



KIM REYNOLDS
GOVERNOR

OFFICE OF THE GOVERNOR

ADAM GREGG
LT GOVERNOR

**REQUEST FOR PRESIDENTIAL DISASTER DECLARATION
COVER LETTER
MAJOR DISASTER OR EMERGENCY**

2/13/2024

The Honorable Joseph R. Biden, Jr.
President of the United States
The White House
Washington, D. C.

Through: Regional Administrator Andrea Spillars
FEMA Region VII
Kansas City, MO 64131

RE: Request for Major Disaster Declaration, Significant Winter Storm Snowfall

Dear Mr. President:

Severe winter storms produced heavy snow, blizzard conditions, and life-threatening cold from January 8 through January 14, 2024, which resulted in a significant emergency response as well as damage to public infrastructure and private property. On January 7, 2024, in accordance with the State Emergency Plan, I directed the primary state response agencies to begin pre-event operational coordination. This effort continued through January 17, 2024 as resources were shifted throughout the state to meet immediate response needs and to address post-storm event cleanup. I have determined this incident is of such severity and magnitude that effective response is beyond the capabilities of the State and affected local governments, and supplementary federal assistance is necessary to save lives and to protect property, public health and safety, or to lessen or avert the threat of a disaster.

Consequently, I would respectfully request that you declare a major disaster for the State of Iowa under the provisions of Section 401 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. §§ 5121-5207, as implemented by 44 CFR §§ 206.36-206.48.

Given the scope of this disaster, I request activation of the Public Assistance Program for the following eighteen (18) counties: Adair, Black Hawk, Cedar, Clinton, Davis, Delaware, Dubuque, Jefferson, Johnson, Jones, Linn, Lucas, Montgomery, Polk, Scott, Story, Wapello, and Washington.

This request for a major disaster declaration under the Stafford Act does not include a request for federal Individual Assistance.

GENERAL FACTS OF THIS DISASTER

An arctic air mass that entered into the state on January 8 collided with a continuous jet stream carrying moisture from the Gulf of Mexico. This collision brought heavy snow, blizzard conditions, and extremely cold temperatures to the state. This onslaught of wintry weather came in waves, starting with heavy snowfall on January 8 and lasting through January 14. Record snowfall was recorded in numerous counties throughout the state.

The snowfall from these storms led to blizzard conditions with wind gusts of 35 to 45 mph throughout Iowa and with some locations experiencing gusting winds of over 50 mph at times. The strong winds caused blowing and drifting snow resulting in whiteout conditions on roadways, making travel extremely dangerous and nearly impossible throughout the state. The Iowa Department of Transportation had to close multiple roads, including stretches of I-80. Many primary and secondary roads were impassable. Travel conditions didn't fully improve until the late afternoon of January 14 when wind gusts finally diminished.

In addition to the heavy snow and blizzard conditions, the Arctic air mass caused temperatures to plummet well below zero. Wind chills throughout the state reached the -10s to -20s on January 12 and then reached the -30s to -40s by the evening of January 14, creating life-threatening danger.¹

This storm was so severe that KCCI in Des Moines noted how rare a storm of this magnitude is in Iowa.²

Amount of Snow

<u>County</u>	<u>NWS Snowfall (Inches)</u>	<u>Period (# of days)</u>	<u>Record</u>	<u>Period (# of days)</u>	<u>Record Exceeded</u>	<u>Near Record</u>	<u>Contiguous</u>	<u>Core</u>
Adair	21.1	3	22.0	3	N	Y	N	Y
Black Hawk	20.0	3	19.5	3	Y	Y	N	Y
Bremer	16.7	3	17.9	3	N	Y	N	Y
Cedar	14.8	3	18.5	3	N	Y	Y	N
Clinton	19.7	3	20.0	3	N	Y	N	Y
Davis	18.2	2	22	2	Y	N	Y	N
Delaware	15.5	3	18	3	N	Y	Y	N
Dubuque	26.0	3	19.2	3	Y	N	N	Y
Jefferson	18.5	2	15.0	2	Y	Y	N	Y
Johnson	13.5	1	14.2	1	N	Y	N	Y
Jones	15.3	3	16.5	3	N	Y	N	Y
Linn	23.7	3	23.5	3	Y	N	N	Y

¹ National Weather Service (NWS) <https://www.weather.gov/dmx/2024-01-11-Iowa-Blizzard-And-Cold>

² KCCI – Iowa deepfreeze: Timeline of dangerous cold snap

Lucas	23.5	3	20.0	3	Y	N	N	Y
Montgomery	15.5	3	17.0	3	N	Y	N	Y
Muscatine	14.5	3	16.0	3	N	Y	N	Y
Polk	18.2	2	20.0	2	N	Y	N	Y
Scott	27.2	3	18.0	3	Y	Y	N	Y
Story	24.4	3	18.6	3	Y	N	N	Y
Wapello	19.0	3	21.0	3	N	Y	N	Y
Washington	14.5	2	18.0	2	N	Y	Y	N

The snowfall during January 8-14 was so heavy that according to the National Weather Service, it led to historical snowfall records throughout the state. Waterloo, Iowa, received 23.9 inches besting the five-day record by 8 inches.³ At Dubuque, Iowa Regional Airport 24.7 inches was reported, supposing the previous record of 19.6 inches.⁴

Temperature, Wind Gust, Wind Chill

The amount of snow combined with the blizzard force winds made vehicular transportation and the moving of over-the-road freight almost impossible for five days (see Statewide Travel).

Wind chills were so severe they prompted NWS Des Moines to issue a Wind Chill Watch on 1/11/2024 and Wind Chill Warnings for 1/12/2024 and 1/13/2024.

Location	Lowest Temp Observation (°F)	Peak Wind Gust (MPH)	Wind Chill (°F)
3.4 SW Sheffield (UPR)	-20	52	-52
Algona	-18	48	-49
Clarion Airport	-17	46	-49
Hubbard	-18	45	-49
Mason City/Mason City Airport	-17	46	-49
Webster City Airport	-17	49	-49

A more detailed list of temperatures, wind gusts, and wind chills can be found in Enclosure B.

³ KCCI – Iowa deepfreeze: Timeline of dangerous cold snap

⁴ CBS 2 Iowa News Now – Record week of snow in eastern Iowa

IMPACT

Statewide Travel

Due to severe snowfall and intense winds, traveling throughout the state was not advised. The images included depict the deteriorating road conditions during the incident period.

As noted earlier, over-the-road freight became incredibly challenging during this storm. In particular the transportation of liquid fuels became very concerning. On January 10, I issued a Proclamation of Disaster Emergency in accordance with Code of Iowa § 29C.6 to provide an hours of service waiver for those drivers and crews that transport liquid fuels to ensure these critical lifeline products were delivered in a timely manner.

During the incident period, travel was of such a treacherous nature that the Iowa State Patrol (ISP) reported that it responded to:

1. 619 motorists assist calls and 225 crashes from January 8 at 8:00 a.m. to January 9 at 10:00 a.m.;⁵
2. 1,183 motorists assist calls and 168 crashes from January 12 at 12:30 a.m. to January 14 at 10:30 p.m.⁶

The winter storm caused an increase in calls to the statewide 911-system managed by HSEMD. For the week prior to the winter storm (January 1 – 7), the 911-system handled over 20,078 calls. During the week of the winter storm (January 8 – 14) the system handled over 24,342 calls. This is an increase of 4,264 calls or an extra 610 calls a day. As impacts from the storm lingered the following week (January 15-21) the system handled 23,323 calls. Compared to the week prior to the storm, this is an increase of 3,245 calls or an extra 464 calls per day.

The blizzard conditions in Iowa were so severe that it caused many counties to stop plowing roads from the afternoon of January 12 to the morning of January 13.⁷ During the incident period much of the state was under a tow ban, meaning weather conditions made it too dangerous to provide towing or roadside assistance.⁸

Additionally commercial air traffic experienced disruptions, cancellations or delays including numerous canceled flights at Des Moines International Airport and Eastern Iowa Airport

⁵ KCRG <https://www.kcrg.com/2024/01/10/iowa-state-patrol-responds-more-than-600-calls-help-drivers-amid-snowstorm/>

⁶ Facebook - Iowa State Patrol

⁷KCCI - <https://www.kcci.com/article/iowa-blizzard-weather-forecast-counties-recommend-shelter-in-place-road-conditions/46367423>

⁸ KCCI – Iowa deepfreeze: Timeline of dangerous cold snap

¹¹NWS - <https://www.weather.gov/oax/jan7-142024>

ADDITIONAL DAMAGE

The following is a compilation of the additional damage, impacts, and accessibility problems in the affected area and population described in sections 8 and 10 of the Request for Presidential Disaster (FEMA form 010-0-13).

Fatalities, Injuries, and Evacuations

Iowa Department of Transportation (IDOT) reported one highway related fatality during the period from January 8 to January 17, 2024.

While there were no evacuations, individuals along many secondary roads were forced to shelter in place for several days during the incident as well as after the incident period was over. Due to sheltering in place, access to essential services such as emergency response, mail delivery, food, and medicine was restricted for several days.

For those who did attempt to leave home, many had to be rescued, with the NWS reporting that over 1,200 people were rescued from vehicles trapped in the snow over the course of the incident.¹¹ These rescues were undertaken by local and state first responders as well as volunteer snowmobile clubs.

Blowing and heavy snow led to large snow drifts along many secondary roads throughout Iowa. The snow drifts were of such magnitude they caused snow plows, graders and blowers used by counties, to become stuck and/or damaged. Frigid cold also caused the repeated breakdown of equipment used by the DOT and county secondary departments.

Critical Facilities and Infrastructure

Emergency services were severely delayed by impassable roads statewide during the incident period and further delayed beyond the incident period for many secondary roads.

Recent Declarations

Currently (2019 - Present), the State of Iowa has five open presidentially-declared disasters for Public Assistance, including the COVID-19 Pandemic. All of the counties included in this major disaster request are currently included in an open Presidential Disaster Declaration, with more than 976 projects and a total obligation exceeding \$473 million. The latest round of damage only serves to cause additional stress to these counties.

Education Facilities

A majority of public and private schools, including colleges and universities, closed and/or canceled in-person classes for part of, if not for, the entirety of the incident period.

When public schools resumed classes bus routes for rural schools were on paved routes only for several weeks.

In Wayne County, heavy snow caused the roof at Wayne Junior-Senior High to collapse creating a 30-by-8-foot hole over the cafeteria.⁹

Government Facilities

Local government facilities throughout the state were closed for several days and were not able to provide residents of Iowa with services.

Houses of Worship

Houses of Worship throughout the state were closed for several days and not able to provide residents of Iowa with services.

Economic Factors

Due to the extreme weather conditions, many county businesses, including essential goods and services providers, were forced to reduce their hours or close completely for employee safety. Those essential goods and services were not available to residents of the affected counties until businesses could return to a regular schedule. Furthermore, many businesses were unable to be resupplied for numerous days during, and following the incident. This led to an economic burden on the businesses, and a lack of necessary supplies, food, and resources for their patrons.

Agriculture

Throughout the state, livestock operations experienced inaccessibility leaving them unable to provide necessary care and food to their livestock.

Sheltering

In response to the storm the Des Moines Area Regional Transit Authority (DART) bus transit service provided individuals free rides to warming centers and shelters across the metro area, like Central Iowa Shelter and Services' Emergency Shelter.¹²

Heating

Throughout the state, inaccessible road conditions made delivery of propane impossible. This inability forced many residents of Iowa to be critically low or entirely without a heating source until propane could be delivered.

The cold weather brought in by the winter storm was compounded with high demand across the Midwest and timely access to heating fuels, placing access challenges to Iowans. A governor's proclamation, provided as Appendix C, was issued on January 10, 2024, addressing the challenges Iowans were facing of receiving liquid fuel.

⁹KCCI - <https://www.kcci.com/article/wayne-community-schools-closed-roof-collapse/46559737>

¹¹KCCI - <https://www.kcci.com/article/iowa-weather-winter-storm-blizzard-conditions-snow/46356402>

Residents of Iowa requiring service to repair their furnaces or other heating mechanisms were unable to receive the needed service until the roads became passable. This caused many Iowans to go without heat until service could be provided.

2024 Republican Caucus

The extreme weather conditions led to the cancellations of campaign events for several Republican Presidential candidates. These events were canceled right before the Republican Caucus on Monday, January, 15th. The fact that the caucus was on the 15th meant it was even more critical that roads were clear so individuals could engage in the democratic process. Furthermore, numerous businesses, including restaurants and meeting halls, were preparing for an uptick in business due to the Caucus. The cancellation of numerous Presidential candidate Caucus events, and the inability of staff to get to work, disrupted the anticipated economic gains from the Caucus events.¹²

RESOURCES

The following describes the nature and amount of state and local resources that have been or will be, used to alleviate conditions of this disaster as outlined in Section 9 of the Request for Presidential Disaster (FEMA Form 010-0-13)

Local Resources

Snow Removal:

All 99-counties engaged in extensive snow removal activities. Those counties identified as core and contiguous counties experienced snowfall above or near historic levels. The historic snow coupled with winds and negative temperatures meant that snow removal activities had to be done numerous times on the same routes/areas.

The road conditions were so poor that emergency services could not access businesses and residences without the removal of snow.

The wind and historic snow lead to many drifts on both paved and unpaved roads taller than the snow removal equipment being used. Many local entities reported snow removal equipment getting stuck in massive snow drifts or suffering major mechanical failures.

Traffic Accidents & Weather-Related Calls:

While many businesses, schools, and even government facilities were closed during and after the incident period, local essential services still had to be performed. Due to the severe weather and road conditions local emergency services were needed to respond to traffic accidents, emergency medical requests and weather-related calls.

¹² New York Times - <https://www.nytimes.com/2024/01/12/us/politics/iowa-caucus-trump-snow-economy.html>

Extreme Cold:

The extreme cold was also a problem for Iowans. The extreme cold led to water main breaks, frozen building pipes, and the constant breaking down of snow removal equipment.

Distribution of Information:

The distribution of real-time information was critical. Local entities used social media to distribute real-time information.

State Resources**Coordination:**

On January 7, at 5:00 p.m. prior to the winter storm, a statewide coordination was held with the following agencies: Governor's staff, IDOT, Iowa State Patrol (ISP), Iowa Homeland Security and Emergency Management (HSEMD), Story County Emergency Management and BAMwx Weather Service to discuss weather forecasts, agencies actions and public messaging. Throughout the incident period two other coordination meetings occurred, January 9 and January 10, 2024. These calls allowed the Governor's staff to direct the response of state government to the storm in accordance with the State of Iowa Emergency Response Plan.

IDOT continued to have daily coordination calls with their Maintenance Bureau, Traffic Management Center and District Maintenance Managers.

Snow Removal:

IDOT repeatedly conducted snow removal activities on IDOT maintained routes and assisted local jurisdictions in conducting snow removal activities on local routes. Many of these routes required multiple snow removal activities due to blowing snow. The impacts of winter weather were felt statewide. IDOT provided around the clock clearing of roads across the state using virtually all of their snowplowing equipment from January 8 to January 15. After the DOT ceased 24-hour operations it was still utilizing extended hours (12-hour shifts) to conduct snow/ice removal activities from January 16 to January 19. From January 8 to January 17, 2024, IDOT conducted snow removal activities to the sum of \$10.351 million.

Additionally, IDOT provided regular updates on road status, such as closures, travel advisories, and road openings via their 511.ia.org website, traditional media and social media.

ISP, in conjunction with IDOT closed roads, responded to accidents and assisted motorists.

Public Messages:

For the duration of the severe winter weather, the Governor's Office, IDOT, ISP and HSEMD coordinated distributed public messaging through press releases, social media, and numerous media interviews.

The distribution of public information via social media was very effective:

- HSEMD had 41 tweets/retweets and post along with 305,349 interactions on Twitter (X) and 801,953 on Facebook;
- IDOT on average reached 262,753 people each day;
- ISP had 134,300 interactions on social media with their posts.

By the Numbers:

IDOT provided a summary of information from the Traffic Management Center for the period from January 8 to January 17, 2024.

<i>Item</i>	<i>Number</i>
Statewide Iowa TMC Events	2,090
Interstate Closures	32
Avg, Interstate Closure Duration	97 Minutes
Total Crashes	370
Snow Plow Crashes	18
Total Fatalities	1
Highway Helper Assists	697

PUBLIC ASSISTANCE SUMMARY

Snow and winds left much of the state impassible. Many communities in the affected area took emergency protective measures to remove snow, treat roads, and close roads (Category B). Freezing temperatures and snow removal activities caused significant damage to buildings (Category E) and utilities (Category F), from busting building pipes to ruptured water mains.

Below is a summary of estimated Public Assistance-eligible damage in the 18 counties for which I am requesting federal assistance:

Category	Estimates
A (Debris Removal)	\$0
B (Emergency Protective Measures)	\$8,220,241
C (Roads & Bridges)	\$0
D (Water Control Facilities)	\$0
E (Buildings)	\$656,521
F (Utilities)	\$19,765
G (Parks, Rec Facilities, Other)	\$0
Total	\$8,896,527

The counties of Black Hawk, Dubuque and Johnson are identified as “Core” counties and provided local resources to respond to the severe weather. All three counties have provided estimated costs/expenses that place them above or just below their county indicator. HSEMD is working with the counties to obtain documentation that supports their final estimates.

The estimates provided by the county are:

County	Estimate
Black Hawk	\$ 836,446.13
Dubuque	\$ 579,033.60
Johnson	\$ 496,111.44

Each of these three counties provided local resources to clear roads, provided access for emergency vehicles, closed roads, responded to accidents, addressed damage to public infrastructure and provided real-time information to the public.

These estimates have been partially validated by FEMA Region 7 through the Joint Preliminary Damage Assessment process.

ASSISTANCE REQUESTED AND CERTIFICATIONS GIVEN

Preliminary estimates of the types and amount of assistance needed under the Stafford Act are tabulated in the enclosures.

I certify that for this major disaster, the state and local governments will assume all applicable non-federal share of costs required by the Stafford Act. The total non-federal expenditures for the period starting January 8, 2024, and January 14, 2024, are expected to exceed \$2,224,132.

I request a declaration for severe winter storm and snowstorm (see Enclosure D) for an incident period of January 8-14.

In addition to Public Assistance, I request Hazard Mitigation funding statewide. I am also requesting Iowa be designated as a Public Assistance managing state.

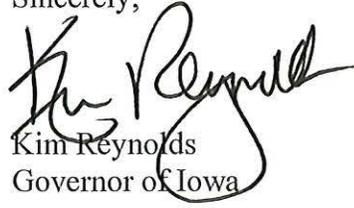
In accordance with 44 CFR § 206.208, the State of Iowa agrees that with respect to direct federal assistance, it will do the following:

1. Provide without cost to the United States all lands, easements and rights-of-way necessary to accomplish the approved work;
2. Hold and save the United States free from damages due to the requested work, and shall indemnify the federal government against any claims arising from such work;
3. Provide reimbursement to FEMA for the non-federal share of the cost of such work in accordance with the provisions of the FEMA-state agreement; and
4. Assist the performing federal agency in all support and local jurisdictional matters.

Pursuant to Sections 403 and 407 of the Stafford Act, 42 U.S.C. §§ 5170b, 5173, the State agrees to indemnify and hold harmless the United States of America for any claims arising from the removal of debris or wreckage for this disaster. The State agrees that debris removal from public and private property will not occur until the landowner signs an unconditional authorization for the removal of debris.

I hereby designate Dennis Harper as the State Coordinating Officer for this request. He will work with FEMA and may provide further information or justification on my behalf.

Sincerely,

A handwritten signature in black ink, appearing to read "Kim Reynolds". The signature is fluid and cursive, with a large, sweeping flourish at the end that loops back under the name.

Kim Reynolds
Governor of Iowa

Enclosures

OMB No. 1660-0009/FEMA Form 010-0-13

Enclosure A – Individual Assistance Not Applicable/Not Included

Enclosure B1 – Public Assistance Preliminary Damage Assessment Cost Estimate Worksheet

Enclosure B2 – Governor’s Certification

Enclosure C – Requirement for Other Federal Agency Programs Not Applicable/Not Included

Enclosure D – Historic Snowfall Totals

Appendices

Appendix A – Iowa Department of Transportation Winter Storm Response Summary

Appendix B – Deteriorating Road Conditions

Appendix C –2024.01.10 Heating Fuels HOS Wavier

Appendix D – Storm Impact Photographs

Appendix E – NSW Summary

ENCLOSURE B1 TO MAJOR DISASTER REQUEST

Estimated requirements for Public Assistance
Under the Stafford Act

CATEGORY

Note: Estimates reflect total eligible costs before any cost sharing.

County (18)	A	B	C	D	E	F	G	Total
Adair		\$130,513			\$36,980			\$167,493
Black Hawk		\$400,850						\$400,850
Cedar		\$151,714						\$151,714
Clinton		\$328,498			\$3,000			\$331,498
Davis		\$103,439			\$25,117			\$128,556
Delaware		\$173,293			\$6,935			\$180,228
Dubuque		\$365,978						\$365,978
Jefferson		\$151,182			\$1,572			\$152,754
Johnson		\$131,335			\$194,163			\$325,498
Jones		\$194,199			\$550			\$194,749
Linn		\$1,221,724			\$5,401			\$1,227,125
Lucas		\$85,218			\$5,817			\$91,035
Montgomery		\$132,551						\$132,551
Polk		\$2,384,264			\$195,242			\$2,579,506
Scott		\$1,226,403			\$31,450			\$1,257,853
Story		\$457,461			\$128,800	\$19,765		\$606,026
Wapello		\$358,414			\$20,694			\$379,108
Washington		\$223,205			\$800			\$224,005
Total	\$0	\$8,220,241	\$0	\$0	\$656,521	\$19,765	\$0	\$8,896,527

ENCLOSURE B2 TO MAJOR DISASTER REQUEST

Estimated Stafford Act Requirements for Public Assistance

I certify that for this current disaster, state and local government expenditures and obligations will include the non-federal share and costs required by the Stafford Act. As stated in my basic letter, and based on information available at this time, tabulation of these estimated expenditures and obligations are as follows:

Category	Estimates
A (Debris Removal)	\$0
B (Emergency Protective Measures)	\$8,220,241
C (Roads & Bridges)	\$0
D (Water Control Facilities)	\$0
E (Buildings)	\$656,521
F (Utilities)	\$19,765
G (Parks, Rec Facilities, Other)	\$0
Total	\$8,896,527

ENCLOSURE D TO MAJOR DISASTER REQUEST

Snowfall amounts were reviewed by HSEMD and validated with FEMA Region 7.

Historic and Current Snowfall Data

<u>County</u>	<u>NWS Snowfall (Inches)</u>	<u>Period (# of days)</u>	<u>Record</u>	<u>Period (# of days)</u>	<u>Record Exceeded</u>	<u>Near Record</u>	<u>Contiguous</u>	<u>Core</u>
Adair	21.1	3	22.0	3	N	Y	N	Y
Black Hawk	20.0	3	19.5	3	Y	Y	N	Y
Bremer	16.7	3	17.9	3	N	Y	N	Y
Cedar	14.8	3	18.5	3	N	Y	Y	N
Clinton	19.7	3	20.0	3	N	Y	N	Y
Davis	18.2	2	22	2	Y	N	Y	N
Delaware	15.5	3	18	3	N	Y	Y	N
Dubuque	26.0	3	19.2	3	Y	N	N	Y
Jefferson	18.5	2	15.0	2	Y	Y	N	Y
Johnson	13.5	1	14.2	1	N	Y	N	Y
Jones	15.3	3	16.5	3	N	Y	N	Y
Linn	23.7	3	23.5	3	Y	N	N	Y
Lucas	23.5	3	20.0	3	Y	N	N	Y
Montgomery	15.5	3	17.0	3	N	Y	N	Y
Muscatine	14.5	3	16.0	3	N	Y	N	Y
Polk	18.2	2	20.0	2	N	Y	N	Y
Scott	27.2	3	18.0	3	Y	Y	N	Y
Story	24.4	3	18.6	3	Y	N	N	Y
Wapello	19.0	3	21.0	3	N	Y	N	Y
Washington	14.5	2	18.0	2	N	Y	Y	N

Statements from National Weather Service event summaries:

- Winter Storm of January 9th, 2024
 - A winter storm moved out of the southern Plains Monday night January 8th, bringing snow across much of our region into Tuesday evening, January 9th. The strong storm dropped heavy, wet snow across parts of Iowa, northern Illinois and southern Wisconsin. Snow totals in excess of a foot were realized at some locations. In addition, strong northerly winds gusted from 30 to 40 mph at times leading to blowing and drifting.
 - The storm led to difficult to dangerous travel conditions during the heaviest snowfall, along with a lot of activity and school closures.
- January 11th-14th, 2024 Iowa Blizzard and Extreme Cold
 - This onslaught of wintry weather came in waves, starting with heavy snowfall on the night of January 11th and lasting through January 12th. Accumulations were highest over southern and southeastern Iowa where amounts ranged from 10 to 14

inches, then steadily tapered off further north and west where 6 to 8 inches was more common.

- The residual snowpack from the winter storm earlier in the week and powdery snow falling from this system resulted in blizzard conditions as gusty winds picked up Friday. Widespread wind gusts of 35 to 45 mph were observed throughout Iowa, with some locations gusting over 50 mph at times. Whiteout conditions developed on roadways, as blowing and drifting snow made travel nearly impossible for much of Friday and Saturday. These poor travel conditions resulted in multiple road closures, including stretches of I-80, with many more roads deemed impassable by the Iowa Department of Transportation. Travel conditions didn't fully improve until the morning of Sunday, January 14th when wind gusts finally diminished.
- In addition to the heavy snow and blizzard conditions, this system brought down an Arctic air mass which plummeted temperatures well below zero. Wind chills during the blizzard dropped to the -10s to -20s on Friday, then -30s to -40s by Saturday evening, creating life-threatening danger with this winter storm.

Temperatures

Lowest Temp Observation (°F)		
Location	Source	Temperature (°F)
3.4 SW Sheffield (UPR)	MESOWEST	-20
Iowa City Airport	ASOS	-20
Cedar Rapids Airport	ASOS	-19
Clinton Airport	AWOS	-19
Pocahontas	DAVIS	-19
Pocahontas	DAVIS	-19
Pomeroy	DAVIS	-19
Rockwell City	DAVIS	-19
Newell	DAVIS	-19
Pomeroy	DAVIS	-19
Burlington Airport	ASOS	-18
Quad City Airport	ASOS	-18
Mount Pleasant Airport	AWOS	-18
West Bend	DAVIS	-18
Williams	MESOWEST	-18
Rockwell City	MESOWEST	-18
Williams	DAVIS	-18
Hubbard	DAVIS	-18
Bagley	DAVIS	-18
Algona	MESOWEST	-18
Adair	MESOWEST	-18
New Providence	DAVIS	-17
Clarion Airport	AWOS	-17
Webster City Airport	AWOS	-17
Dubuque Airport	ASOS	-17
Mason City	MESOWEST	-17
Keokuk Airport	AWOS	-17
Independence Airport	AWOS	-17
Muscatine Airport	AWOS	-17
Buffalo Center	DAVIS	-16

Wind Gust

Peak wind gusts measured throughout Central Iowa		
<u>Location</u>	<u>Peak Wind Gust (MPH)</u>	<u>Source</u>
Ogden	53	CWOP
Ames Airport	53	ASOS
3.4 SW Sheffield (UPR)	52	MESOWEST
Norwalk	51	CWOP
Holland	51	DAVIS
Cedar Rapids Airport	51	ASOS
Webster City Airport	49	AWOS
Algona	48	MESOWEST
Grimes	48	MESOWEST
Des Moines International Air	48	ASOS
Iowa Falls Airport	47	AWOS
Carroll Airport	47	AWOS
Mason City Airport	46	ASOS
Iowa State University	46	MESOWEST
Boone Airport	46	AWOS
Clarion Airport	46	AWOS
Estherville Airport	46	ASOS
Marshalltown Airport	46	ASOS
Davenport Airport	46	ASOS
Denison	46	MESOWEST
Hubbard	45	CWOP
Algona Airport	45	AWOS
Carroll	45	MESOWEST
Denison	45	MESOWEST
Chariton Airport	45	AWOS
Independence Airport	45	AWOS
Ogden	44	CWOP
Ames Airport	44	ASOS
Rockwell City	44	MESOWEST
Des Moines International Airport	43	ASOS
Lamoni Airport	43	ASOS
Algona Airport	43	AWOS
Webster City Airport	43	AWOS
Marshalltown Airport	43	ASOS
Ottumwa Regional Airport	43	ASOS
Ames	43	MESOWEST
Burlington Airport	43	ASOS
Quad City Airport	43	ASOS
3.4 SW Sheffield (UPR)	42	MESOWEST

Wind Chills

Minimum Wind Chill Reports				
Location	Source	Wind Chill °F	Temperature °F	Wind Speed (MPH)
3.4 SW Sheffield (UPR)	MESOWEST	-52	-20	28
Pocahontas	DAVIS	-51	-19	28
West Bend	DAVIS	-51	-18	32
Williams	MESOWEST	-51	-18	31
Pocahontas	DAVIS	-50	-19	26
Pomeroy	DAVIS	-50	-19	26
Rockwell City	MESOWEST	-50	-18	30
Rockwell City	DAVIS	-49	-19	25
Newell	DAVIS	-49	-19	23
Pomeroy	DAVIS	-49	-19	25
New Providence	DAVIS	-49	-17	29
Williams	DAVIS	-49	-18	28
Buffalo Center	DAVIS	-49	-16	33
Hubbard	DAVIS	-49	-18	26
Bagley	DAVIS	-49	-18	27
Clarion Airport	AWOS	-49	-17	29
Webster City Airport	AWOS	-49	-17	29
Algona	MESOWEST	-49	-18	27
Adair	MESOWEST	-49	-18	26
Mason City	MESOWEST	-49	-17	31 ¹⁰

¹⁰ National Weather Service (NWS)