

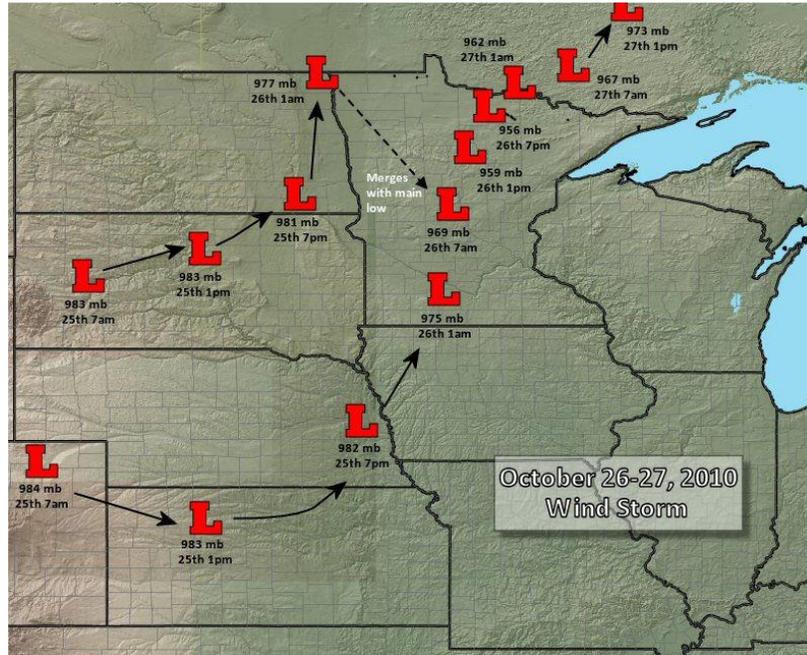
October 26-27th, 2010 Record Low Pressure, Strong Winds, and Early Season Snowfall

Overview

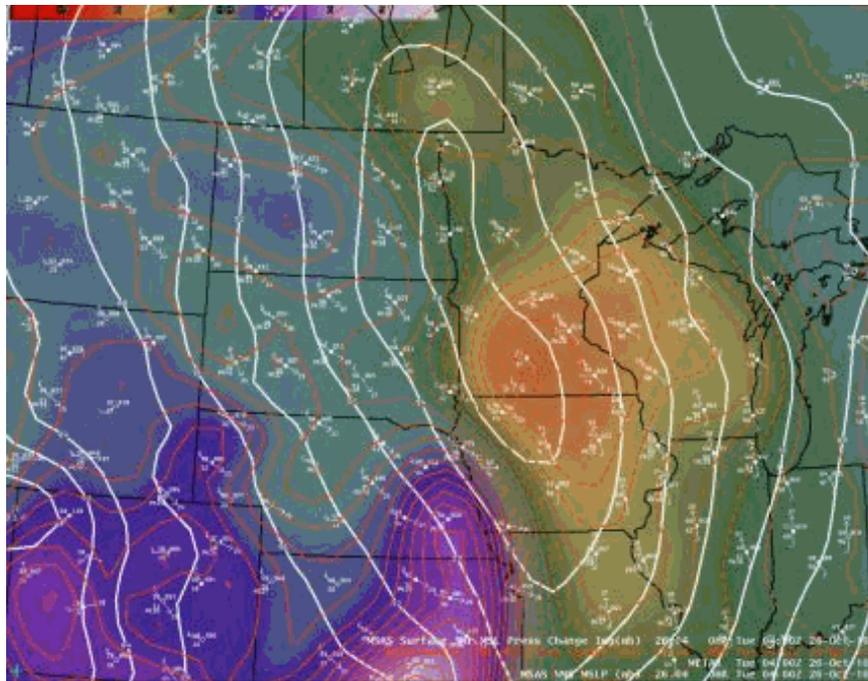


One of the deepest extratropical low pressure systems on record for the lower 48 states evolved from Iowa into Minnesota on October 26th and slowly moved northeast on the 27th. Such a low developed in response to powerful 175 kt jet stream winds from the west and a major contrast in temperatures, with warm and moist air to the south and colder air building to the north. A low pressure area in advance of this system had already tightened the temperature gradient, or as meteorologists say, increased the baroclinicity. This set the stage for even lower pressures as the strong jet stream moved atop the area. As the low evolved, moderate to heavy rain was seen over Minnesota into western Wisconsin on Monday night. Powerful winds developed by daybreak Tuesday, with much of Minnesota seeing sustained winds of 30 to 45 mph with gusts of 50 to 65 mph. Very strong winds driven by the pressure difference around the low were seen across all of the Upper Midwest. Across the lower Great Lakes and into the Ohio River Valley, a widespread severe weather event occurred, with damaging winds and tornadoes. This was one of the largest outbreaks on record for October. Across northern Minnesota, this rain changed to snow during Tuesday and Tuesday night. Snow was seen all the way to the southern border of the state on Wednesday. Accumulations of five to nine inches were seen near Duluth and in the higher country of the north shore, making it the fourth highest snowfall amount seen in Duluth.

Pressure Records



Path of Low Pressure System



3-Hour Pressure Change

Minnesota Record Low Pressure

A new low pressure record was set for the state of Minnesota. At 5:13 pm on October 26th, a pressure of 955.2 mb* (28.21 inches of mercury) was observed at Big Fork, Minnesota, located in the north central part of the state. The previous record was 962.7 millibars (28.43"), set on November 10, 1998 at both Albert Lea, MN and Austin, MN.

** = This was recalculated slightly from the lowest altimeter reading of 28.20" that was initially reported for this storm. Both altimeter readings and sea level pressure are derived from the station pressure. Although the altimeter reading is a sea level reduction as well, it uses a US standard atmosphere assumption. The sea level pressure factors in observed temperatures. Therefore, the altimeter and sea level pressure readings are often very slightly different.*

Minneapolis Second Lowest Pressure

PUBLIC INFORMATION STATEMENT

NATIONAL WEATHER SERVICE TWIN CITIES/CHANHASSEN MN
815 PM CDT WED OCT 27 2010

...SECOND LOWEST BAROMETRIC PRESSURE ON RECORD SET FOR THE TWIN CITIES ON OCTOBER 26TH...

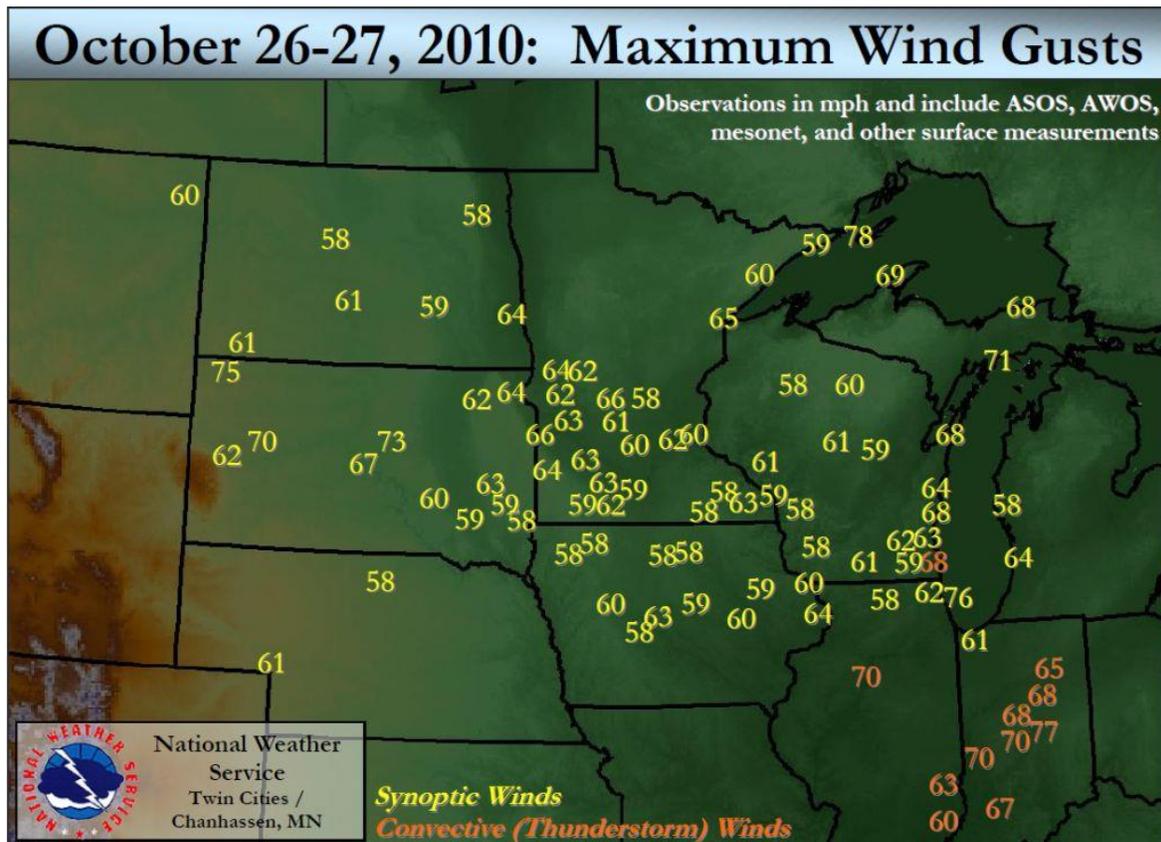
THE SECOND LOWEST BAROMETRIC PRESSURE EVER RECORDED IN THE TWIN CITIES...AFTER ONLY NOVEMBER 10TH 1998...WAS OBSERVED AT 755 AM ON THE MORNING OF OCTOBER 26TH 2010. THE PRESSURE OBSERVED WAS 28.60 INCHES OF MERCURY...OR 968.50 MILLIBARS. THIS IS EQUIVALENT TO WHAT IS COMMONLY OBSERVED IN CATEGORY 2 HURRICANES.

THE FIVE LOWEST BAROMETRIC READINGS...IN INCHES OF MERCURY...OBSERVED AT THE TWIN CITIES ARE:

RANK	PRESSURE	DATE
1.	28.55	NOV 10 1998
2.	28.60	OCT 26 2010
3.	28.62	JAN 10 1975
4.	28.77	APR 13 1964
4T.	28.77	FEB 26 1971

BAROMETRIC PRESSURE IS THE FORCE EXERTED BY THE ATMOSPHERE AND IS KEY IN ANALYZING WEATHER PATTERNS AND MAGNITUDES OF STORM SYSTEMS...OR LOW PRESSURE AREAS. THE VERY LOW PRESSURE DURING THE OCTOBER 25TH-27TH 2010 INDICATED RAPID CHANGE AND TRANSITION OCCURRING IN THE ATMOSPHERE...WHICH CREATED VERY STRONG WINDS ACROSS THE UPPER MIDWEST...EARLY SEASON ACCUMULATING SNOW IN NORTHERN MINNESOTA...AND WIDESPREAD SEVERE THUNDERSTORMS ACROSS THE OHIO RIVER VALLEY.

Wind Speeds



Central and Southern Minnesota and Western Wisconsin Listing of Maximum Gusts

PUBLIC INFORMATION STATEMENT
NATIONAL WEATHER SERVICE TWIN CITIES/CHANHASSEN MN
839 AM CDT SAT OCT 30 2010

...MAXIMUM WIND GUSTS FROM OCTOBER 26TH AND 27TH IN CENTRAL AND SOUTHERN MINNESOTA AND WESTERN WISCONSIN...

MINNESOTA...

--AUTOMATED ASOS AND AWOS SITES--

LOCATION	PEAK GUST	TIME OF PEAK GUST
APPLETON	63 MPH	5:14 PM TUE
REDWOOD FALLS	63 MPH	12:48 AM WED
ALEXANDRIA	62 MPH	6:16 PM TUE
GLENWOOD	62 MPH	6:33 PM TUE
MINNEAPOLIS	62 MPH	1:21 AM WED
MORRIS	62 MPH	5:12 PM TUE
GRANITE FALLS	61 MPH	12:32 AM WED

OLIVIA	61 MPH	12:53 AM WED
PAYNESVILLE	61 MPH	3:53 PM TUE
WILLMAR	61 MPH	6:56 PM TUE
CANBY	60 MPH	6:34 PM TUE
ST. PAUL	60 MPH	7:20 PM TUE
BENSON	59 MPH	2:33 PM TUE
MADISON	59 MPH	12:34 AM WED
ST. JAMES	59 MPH	2:55 PM TUE
ST. CLOUD	58 MPH	9:35 PM TUE
MANKATO	56 MPH	1:15 AM WED
NEW ULM	56 MPH	2:55 PM TUE
CRYSTAL	55 MPH	6:53 PM TUE
LONG PRAIRIE	55 MPH	6:16 PM TUE
OWATONNA	55 MPH	5:14 PM TUE
EDEN PRAIRIE	54 MPH	4:53 PM TUE
HUTCHINSON	54 MPH	4:31 PM TUE
RED WING	54 MPH	4:56 AM WED
MONTEVIDEO	53 MPH	12:34 PM TUE
FAIRMONT	52 MPH	9:15 PM TUE
LITTLE FALLS	52 MPH	8:53 PM TUE
MAPLE LAKE	52 MPH	6:55 PM TUE
MORA	51 MPH	7:55 PM TUE
PRINCETON	51 MPH	7:53 PM TUE
LAKEVILLE	49 MPH	9:14 PM TUE
STANTON	49 MPH	1:14 AM WED
BLAINE	48 MPH	7:55 PM TUE
CAMBRIDGE	47 MPH	8:55 PM TUE
GLENCOE	47 MPH	6:53 PM TUE
RUSH CITY	47 MPH	9:34 PM TUE

--AUTOMATED MESONET DATA--

GEORGEVILLE	66 MPH	12:30 AM WED
MEHURIN	66 MPH	8:20 PM TUE
CANNON FALLS	63 MPH	9:54 PM TUE
HANLEY FALLS	63 MPH	2:10 PM TUE
SAUK CENTER	62 MPH	4:03 PM TUE
LANGHEI	61 MPH	2:16 PM TUE
CLARA CITY	60 MPH	6:30 PM TUE
CLEARWATER	60 MPH	6:39 PM TUE
LASTRUP	60 MPH	7:42 PM TUE
LESTER PRAIRIE	60 MPH	3:54 PM TUE
WELCH	60 MPH	5:19 PM TUE
BELLE PLAINE	56 MPH	12:16 AM TUE
MILACA	55 MPH	8:17 PM TUE
RICE	55 MPH	6:59 PM TUE
LITTLE CHICAGO	53 MPH	8:35 PM TUE

WISCONSIN...

--AUTOMATED ASOS AND AWOS SITES--

OSCEOLA	55 MPH	7:15 PM TUE
EAU CLAIRE	54 MPH	4:37 PM TUE
NEW RICHMOND	48 MPH	8:35 PM TUE

RICE LAKE
MENOMONIE

46 MPH
41 MPH

12:18 AM WED
2:36 PM TUE

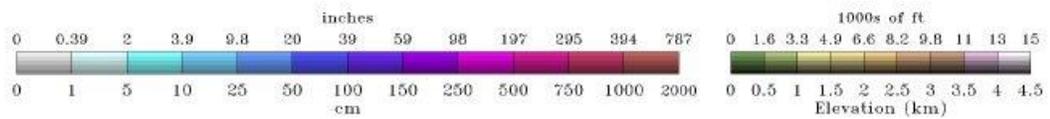
Maximum *Sustained* Wind Speeds

Site	Speed (mph)
Appleton	48
Morris	48
Benson	48
Canby	46
Granite Falls	46
Georgeville	45
Paynesville	45
Willmar	45
Glenwood	44
Mehurin	44
Olivia	44
Redwood Falls	44

Snowfall Amounts



Snow Depth
2010-10-27 06



The low pressure system also brought several inches of snow to portions of central Minnesota.

...SNOWFALL TOTALS ACROSS CENTRAL MINNESOTA FROM OCTOBER 26TH AND 27TH STORM...

A RECORD LOW PRESSURE SYSTEM BROUGHT THE FIRST ACCUMULATING SNOWFALL OF THE SEASON TO CENTRAL MINNESOTA. HERE ARE THE LATEST SNOWFALL TOTALS FROM TRAINED SPOTTERS AND WEATHER OBSERVERS ACROSS CENTRAL MINNESOTA.

LOCATION	COUNTY	SNOWFALL TOTAL
MILLERSVILLE	DOUGLAS	4.0 INCHES
HEWITT	TODD	4.0 INCHES
VINELAND	MILLE LACS	3.0 INCHES
BROWERVILLE	TODD	1.0 INCHES
MORRIS	STEVENS	1.0 INCHES
LONG PRAIRIE	TODD	0.9 INCHES
BELGRADE 8 ESE	KANDIYOHI	0.8 INCHES
WOODLAND	KANABEC	0.7 INCHES
WILLMAR	KANDIYOHI	0.3 INCHES

Other Reports

PRELIMINARY LOCAL STORM REPORT...SUMMARY
 NATIONAL WEATHER SERVICE TWIN CITIES/CHANHASSEN MN
 946 PM CDT WED OCT 27 2010

..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	...MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		
0215 PM 10/26/2010	NON-TSTM WND GST M63.00 MPH	HANLEY FALLS YELLOW MEDICINE MN	44.69N 95.62W MESONET
0230 PM 10/26/2010	NON-TSTM WND GST M59.00 MPH	BENSON SWIFT MN	45.32N 95.61W AWOS
0255 PM 10/26/2010	NON-TSTM WND GST M59.00 MPH	ST JAMES WATONWAN MN	43.98N 94.63W AWOS
0300 PM 10/26/2010	NON-TSTM WND DMG 6 NW RICE LAKE BARRON		45.56N 91.83W WI CO-OP OBSERVER
	8 INCH TREE BLOW DOWN...SEVERAL 4-6 INCH LIMBS DOWN		
0417 PM 10/26/2010	NON-TSTM WND DMG LITCHFIELD MEEKER		45.12N 94.53W MN TRAINED SPOTTER
	14 INCH TREE SNAPPED AND FELL ON A HOUSE		

0420 PM NON-TSTM WND GST LESTER PRAIRIE 44.88N 94.04W
10/26/2010 M60.00 MPH MCLEOD MN MESONET
MNDOT MESONET

0430 PM NON-TSTM WND DMG SACRED HEART 44.78N 95.35W
10/26/2010 RENVILLE MN TRAINED SPOTTER
LARGE TREE DOWN...NUMEROUS BRANCHES ALSO DOWN.

0445 PM NON-TSTM WND GST 3 SE ALEXANDRIA 45.84N 95.33W
10/26/2010 M62.00 MPH DOUGLAS MN MESONET
MNDOT MESONET

0510 PM NON-TSTM WND GST MORRIS 45.59N 95.91W
10/26/2010 M62.00 MPH STEVENS MN AWOS

0510 PM NON-TSTM WND GST APPLETON 45.20N 96.02W
10/26/2010 M63.00 MPH SWIFT MN AWOS

0600 PM NON-TSTM WND GST CLARA CITY 44.96N 95.37W
10/26/2010 M60.00 MPH CHIPPEWA MN MESONET
MNDOT MESONET

0600 PM NON-TSTM WND DMG 3 WNW PRINCETON 45.59N 93.65W
10/26/2010 MILLE LACS MN TRAINED SPOTTER
4-5 FT DIAMETER 70 FOOT TALL TREE BLOWN OVER ON PERSONS
VEHICLE. NO INJURIES REPORTED.

0630 PM NON-TSTM WND GST CANBY 44.71N 96.27W
10/26/2010 M60.00 MPH YELLOW MEDICINE MN AWOS

0630 PM NON-TSTM WND GST GLENWOOD 45.65N 95.38W
10/26/2010 M62.00 MPH POPE MN AWOS

0650 PM NON-TSTM WND GST WILLMAR 45.12N 95.05W
10/26/2010 M61.00 MPH KANDIYOHI MN AWOS

0655 PM NON-TSTM WND GST GEORGEVILLE 45.44N 94.94W
10/26/2010 M66.00 MPH STEARNS MN MESONET
MNDOT MESONET

0700 PM NON-TSTM WND GST SAUK CENTRE 45.74N 94.96W
10/26/2010 M63.00 MPH STEARNS MN MESONET
MNDOT MESONET

0715 PM NON-TSTM WND DMG CLAYTON 45.32N 92.17W
10/26/2010 POLK WI TRAINED SPOTTER
MULTIPLE LARGE TREE BRANCHES DOWN...POWER OUT SOUTH SIDE
OF TOWN NEAR LAKE MAGNOR.

0800 PM 10/26/2010	NON-TSTM WND DMG WEST ST PAUL DAKOTA	MN	44.90N 93.09W LAW ENFORCEMENT
	TRESS AND POWER LINE DOWN		
0800 PM 10/26/2010	NON-TSTM WND DMG SOUTH ST PAUL DAKOTA	MN	44.89N 93.04W LAW ENFORCEMENT
	TREES DOWN ON HOME		
0815 PM 10/26/2010	NON-TSTM WND DMG CORNELL CHIPPEWA	WI	45.16N 91.15W TRAINED SPOTTER
	A TWO FOOT DIAMETER TREE BLEW DOWN AND CAUSED DAMAGE TO A HOUSE IN CORNELL.		
0815 PM 10/26/2010	NON-TSTM WND DMG 1 W CORNELL CHIPPEWA	WI	45.16N 91.17W TRAINED SPOTTER
	TWO TREES WERE BLOWN DOWN WEST OF CORNELL, NEAR THE INTERSECTION OF COUNTY ROAD CC AND Z.		
0820 PM 10/26/2010	NON-TSTM WND GST 4 S MARIETTA M66.00 MPH LAC QUI PARLE	MN	44.95N 96.42W MESONET
	MNDOT MESONET		
0910 PM 10/26/2010	NON-TSTM WND GST PAYNESVILLE M61.00 MPH STEARNS	MN	45.38N 94.72W AWOS
1030 PM 10/26/2010	SNOW BROWERVILLE E1.0 INCH TODD	MN	46.09N 94.87W LAW ENFORCEMENT
	ESTIMATED 1 INCH OF SNOW ACCUMULATION ON MAINLY GRASSY AREAS BETWEEN BROWERVILLE AND STAPLES		
1128 PM 10/26/2010	NON-TSTM WND DMG 1 S HOLCOMBE CHIPPEWA	WI	45.21N 91.12W TRAINED SPOTTER
	2 TREES DOWN ABOUT A FOOT IN DIAMETER DOWN.		
1132 PM 10/26/2010	NON-TSTM WND DMG HOLCOMBE CHIPPEWA	WI	45.22N 91.12W TRAINED SPOTTER
	4 TO 5 FOOT DIAMETER PINE TREE SNAPPED OFF...AND DOWN.		
1215 AM 10/27/2010	NON-TSTM WND DMG ST PAUL RAMSEY	MN	44.95N 93.10W TRAINED SPOTTER
	6-8 DIAMETER TREE FELL ONTO A SMALL BUSINESS ON THE SW CORNER OF RANDOLPH AVE AND SNELLING AVE IN ST PAUL. NUMEROUS BRANCHES DOWN ALSO.		
1230 AM 10/27/2010	NON-TSTM WND GST MADISON M59.00 MPH LAC QUI PARLE	MN	45.01N 96.19W AWOS
1230 AM	NON-TSTM WND GST GRANITE FALLS		44.81N 95.54W

10/27/2010	M61.00 MPH	CHIPPEWA	MN	AWOS
1250 AM	NON-TSTM WND GST	OLIVIA		44.78N 95.00W
10/27/2010	M61.00 MPH	RENVILLE	MN	AWOS
1255 AM	NON-TSTM WND GST	4 N ELLENDALE		43.93N 93.30W
10/27/2010	M63.00 MPH	STEELE	MN	MESONET
	MNDOT	MESONET		
0150 AM	NON-TSTM WND GST	REDWOOD FALLS		44.54N 95.11W
10/27/2010	M63.00 MPH	REDWOOD	MN	ASOS
0300 AM	NON-TSTM WND DMG	EDEN PRAIRIE		44.85N 93.46W
10/27/2010		HENNEPIN	MN	TRAINED SPOTTER
	MEDIUM SIZED TREE BRANCH FELL ONTO AND DENTED VEHICLE.			
0530 AM	SNOW	VINELAND		46.18N 93.77W
10/27/2010	E3.0 INCH	MILLE LACS	MN	TRAINED SPOTTER
0620 AM	NON-TSTM WND DMG	SW MILLERVILLE		46.07N 95.56W
10/27/2010		DOUGLAS	MN	TRAINED SPOTTER
	6 INCH DIAMETER BRANCHES DOWN IN YARD.			
0620 AM	SNOW	SW MILLERVILLE		46.07N 95.56W
10/27/2010	M4.0 INCH	DOUGLAS	MN	TRAINED SPOTTER
0803 AM	NON-TSTM WND DMG	1 SW MENOMONIE		44.88N 91.93W
10/27/2010		DUNN	WI	TRAINED SPOTTER
	1 FOOT DIAMETER PINE TREE UPROOTED ON UW STOUT CAMPUS.			
0803 AM	NON-TSTM WND DMG	1 SSW MENOMONIE		44.87N 91.92W
10/27/2010		DUNN	WI	TRAINED SPOTTER
	1 FOOT DIAMETER BRANCH DOWN.			
0831 AM	NON-TSTM WND DMG	STILLWATER		45.06N 92.82W
10/27/2010		WASHINGTON	MN	TRAINED SPOTTER
	SPORATIC TREES...UP TO ONE FOOT DIAMETER...BLOWN DOWN AROUND TOWN.			