

## Web Story of Event Overview of the Blizzard of 12/11/2010

A major winter storm struck Iowa on December 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup>. Heavy snow and very strong northerly winds created blizzard conditions across the state beginning across the West Saturday morning spreading East through Sunday morning. The storm dumped 9 to 11 inches of snow across Northern Iowa... mainly North of Highway 20. Central and Southern Iowa saw 1 to 3 inches of snow. There were numerous reports of wind gusts between 58 mph and 65 mph with visibilities less than 100-200 feet. The highest wind gust reported was 70 mph and that occurred at Audubon at 5:46 PM on Saturday.

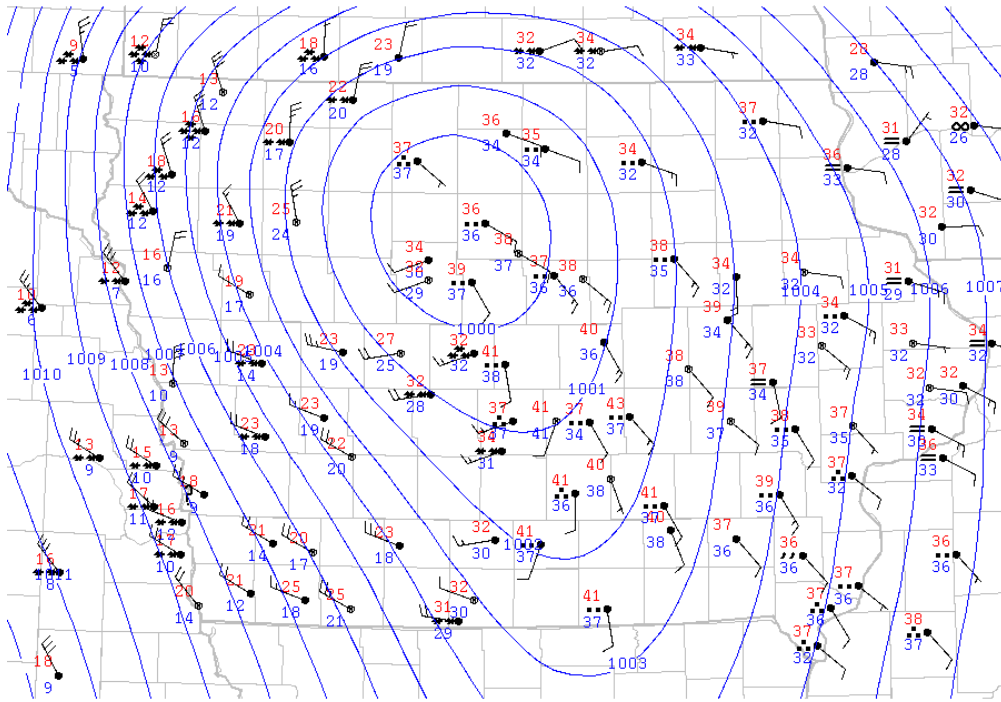


*Photo: Iowa DOT webcam from Algona on Saturday.*

During the overnight hours of Friday December 10<sup>th</sup>, 2010, low pressure developed over Northeast Nebraska and moved into Northwest Iowa. Very mild and moist air was in place over much of the state.

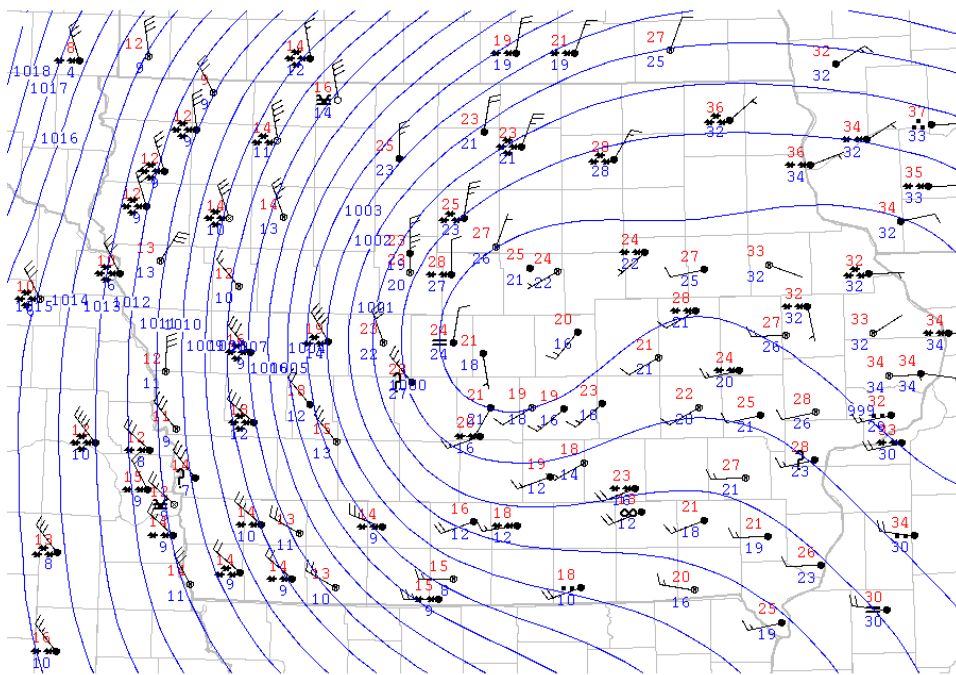
By 8 AM Saturday the surface low was centered over Fort Dodge and was strengthening. The surface pressure gradient behind the low...over Western Iowa was increasing. Ahead of the low the wind was already blowing at 15 to 30 mph. On the backside of the low, the wind was blowing at 25 to 40 mph and increasing with moderate to heavy snow falling.

Saturday afternoon the low had slowed and had taken a more Southerly track. In addition, a second surface low was developing along the I-80 corridor, just East of the Des Moines metro area. The development of this secondary low provided for heavier snow to fall further south across central Iowa, and in combination with the intense winds, produced a blizzard. By 8 PM Saturday, this secondary low had dropped to near Ottumwa and the pressure gradient across the state was very strong. Wind speeds were reported at 40 to 55 mph with wind gusts to 60+ mph. Moderate snow and near-zero visibilities were also reported. The low finally exited the state early Sunday morning.



LOCAL: Dec 11 08 AM  
 GMT: 101211/1400 Iowa Mesonet Data

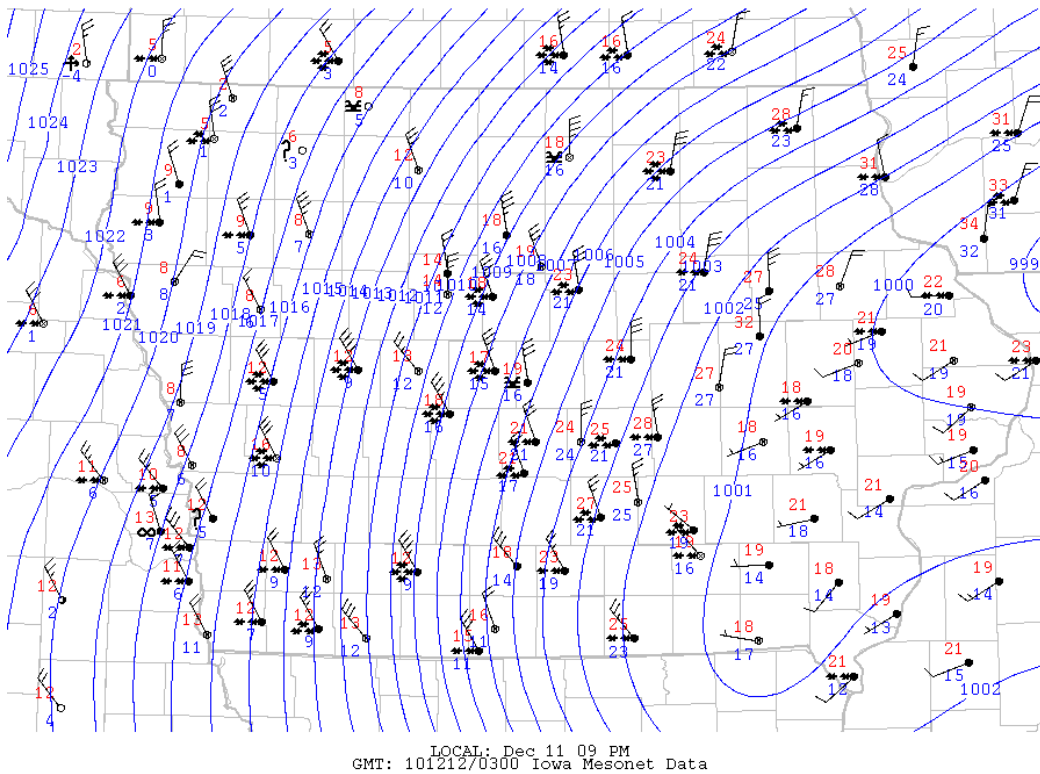
Surface low 8AM Saturday morning. Note the warm air and brisk wind over Eastern Iowa and the strong wind and snowfall over Western Iowa.



LOCAL: Dec 11 03 PM  
 GMT: 101211/2100 Iowa Mesonet Data

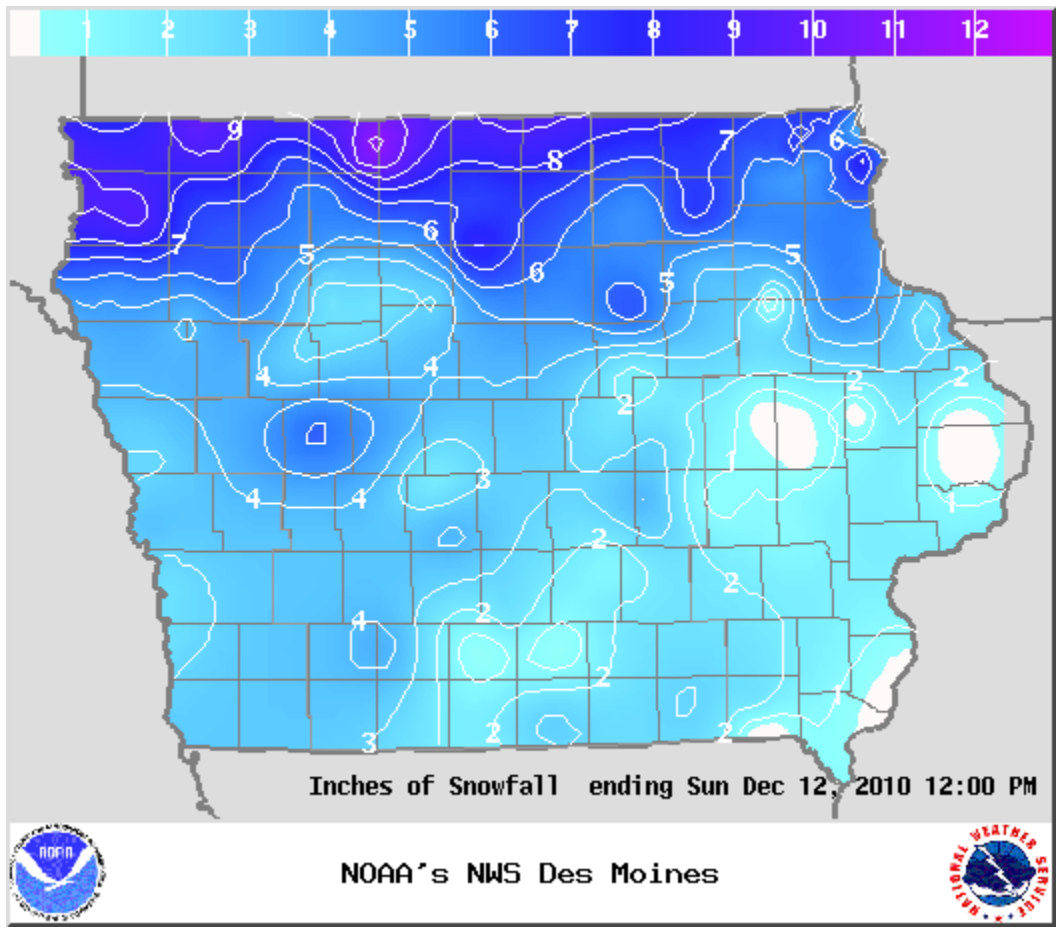
By 3PM a secondary surface low was developing and heading South. This would allow heavier snow to develop further South across Central Iowa. Note

the strong pressure gradient...strong wind and heavy snow falling across the West.

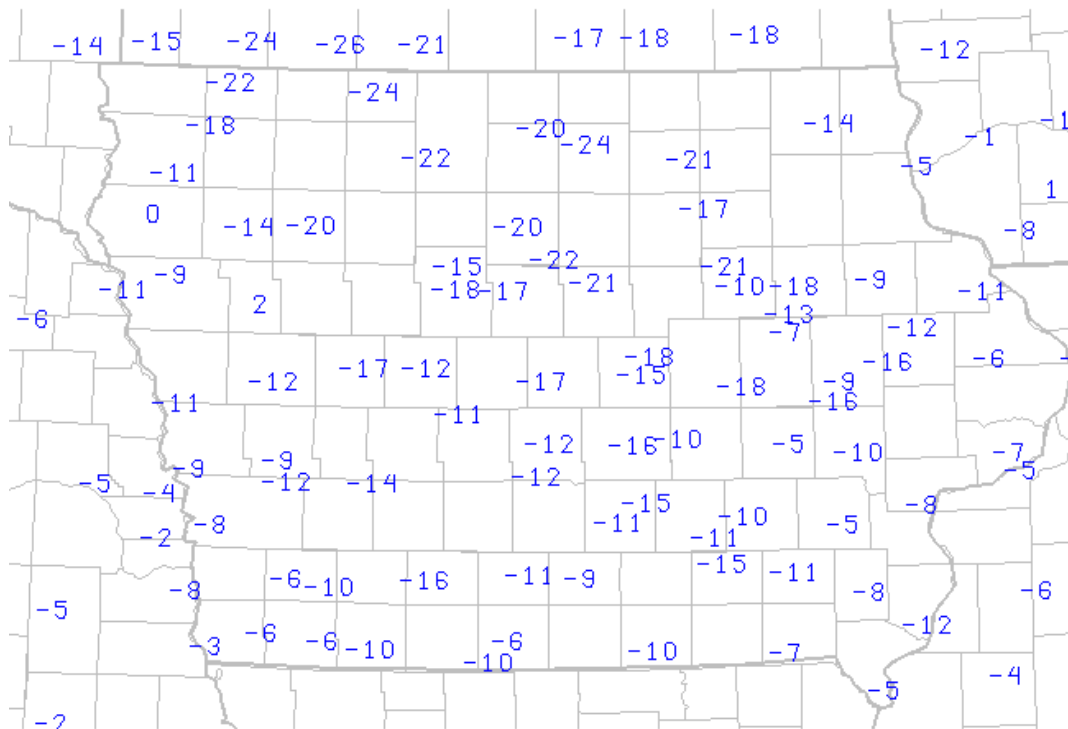


By 9PM strong wind and moderate to heavy snow was falling across much of Iowa. The heaviest snowfall was occurring over Northern Iowa...mainly North of Highway 20.





This is a map of snowfall totals for the weekend event.



101213/0000 NWS Wind Chill Index

Saturday evening, the combination of strong wind and very cold air surging in created wind chills well below zero across the state.

This is the latest storm report summary from the weekend blizzard.

PRELIMINARY LOCAL STORM REPORT...SUMMARY  
 NATIONAL WEATHER SERVICE DES MOINES IA  
 436 AM CST MON DEC 13 2010

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....
..REMARKS..			
0441 PM 12/11/2010	NON-TSTM WND GST M58.00 MPH	NNW COON RAPIDS CARROLL IA	41.88N 94.68W MESONET
MEASURED FROM KCCI SCHOOL NET SITE			
0529 PM 12/11/2010	NON-TSTM WND GST M60.00 MPH	N ALGONA AIRPORT KOSSUTH IA	43.08N 94.27W MESONET
MEASURED FROM RWIS SITE			
0546 PM 12/11/2010	NON-TSTM WND GST M70.00 MPH	SSE AUDUBON AIRPORT AUDUBON IA	41.70N 94.92W AWOS
0608 PM 12/11/2010	NON-TSTM WND GST M63.00 MPH	2 WNW CARROLL CARROLL IA	42.08N 94.90W MESONET

IDOT RWIS

0620 PM 12/11/2010	NON-TSTM WND GST 1 SE ROCKWELL CITY M58.00 MPH CALHOUN	IA	42.39N 94.62W MESONET
	MEASURED FROM RWIS		
0623 PM 12/11/2010	NON-TSTM WND GST W CRESTON AIRPORT M61.00 MPH UNION	IA	41.02N 94.36W MESONET
	MEASURED FROM AWOS		
0637 PM 12/11/2010	NON-TSTM WND GST N DENISON AIRPORT M58.00 MPH CRAWFORD	IA	41.99N 95.38W MESONET
	MEASURED FROM ASOS		
0655 PM 12/11/2010	NON-TSTM WND GST 5 WNW CARROLL AIRPORT M64.00 MPH CARROLL	IA	42.08N 94.87W MESONET
	KCCI SCHOOLNET		
0700 PM 12/11/2010	NON-TSTM WND GST 4 NNE ANITA M64.00 MPH CASS	IA	41.50N 94.73W MESONET
	IDOT RWIS SITE		
0701 PM 12/11/2010	NON-TSTM WND GST NW FARNHAMVILLE M66.00 MPH CALHOUN	IA	42.28N 94.42W MESONET
	KCCI SCHOOLNET		
0703 PM 12/11/2010	NON-TSTM WND GST SSE WINTERSET M58.00 MPH MADISON	IA	41.33N 94.01W MESONET
	MEASURED FROM KCCI SCHOOL NET		
0710 PM 12/11/2010	NON-TSTM WND GST 2 SW POLK CITY M65.00 MPH POLK	IA	41.76N 93.74W MESONET
	65 MPH MEASURED AT THE SAYLORVILLE MILE LONG BRIDGE SENSOR.		
0711 PM 12/11/2010	NON-TSTM WND GST ENE MOUNT AYR M58.00 MPH RINGGOLD	IA	40.72N 94.23W MESONET
	MEASURED FROM KCCI SCHOOL NET		
0728 PM 12/11/2010	BLIZZARD 3 NE YALE GUTHRIE	IA	41.80N 94.31W NWS EMPLOYEE
	WHITEOUT IN PROGRESS...CANNOT SEE TREE GROVE OR HOG BUILDING AT 150-200 FEET. YARD LIGHT IS HARD TO SEE AT 50 FEET. ABOUT 1.3 INCHES OF SNOWFALL BUT DIFFICULT TO DETERMINE GIVEN THE WIND SPEEDS.		
0744 PM 12/11/2010	BLIZZARD 3 WNW AMES AIRPORT STORY	IA	42.01N 93.68W TRAINED SPOTTER
	ZERO VISIBILITY OR WHITE-OUT CONDITIONS NEAR THE INTERSECTION OF MORTENSON ROAD AND SOUTH DAKOTA AVENUE IN AMES.		
0916 PM 12/11/2010	NON-TSTM WND GST N AMES AIRPORT M58.00 MPH STORY	IA	41.99N 93.62W MESONET

MEASURED FROM ASOS

0938 PM NON-TSTM WND GST 4 ESE BOONE AIRPORT 42.03N 93.78W  
12/11/2010 M64.00 MPH BOONE IA MESONET

KCCI SCHOOLNET

0943 PM NON-TSTM WND GST N ANKENY AIRPORT 41.69N 93.57W  
12/11/2010 M59.00 MPH POLK IA MESONET

MEASURED FROM RWIS

1156 PM NON-TSTM WND GST MARSHALLTOWN AIRPORT 42.11N 92.92W  
12/11/2010 M58.00 MPH MARSHALL IA ASOS

CORRECTED FOR TIME

1227 AM BLIZZARD 2 WNW WATERLOO 42.50N 92.39W  
12/12/2010 BLACK HAWK IA TRAINED SPOTTER

WHITEOUT CONDITIONS IN TOWN BETWEEN WATERLOO AND CEDAR  
FALLS...AT THE UNIVERSITY AVE AND GREENHILL ROAD  
INTERSECTION. ESTIMATED SNOWFALL UP TO 3 INCHES...WITH  
DRIFTS OVER 6 INCHES DEEP.

1242 AM NON-TSTM WND GST N AMES AIRPORT 41.99N 93.62W  
12/12/2010 M59.00 MPH STORY IA ASOS

0215 AM NON-TSTM WND GST 3 S IOWA FALLS 42.47N 93.27W  
12/12/2010 M58.00 MPH HARDIN IA AWOS

0415 AM BLIZZARD NE EXLINE 40.65N 92.84W  
12/12/2010 APPANOOSE IA TRAINED SPOTTER

SNOW AND BLOWING SNOW HAS REDUCED VISIBILITIES TO 50 FT  
TO 250 FT. SNOW DRIFTS UP TO 2.5 FT ALSO.

0544 AM BLIZZARD MASON CITY 43.15N 93.20W  
12/12/2010 CERRO GORDO IA DEPT OF HIGHWAYS

IDOT REPORTS VISIBILITY BELOW ONE-QUARTER OF A MILE AT  
TIMES THROUGHOUT CERRO GORDO COUNTY.

&&  
SUMMARY OF WIND GUSTS AND BLIZZARD REPORTS FROM THE EVENING OF SAT  
DEC 11 TO THE MORNING OF SUN DEC 12.  
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Thanks to the Iowa Environmental Mesonet page for providing the images for this report.