities reduced to near zero in open areas. Travel was not recommended throughout northeast Iowa. Snowfall was not all that great with new snow accumulations under 3 inches for the most part. A narrow area of the CWA received 3 to 5 inches with 5.1 inches reported at Northwood, 5 inches at Iowa Falls, and 2.5 to 4 inches in the Mason City area. The existing snow on the ground was glaciated, thus was not available to blow around. Southwest of the snow area...freezing drizzle coated roads, trees, and power lines over central and southwest Iowa. There were scattered power outages due to fallen limbs, but little significant damage. Traffic accidents were too numerous to mention due to near freezing temperatures allowing the initial snow to melt somewhat before the Arctic cold swept in.

IAZ004>007-015>017-023>028-033>039-044>050-057>062-070>075-084>086-096>097 **Emmet - Kossuth - Winnebago - Worth - Palo Alto - Hancock - Cerro Gordo - Pocahontas - Humboldt - Wright - Franklin - Butler - Bremer - Sac - Calhoun - Webster - Hamilton - Hardin - Grundy - Black Hawk - Crawford - Carroll - Greene - Boone - Story - Marshall - Tama - Audubon - Guthrie - Dallas - Polk - Jasper - Poweshiek - Cass - Adair - Madison - Warren - Marion - Mahaska - Lucas - Monroe - Wapello - Appanoose - Davis**

22 **0015CST** **0** **0** **440K** **High Wind (MG56)**
0900CST

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