



Environment Canada / Environnement Canada
 Atmospheric Environment Service / Service de l'environnement atmosphérique

MONTHLY METEOROLOGICAL SUMMARY SOMMAIRE MÉTÉOROLOGIQUE MENSUEL

MONTH/MOIS JULY / JUILLET

1983

AT/À WINNIPEG INT'L AIRPORT / A L'AEROPORT INTERN. DE WINNIPEG

LAT: 49° 54' N		LONG: 97° 14' W		ELEVATION: 239.6 METRES (ASL) ALTITUDE: 239.6 MÈTRES (NMM)		STANDARD TIME USED: CENTRAL HEURE NORMALE UTILISÉE:										
DATE	TEMPERATURE TEMPÉRATURE			DEGREE-DAYS DEGRÉS-JOURS		REL. HUMIDITY HUMIDITÉ REL.		THUNDERSTORM ORAGE	PRECIPITATION PRÉCIPITATIONS			SNOW ON GROUND NEIGE AU SOL	WIND VENT			BRIGHT SUNSHINE INSOLATION EFFECTIVE HEURES
	MAXIMUM MAXIMALE	MINIMUM MINIMALE	MEAN MOYENNE	HEATING DE CHAUFFE	GROWING DE CROISSANCE	MAXIMUM MAXIMALE	MINIMUM MINIMALE		RAINFALL PLUIE (HAUTEUR)	SNOWFALL NEIGE (HAUTEUR)	TOTAL PRECIP. PRÉCIP. TOTALE		AVERAGE SPEED * VITESSE MOYENNE	PREVAILING DIRECTION DOMINANTE	MAXIMUM SPEED AND DIRECTION VITESSE MAXIMALE ET DIRECTION	
	°C	°C	°C	BASE 18.0°C	BASE 5.0°C	%	%		mm	cm	mm		cm	km/h	km/h	
1	21.3	14.4	17.9	0.1	12.9	98	66		1.4		1.4		14.5	N	NE 22*	4.7
2	19.2	15.6	17.4	0.6	12.4	94	80		11.2		11.2		16.1	ESE	ESE 33	0.5
3	25.0	17.2	21.1		16.1	98	51						12.1	W	W 22*	9.7
4	17.8	6.6	12.2	5.8	7.2	94	50		5.0		5.0		25.8	N,NNW	NNW 41	7.0
5	19.5	5.4	12.5	5.5	7.5	84	53						13.3	S,WSW	SSE 20*	14.2
6	29.2	13.8	21.5		16.5	90	62						21.1	S	S 30*	13.1
7	29.0	20.1	24.6		19.6	90	66						11.7	SSE	SSE 22	12.6
8	31.0	18.0	24.5		19.5	91	54						11.8	NNE	ESE 26	14.3
9	29.5	20.8	25.2		20.2	83	65						21.8	ESE	ESE 31	7.2
10	33.0	19.5	26.3		21.3	82	51						22.4	SE	WSW 31*	8.6
11	23.2	15.1	19.2		14.2	76	52						27.5	SW,W	WSW 39*	5.9
12	31.8	14.0	22.9		17.9	84	37						15.6	S	S 24	15.1
13	30.9	19.0	25.0		20.0	84	46						13.0	S	S 22*	10.0
14	33.7	18.8	26.3		21.3	89	40						11.8	ESE	ESE 24	14.7
15	33.0	23.5	28.3		23.3	80	48						24.0	SSE	SE 33*	10.2
16	25.2	17.2	21.2		16.2	88	43						12.6	WSW	WSW 24	10.2
17	27.4	13.9	20.7		15.7	80	40						7.7	W	S 19	14.2
18	28.0	15.9	22.0		17.0	81	55		0.4		0.4		8.8	E	ENE 17	5.9
19	29.3	18.1	23.7		18.7	85	51		0.2		0.2		5.0	SE	SSE 11	8.0
20	31.7	17.4	24.6		19.6	91	39						9.2	ENE	NE 26	13.6
21	32.0	17.5	24.8		19.8	86	47						13.5	S	ESE 20*	12.6
22	30.7	17.0	23.9		18.9	85	26						19.9	W	W 41	14.8
23	25.5	14.9	20.2		15.2	88	56						14.5	NW	NNW 28	12.1
24	28.1	13.0	20.6		15.6	91	39						5.3	WNW	NNW 11*	13.1
25	30.1	15.4	22.8		17.8	85	38						11.4	S	SSE 22*	14.0
26	29.5	19.4	24.5		19.5	78	50		TR.		TR.		25.0	S	SSE 33	4.1
27	30.9	20.2	25.6		20.6	86	43						9.4	SSE	SSE 19*	11.8
28	30.8	17.9	24.4		19.4	91	29		TR.		TR.		11.5	W	W 22	12.9
29	29.0	15.2	22.1		17.1	90	40						9.5	W	WNW 17	14.2
30	27.5	15.8	21.7		16.7	90	57	1	11.6		11.6		11.5	SW	NW 28*	7.1
31	27.0	13.4	20.2		15.2	92	47						14.8	W,WNW	NW 26	13.9
MEAN MOYENNE	28.1	16.3	22.2	TOTAL 12.0	TOTAL 532.9	87	49	TOTAL 1	TOTAL 29.8	TOTAL 0.0	TOTAL 29.8		14.6	PREVAILING DOMINANTE S	MAXIMUM NNW 41 W 41	TOTAL 330.3
NORMAL NORMALE	25.9	13.3	19.6	21.1	453.8	89	47	6.5	75.9		75.9		16.0	S	52	315.6

DEGREE-DAY SUMMARY - SOMMAIRE DE DEGRÉS-JOURS

DAYS WITH TOTAL PRECIPITATION:
JOURS AVEC PRÉCIPITATIONS
TOTALES:

DAYS WITH SNOWFALL:
JOURS AVEC CHÔTE DE NEIGE:

BELOW 18°C AU-DESSOUS DE 18°C	THIS YEAR ANNÉE EN COURS	PREVIOUS YEAR ANNÉE PRÉCÉDENTE	NORMAL NORMALE	ABOVE 5°C AU-DESSUS DE 5°C	THIS YEAR ANNÉE EN COURS	PREVIOUS YEAR ANNÉE PRÉCÉDENTE	NORMAL NORMALE	mm					cm				
								0.2 OR MORE OU PLUS	1.0 OR MORE OU PLUS	2.0 OR MORE OU PLUS	10.0 OR MORE OU PLUS	50.0 OR MORE OU PLUS	0.2 OR MORE OU PLUS	1.0 OR MORE OU PLUS	2.0 OR MORE OU PLUS	10.0 OR MORE OU PLUS	50.0 OR MORE OU PLUS
TOTAL FOR MONTH TOTAL DU MOIS	12.0	7.7	21.1	TOTAL FOR MONTH TOTAL DU MOIS	532.9	465.3	453.8	6	4	3	2						
ACCUMULATED SINCE JULY 1 ACCUMULÉE DEPUIS LE 1 ^{er} JUILLET	12.0	7.7	21.1	ACCUMULATED SINCE APRIL 1 ACCUMULÉE DEPUIS LE 1 ^{er} AVRIL	1059.0	1055.9	1061.9										

UDC 551.506.11

* INDICATES MORE THAN ONE OCCURRENCE OF THE SPEED BUT NOT NECESSARILY THE DIRECTION. ! ACTUAL SPEED IS 50 KMH GREATER THAN INDICATED.

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Also NNE, E, NE, SE - 1st.



CLIMATOLOGICAL SUMMARY FOR JULY, 1983

AT WINNIPEG, MANITOBA

July was the warmest on record since 1957 and tied that year with a mean temperature of 22.2°C. This July's mean temperature was only exceeded in 1936, which holds the record mean temperature of 24.2°C, and in 1914, 1916 and 1935 when the mean of 22.4°C was recorded. The normal July mean temperature is 19.6°C. The maximum temperature exceeded 30°C on 12 days of the month, four of which were consecutive between July 12th and 15th. The highest temperature of 33.7°C was recorded on July 14th and the lowest temperature was 5.4°C on July 5th.

Precipitation totalled 29.8 millimetres, far below the normal value of 75.9 millimetres. Heaviest precipitation of 11.6 millimetres fell on July 30th followed closely by 11.2 millimetres on July 2nd.

The mean wind speed averaged 14.6 Km/h, below the normal of 16.0 Km/h. Sunshine was above normal with 330.3 hours compared to the normal 315.6 hours.

DAILY WEATHER SUMMARY FOR JULY, 1983

AT WINNIPEG, MANITOBA

* NOTE: ALL TIME CENTRAL STANDARD NOT DAYLIGHT

1. Slightly below normal temperatures. Partly cloudy. Rain to 00:31 AM, 3:54 AM to 6:35 AM. Drizzle to 8:53 AM, light fog in morning. Visibility restricted. Mostly light winds but N gust to 31 Km/h in morning.
2. Slightly below normal temperatures. Cloudy. Showers 01:18 AM to 12:39 PM. Rain 12:39 PM to 3:01 PM. Showers 5:03 PM to 8:09 PM. Mostly light winds but ESE gust to 39 Km/h in morning. Light fog in evening. Visibilities restricted. Power outages - heavy precipitation near Sprague.
3. Above normal temperatures. Partly cloudy. Light fog in morning. Visibility restricted. Mostly light winds but W gust to 31 Km/h in afternoon.
4. Below normal temperature. Partly cloudy. Showers 00:59 AM to 01:15 AM. Rain 02:10 AM to 03:48 AM. Moderate winds with N gust to 56 Km/h in morning. Light fog in morning. Visibility restricted.
5. Below normal temperature. Mostly sunny. Mostly light winds but S gust to 48 Km/h in afternoon. Frost in S Manitoba, especially near Elphinstone. Many crops damaged. Plane crashed into Red River near Matlock. 2 injured.
6. Above normal temperature. Mostly sunny. Moderate winds with SSW gust to 43 Km/h in afternoon.
7. Warm. Mostly sunny. Mostly light wind SSE gusts to 31 Km/h in morning.
8. Warm. Mostly sunny. Mostly light wind but ESE gusts to 41 Km/h in late evening.
9. Warm. Partly cloudy. Moderate winds with ESE gust to 44 Km/h in afternoon. Record high Minimum temperature.
10. Warm. Partly cloudy. Moderate winds with S gust to 54 Km/h in afternoon. Lightning in morning in Winnipeg. Twister reported near Birtle. Severe storm near Brandon and Hodgson. 18 cattle killed by lightning near Brandon. Power outages - winds of up to 100 Km/h there.
11. Below normal temperatures. Cloudy, clearing mid afternoon. Moderate winds with SW gusts to 65 Km/h in morning.
12. Above normal temperatures. Sunny. Mostly light winds but S gust to 35 Km/h in afternoon.
13. Warm. Mostly sunny. Mostly light winds but S gust to 33 Km/h in morning. Forest fires very low this year but mosquitoes approaching an epidemic due to wet weather earlier.
14. Warm. Mostly sunny. Mostly light wind but ESE gusts to 35 Km/h in afternoon.
15. Warm. Mostly sunny. Moderate winds with SSE gust to 54 Km/h in afternoon. Haze late morning till evening. Hail at Swan River. Motorcyclist and passenger struck by lightning E of Brandon on Trans-Continental Highway. Record High Minimum temperature at Winnipeg.
16. Above normal temperatures. Mostly sunny. Mostly light wind but SSW gusts to 35 Km/h in morning. Pilot and passenger killed 55 Km N of Grand Rapids - weather bad there. Funnel cloud N of The Pas.
17. Slightly above normal temperatures. Sunny. Light winds.
18. Above normal temperatures. Partly cloudy. Showers 11:57 AM to 12:02 PM, 4:06 PM to 4:46 PM. Light winds. Pea size hail at Rossburn, NE of Russell. Baseball hail at Dropmore.
19. Warm. Partly cloudy. Showers 11:25 AM to 12:08 PM. Light winds. Marble size hail near Hodgson, hail at Graysville and Carman.
20. Warm. Mostly sunny. Mostly light winds but NE gust to 31 Km/h in evening.
21. Sunny skies, light southerly wind and continuing hot.
22. Low humidity (dry), continuing very warm and sunny. Brisk gusty westerly winds with W gust to 57 Km/h in afternoon.
23. Clear overnight becoming cloudy during the day, mostly light winds but NNW gust to 41 Km/h in morning. Temperatures normal. Aerial spraying against mosquitoes begins in Winnipeg. Air Canada makes emergency landing at Gimli - fuel trouble.
24. General cloudy skies, light winds. Normal temperatures.
25. Sunny, temperature climbing above 30°C once again. Aerial spraying still going on in S Manitoba. Many bees killed. Light winds but SSE gust to 31 Km/h in late evening.
26. Warm. Mostly cloudy. Showers 3:29 PM to 5:03 PM. Moderate winds with SSE gust to 56 Km/h in morning. Golf ball hail N of The Pas.
27. Warm. Mostly sunny. Light winds. Heavy precipitation near Steinbach.
28. Warm. Mostly sunny. Showers 3:08 AM to 6:14 AM. Mostly light winds but W gust to 33 Km/h in afternoon. Forest fire danger increasing especially in E Manitoba. 201 fires so far this year, 890 in 1980 - 3 small ones burning.
29. Above normal temperatures. Mostly sunny. Light winds. Very strong winds near Brandon and Souris. Funnel cloud seen near Radville. Hail at Lumsden.
30. Above normal temperatures. Partly cloudy. Thunder 01:15 AM to 02:35 AM, 4:47 PM to 5:32 PM. Showers 01:07 AM to 3:10 AM, 4:47 PM to 5:32 PM. Mostly light winds but NW gust to 57 Km/h in afternoon. Tornadoes seen near Oakland, Gladstone, Plumas touched down but no damage. Funnel cloud W of Grand Rapids. Grape size hail at Altona - some crop damage.
31. Slightly above normal temperatures. Mostly sunny. Mostly light winds but NW gust to 39 Km/h in afternoon.

ALL TEMPERATURES IN DEGREES CELSIUS

DATE	00.	01.	02.	03.	04.	05.	06.	07.	08.	09.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.
1.	13.8	13.8	14.1	14.6	14.4	14.0	13.8	14.7	13.9	13.7	14.2	14.1	14.3	15.1	15.5	15.0	14.4	14.2	13.8	13.6	14.3	14.2	14.0	13.9
2.	13.8	13.8	13.9	14.2	14.2	14.3	14.6	15.1	15.3	15.1	15.1	15.0	15.6	15.1	16.6	17.1	17.0	17.1	17.2	17.2	17.2	17.1	17.2	16.9
3.	16.9	17.1	17.6	17.6	17.1	17.0	17.6	17.9	17.4	16.9	17.0	16.0	16.1	16.2	14.5	13.8	13.0	13.1	14.0	13.8	14.2	14.1	14.9	15.9
4.	16.0	16.0	15.7	14.6	12.4	12.3	10.8	9.9	9.4	8.4	7.7	7.8	7.6	6.5	6.1	6.2	3.9	5.1	4.3	4.5	4.6	4.2	3.5	2.9
5.	2.3	2.3	2.3	2.9	2.5	2.9	4.0	5.4	6.1	5.2	5.8	5.6	7.4	7.9	7.8	9.1	10.1	10.7	10.7	11.6	11.3	11.4	10.3	10.6
6.	11.8	11.8	11.8	11.8	11.8	12.2	12.3	12.9	14.9	15.8	17.4	18.5	19.2	18.9	19.7	20.3	20.5	21.1	21.7	21.2	20.9	20.2	19.7	19.2
7.	18.7	18.0	17.7	18.6	18.6	18.5	17.3	17.0	17.5	17.1	18.4	18.9	19.8	21.0	21.0	20.9	20.9	22.2	21.7	22.0	20.6	20.6	19.6	17.9
8.	17.2	16.9	16.6	16.0	17.1	16.4	14.9	16.1	16.9	17.2	21.3	20.5	20.1	20.7	20.9	22.1	21.6	22.2	21.5	21.7	17.9	17.3	16.7	16.7
9.	16.1	16.0	16.0	16.0	16.3	17.0	17.9	19.0	19.4	19.4	20.6	21.3	21.0	21.2	20.7	21.0	21.1	22.1	22.6	22.1	22.3	22.1	21.7	21.2
10	21.0	20.7	20.6	20.3	20.0	19.6	19.4	19.5	19.9	20.2	20.5	21.0	21.1	22.0	21.0	21.6	22.3	22.7	24.1	24.3	21.0	16.0	14.5	11.5
11	10.4	10.4	9.9	10.0	10.1	10.5	10.5	10.7	11.3	12.0	11.4	12.1	12.6	12.6	13.0	12.6	12.6	11.9	13.4	13.5	13.8	13.0	13.2	12.9
12	13.1	12.6	12.4	12.2	11.9	11.7	12.0	13.0	14.0	14.8	15.3	16.2	16.5	17.3	14.6	14.8	14.4	15.2	16.5	17.4	16.0	17.0	16.4	15.8
13	15.5	15.3	15.3	15.4	15.3	15.1	15.1	16.0	17.0	17.6	18.3	19.2	20.1	20.0	18.0	16.9	17.0	17.3	19.3	18.7	17.6	17.1	17.3	17.2
14	16.8	17.4	17.2	16.9	17.0	17.3	18.5	18.6	18.8	19.1	17.2	17.6	18.8	18.2	18.5	18.1	18.3	17.9	17.6	18.7	20.6	21.2	20.6	19.2
15	20.6	20.6	20.7	20.1	19.4	18.4	18.0	18.4	19.1	19.6	19.9	19.6	20.0	19.6	18.7	19.9	20.9	20.0	20.9	20.1	20.1	19.4	19.4	19.2
16	19.2	19.4	18.6	18.8	19.4	18.8	18.1	17.8	16.9	14.6	15.8	15.9	14.9	13.5	13.0	11.2	12.0	13.2	11.0	10.3	9.9	10.8	12.8	11.6
17	11.6	12.3	12.2	11.6	11.2	11.1	10.4	10.8	11.9	12.3	12.9	12.9	12.7	12.6	11.6	12.6	12.4	12.1	12.4	15.3	15.4	15.2	14.1	14.0
18	13.2	13.7	13.0	12.6	12.4	11.5	12.0	12.9	13.0	16.5	15.6	17.1	16.3	17.1	17.2	17.5	16.6	17.6	18.8	15.6	14.2	14.5	14.5	15.5
19	15.8	15.3	14.9	15.6	16.0	15.6	16.2	17.1	17.9	18.3	18.9	19.1	19.8	19.3	18.1	17.4	17.4	17.4	16.9	17.6	17.9	17.9	17.8	17.4
20	16.4	16.9	16.4	15.6	16.3	16.3	16.8	18.1	18.7	18.5	18.8	18.8	18.2	16.9	16.3	16.6	16.3	15.0	14.5	15.8	17.9	15.9	16.1	17.0
21	17.2	17.9	17.6	16.3	15.9	15.0	15.0	14.9	16.6	17.9	19.1	18.5	18.6	18.8	18.7	19.1	18.2	18.3	18.5	19.4	19.0	16.4	15.5	14.9
22	14.9	15.4	14.6	14.5	14.5	14.4	13.8	14.3	15.0	13.1	12.1	10.3	12.6	10.4	10.5	8.5	9.2	8.7	13.2	12.6	12.0	11.4	12.9	13.5
23	13.6	13.0	11.0	10.1	11.9	11.9	13.2	14.3	13.9	13.4	13.6	13.5	14.6	13.8	14.0	13.9	14.2	14.9	14.3	14.8	14.6	14.0	13.5	13.4
24	13.0	12.6	12.3	9.6	11.6	11.0	11.6	12.6	13.0	14.1	13.6	12.5	12.9	12.6	12.8	12.5	11.8	12.3	14.4	13.7	13.4	12.7	12.6	12.6
25	12.2	12.1	13.8	13.3	12.9	13.4	14.2	14.2	15.0	14.8	14.7	13.5	13.0	12.9	13.2	13.4	13.5	13.7	13.8	14.0	14.3	14.5	13.9	13.4
26	13.4	13.0	13.0	13.2	13.9	14.4	14.8	15.4	16.6	16.0	15.7	15.9	17.0	17.2	17.2	17.5	17.9	18.7	19.0	19.0	18.9	18.9	18.9	18.8
27	18.9	19.1	18.7	18.7	18.3	18.5	18.2	18.6	17.0	15.3	15.8	16.1	15.4	15.7	17.1	16.6	16.9	16.5	17.7	19.7	19.9	20.3	20.1	19.9
28	19.7	19.2	18.5	17.1	16.3	15.2	15.3	16.6	16.2	15.8	14.6	11.9	10.1	10.4	10.6	10.8	10.7	10.9	11.9	13.6	13.9	14.2	14.2	14.2
29	14.5	14.9	14.7	14.4	14.0	14.0	14.1	15.3	16.5	17.1	16.9	16.2	16.0	15.9	15.7	14.5	14.6	14.6	13.8	10.5	8.6	9.8	10.9	12.8
30	13.7	14.0	14.3	15.3	13.0	11.4	12.6	15.6	15.6	16.4	17.6	17.6	17.5	17.6	17.4	16.8	16.7	16.0	16.9	16.9	15.8	14.2	15.3	15.3
31	13.2	12.4	12.6	13.1	12.9	13.6	13.8	14.7	15.7	15.1	14.0	12.8	13.0	13.8	15.9	15.2	15.3	15.2	16.4	16.7	17.0	16.1	16.0	15.7

MEAN	15.0	15.0	14.8	14.5	14.5	14.3	14.4	15.1	15.5	15.5	15.8	15.7	15.9	15.8	15.7	15.6	15.5	15.7	16.2	16.2	16.0	15.6	15.4	15.2
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MEAN DAILY DEWPOINT BASED ON HOURLY READINGS

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MEAN	14.2	15.6	15.8	8.4	6.9	16.9	19.4	13.6	19.8	20.2	11.9	14.6	17.1	18.3	19.7	14.9

NOTE: AS OF JANUARY 1 1983, HOURLY DEWPOINT TEMPERATURES HAVE REPLACED HOURLY WETBULB TEMPERATURES IN THIS PUBLICATION.

MEAN DAILY DEWPOINT BASED ON HOURLY READINGS

DATE	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MEAN	12.6	15.0	17.4	16.8	17.4	12.6	13.5	12.6	13.6	16.4	17.9	14.1	14.2	15.6	14.6

17	S	S	S	S	S	S	SSW	WSW	W	W	WNW	WNW	SW	SW	W	W	C	N	N	E			
11	19	11	13	11	11	9	13	13	6	9	7	11	6	4	4	4	2	0	6	2	2		
18	ESE	E	NNE	NNE	E	ENE	NE	S	E	NE	E	NE	E	NE	NE	ESE	ENE	E	NE	NNE	N		
2	2	4	7	6	9	11	11	9	11	4	13	9	7	11	11	15	15	7	17	9	7	6	9
19	NNE	NE	SE	SE	SSE	SSE	SE	SE	SE	S	E	SSE	S	SSW	WSW	SE	W	SSW	S	SSW	SSW	SW	SW
6	2	7	6	6	6	6	4	4	2	4	4	11	7	2	4	2	6	4	2	6	7	7	6
20	SW	SW	SE	SE	SSE	SSE	S	S	SW	S	C	NNW	ENE	ENE	E	ESE	SE	ENE	ENE	NE	NE	NNE	NNE
6	9	2	6	2	2	2	7	15	11	6	0	11	7	11	9	13	11	11	11	20	26	11	11
21	NNE	NE	ENE	NNE	ENE	ENE	ENE	SE	S	S	S	SSW	SSW	S	SW	WSW	S	W	W	W	W	W	W
13	9	13	6	11	7	11	20	20	13	17	13	13	15	19	17	13	15	11	11	17	13	15	11
22	W	W	WSW	W	WSW	WSW	SW	SW	WSW	W	W	WSW	WSW	W	WSW	W	NW	NNW	NNW	WNW	W	W	W
13	11	13	13	11	7	13	13	13	15	19	24	24	26	31	33	41	39	31	26	17	19	13	13
23	NNW	NNW	W	W	NW	NNW	NW	NNW	NW	NNW	NW	NW	NW	NW	N	NNE	N	N	NNW	NNW	NNW	NNW	NNW
11	13	11	9	11	15	11	15	19	22	20	28	15	19	22	22	19	13	15	7	9	6	9	7
24	NNW	NW	NNW	NNW	NNW	C	C	WNW	N	N	SSW	NNW	NNW	NNW	NNW	NW	W	WNW	NW	NNW	C		
6	2	4	4	7	6	4	0	0	9	9	11	4	6	11	6	4	6	7	6	7	6	2	0
25	C	C	SE	SSE	SSE	S	S	SSW	S	SSE	S	SSE	S	S	SSW	S	S	S	S	SSE	SSE	SSE	SSE
0	0	2	6	6	6	7	7	6	9	11	13	15	15	9	15	22	19	22	17	11	15	19	22
26	S	S	S	S	SSE	SSE	S	SSE	SSE	SSE	SSE	SSE	SSE	S	SSE	S	S	S	S	S	S	S	S
19	22	20	20	20	22	22	22	28	31	33	30	31	30	30	28	30	24	28	26	26	24	22	13
27	SSW	SSW	SSW	W	NNW	NNW	NE	NE	ENE	ESE	SE	SE	SE	SE	SSE	C	SSE	SSE	SSE	S	S	S	S
9	7	11	9	4	2	2	6	9	9	19	13	11	9	6	0	4	6	15	19	13	15	13	15
28	S	SW	W	W	NNW	W	SE	SW	WSW	W	W	WSW	W	W	NNW	W	W	W	W	W	W	NNW	NNW
15	9	15	9	9	9	4	6	6	7	9	11	15	13	22	19	20	19	15	9	7	11	9	7
29	W	W	W	W	W	NNW	W	NNW	NNW	NW	NNW	NNW	NNE	W	NNW	NW	NW	NW	C	NE	ENE	ENE	ENE
11	9	11	15	11	9	9	7	6	9	13	6	11	13	7	6	13	17	13	11	0	7	6	7
30	E	SSE	SSW	S	C	ESE	C	SSW	SW	SW	SW	SW	SSW	WSW	W	NW	NW	W	WNW	W	WSW	W	WSW
9	28	13	4	0	9	0	9	6	9	11	17	11	11	9	19	24	28	17	4	4	7	9	17
31	W	NW	W	W	W	W	NNW	NW	NNW	NNW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	N	NNW	NNW	WSW
15	6	9	9	9	9	13	11	20	26	22	24	22	24	19	15	19	22	19	11	7	9	9	6

MEAN 11.5 11.5 12.4 12.3 15.2 16.9 17.2 17.3 17.7 16.1 13.0 12.0
 12.2 12.4 13.5 13.5 16.4 18.1 16.7 17.8 17.4 13.5 13.2 12.1