



Environment Canada
Atmospheric Environment Service

Environnement Canada
Service de l'environnement atmosphérique

MONTHLY METEOROLOGICAL SUMMARY SOMMAIRE MÉTÉOROLOGIQUE MENSUEL

MONTH/MOIS

AUGUST/AOUT

19 83

AT/A WINNIPEG INT'L AIRPORT/A L'AERPORT, 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		km/h		km/h					
1	31.0	16.5	23.8		18.8	91	38				9.3	S W	S 22	12.7						
2	30.5	18.8	24.7		19.7	91	58	1	18.2		16.0	S	SSE26*	5.0						
3	33.1	18.4	25.8		20.8	95	46				4.2	CALM	SE 9*	13.8						
4	36.5	22.0	29.3		24.3	84	42		TR.		17.8	S	W 26*	13.4						
5	32.2	16.0	24.1		19.1	81	28				14.8	N	NNE30	14.0						
6	33.3	13.2	23.3		18.3	88	27		TR.		14.9	S	S 28*	12.3						
7	32.7	17.6	25.2		20.2	74	28				17.5	NW	NW 33*	13.7						
8	27.3	13.6	20.5		15.5	81	38				11.5	WNW	N 19	13.0						
9	29.5	15.2	22.4		17.4	85	37				11.7	S	SSW31	5.0						
10	27.0	13.7	20.4		15.4	94	36		0.2	0.2	15.0	N	N 30*	13.5						
11	29.5	9.9	19.7		14.7	93	35				7.9	CALM	SSE20	13.6						
12	31.9	17.2	24.6		19.6	80	38	1	TR.	TR.	24.9	SSE	SSE46	10.0						
13	28.5	16.8	22.7		17.7	82	32				18.2	WNW	NW 31	13.7						
14	32.7	12.7	22.7		17.7	73	24				15.7	SSE	S 26*	13.6						
15	30.3	16.4	23.4		18.4	65	20				19.4	S	WNW33	13.3						
16	22.0	14.9	18.5		13.5	90	56		0.8	0.8	8.5	SE	E 17*	2.5						
17	34.3	14.3	24.3		19.3	92	25		TR.	TR.	13.9	SSE S	S 24	13.4						
18	36.2	14.0	25.1		20.1	90	33	1	0.4	0.4	15.7	S	S 41	9.5						
19	24.9	9.6	17.3	0.7	12.3	76	26				27.8	W	W 41	13.4						
20	16.9	8.8	12.9	5.1	7.9	95	63		47.2	47.2	10.3	ENE	ENE24	0.0						
21	24.5	13.3	18.9		13.9	96	47		1.2	1.2	13.6	NW	NW 24*	8.9						
22	25.3	11.7	18.5		13.5	89	35		TR.	TR.	8.2	W	NNW22	10.7						
23	26.0	15.6	20.8		15.8	90	42	1	2.6	2.6	10.2	SE	SE 20	3.4						
24	28.6	16.3	22.5		17.5	94	58	1	11.4	11.4	8.8	SE	SE 22	8.4						
25	32.1	18.3	25.2		20.2	90	47		TR.	TR.	10.8	SSW	SSW20	11.1						
26	30.0	16.6	23.3		18.3	91	38		TR.	TR.	6.9	W	W 17	11.4						
27	31.4	15.7	23.6		18.6	88	43	1	1.6	1.6	6.7	CALM	WSW28	9.5						
28	30.3	16.1	23.2		18.2	87	28	1	0.2	0.2	15.0	S	S 31*	11.7						
29	29.0	15.4	22.2		17.2	94	41	1	1.4	1.4	6.4	CALM	E 30	10.0						
30	29.3	14.8	22.1		17.1	94	41				6.3	CALM	SSE13*	10.9						
31	33.3	18.3	25.8		20.8	80	36				15.6	S	S 24	10.9						
MEAN MOYENNE	29.7	15.2	22.5	5.8	541.8	87	38	8	85.2	0.0	85.2		13.0 S DOMINANTE	MAXIMUM SSE46	TOTAL 326.3					
NORMAL NORMALE	24.7	11.8	18.3	43.3	411.7	91	46	6.0	75.2	0.0	75.2		16.4 S	52	283.3					
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	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		5.8	74.3	43.3	TOTAL FOR MONTH TOTAL DU MOIS		541.8	366.6	411.7	11	7	4	3							
ACCUMULATED SINCE JULY 1 ACCUMULÉE DEPUIS LE 1 ^{ER} JUILLET		17.8	82.0	64.4	ACCUMULATED SINCE APRIL 1 ACCUMULÉE DEPUIS LE 1 ^{ER} AVRIL		1600.8	1422.5	1473.6	11	7	4	3							

UDC 551.506.1 (

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

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Canada

CLIMATOLOGICAL SUMMARY FOR AUGUST 1983AT WINNIPEG, MANITOBA

This was the warmest August on record. The mean of 22.5°C was much warmer than the previous record of 21.6°C set in 1961. There were 16 days where the maximum exceeded 30 degrees, surpassing the record 15 set in 1920. The three summer months of June, July and August combined was the warmest on record with a mean of 20.6°C. The previous record was 20.4°C set in 1961. The month was also the second calmest on record with an average wind of 13.0 Km/h compared to the record of 12.6 Km/h set in 1972.

DAILY WEATHER SUMMARY FOR AUGUST 1983AT WINNIPEG, MANITOBA

1. Warm. Mostly sunny. Light winds.
2. Warm. Partly cloudy. Mostly light winds but S gust to 44 Km/h in morning. Thunder 7:50 AM to 8:28 AM, 5:37 PM to 6:12 PM. Showers sometimes heavy 7:58 AM to 8:13 AM, 5:30 PM to 6:12 PM.
3. Very warm. Mostly sunny. Light winds.
4. Very warm. Mostly sunny. Showers 11:12 PM to 11:16 PM. Mostly light winds but WSW gust to 44 Km/h in evening. Unconfirmed tornado N. of MacGregor, trees uprooted, siding torn off buildings, strong winds. Pea size hail near Delta, Plum Coole, Altona. Some crop damage. Lightning at Winnipeg in evening. Record high minimum temperature at Winnipeg.
5. Still warm. Mostly sunny. Mostly light winds but N gust to 41 Km/h in afternoon. Possible funnel cloud in Maxstone area especially in SW Assiniboia, strong winds near Limerick, quonset huts flattened there, golf ball hail at Stonehenge and Maxstone. 100% crop damage near Stonehenge. Fires due to lightning.
6. Warm. Mostly sunny. Showers 1:07 PM to 1:17 PM. Mostly light winds but S gust to 43 Km/h in afternoon. Strong winds near The Pas. Pacific Western Boeing on route to Slave Lake makes emergency landing at Winnipeg.
7. Very warm. Sunny. Mostly light winds but NW gust to 41 Km/h in afternoon.
8. Above normal temp. Mostly sunny. Mostly light winds but WNW gust to 31 Km/h in afternoon. Forest fires burning in Manitoba. Severe to extreme danger. 2 large ones near Berens River. 293 so far this year compared to normal 500. Shipping season opens at Churchill, ice very bad, ships damaged.
9. Warm. Partly cloudy. Mostly light winds but SSW gust to 43 Km/h in evening.
10. Above normal temperature. Mostly sunny. Showers 0040 AM to 01:38 AM. Mostly light winds but NNW gust to 44 Km/h in afternoon.
11. Slightly above normal temperature. Mostly sunny. Mostly light winds but S gust to 31 Km/h in afternoon. Local smoke.
12. Warm. Sunny becoming cloudy late afternoon. Thunder 5:14 PM to 6:28 PM. Showers 3:50 PM to 6:29 PM. Hail reported at Swan River. Moderate winds with SSE gust to 61 Km/h in afternoon.
13. Warm. Sunny. Mostly light winds but WNW gust to 43 Km/h in afternoon.
14. Warm. Sunny. Visibility reduced in smoke. 3:10 AM to 7:35 AM due to farmers burning stubble. Mostly light winds but SSE gust to 39 Km/h late evening. Possible tornado near Manitoba border at Carnduff. Trees uprooted, graneries blown over, crops severely damaged.
15. Warm. Sunny. Mostly light winds but WNW gust to 44 Km/h in afternoon. Lightning in morning. Concern about pollution at beaches and radiation in the drinking water at Lac du Bonnet from atomic plant.
16. Near normal temperature. Mostly cloudy. Showers 9:55 AM to 1:10 PM. Light winds. Golf ball hail and heavy rain reported at and near Birtle and Hamiota. Smoke 2:40 PM to 3:12 PM. Lightning late evening.
17. Very warm. Sunny. Showers 3:06 AM to 3:41 AM. Mostly light winds but S gust to 39 Km/h in morning. 134 forest fires since August in Manitoba. A big fire N of Grand Rapids near William's Lake, \$180,000 a day to fight fires. Strong winds at Marchand, snapped trees 20 to 30 cm. in diameter. Small tornado at Indian Bay, trees torn down at West Hawk Lake.
18. Very warm. Record breaking high temperature. Partly cloudy, smoke over city in morning. Thunder 3:15 PM to 4:21 PM. Showers 2:57 PM to 4:35 PM 10:45 PM to 11:06 PM. Haze 4:45 AM to 6:15 AM. Mostly light winds but S gust to 56 Km/h in afternoon. Strong winds at Souris. Pea size hail at The Pas. Fields flooded near Brandon.
19. Below normal temperature. Sunny. Moderate winds with WNW gust to 57 Km/h in morning. Lightning in morning. Severe thunderstorm and heavy precipitation at Island Lake.
20. Cool. Cloudy. Showers or rain sometimes heavy 8:15 AM continued all day. Fog late afternoon and evening. Visibility restricted, mostly light winds but E gust to 39 Km/h in late afternoon.
21. Slightly above normal temperature, cloudy clearing mid afternoon. Rain to 3:20 AM. Mostly light winds but NW gust to 33 Km/h in afternoon.
22. Slightly above normal temperatures. Mostly sunny. Rain 11:40 PM continue. Smoke over city. Light winds.
23. Above normal temperatures. Mostly cloudy. Rain to 2:40 AM. Thunder 11:58 PM continued. Showers 5:06 PM to 9:18 PM. 10:23 PM to 10:49 PM. 11:46 PM continued. Mostly light winds but SE gust to 31 Km/h in afternoon.
24. Warm. Partly cloudy. Thunder to 03:23 AM. Showers to 3:42 AM. Mostly light winds but N gust to 33 Km/h in morning. Light fog in morning. Lightning struck five storey building in Winnipeg. TV's, roof and windows damaged. Precipitation variable in the city. Golf ball and pea size hail at Swan River, hail at Rosburn, Starbuck. Near South Woody River and at South Porcupine forest, 4 mile swath totally destroyed.
25. Very warm. Mostly sunny. Showers 11:45 PM continued. Mostly light winds but WSW gust to 37 Km/h in afternoon, lightning in morning and evening. Possible tornado near Dryden but no damage. Tornado near Holland Manitoba damage to farms, trees down, bad electrical storm there. Possible tornado at Hilbre near Ashern. Grape size hail and electrical storm at Gypsumville. Hail at Steep Rock.
26. Warm. Sunny. Mostly light winds but SSW gust to 37 Km/h in morning. Rain to 00:13 AM.
27. Warm. Partly cloudy. Thunder 11:36 AM to 11:57 AM. 10:39 PM continued. Showers 9:47 AM to 11:57 AM. 10:46 PM continue. Mostly light winds but E gust to 50 Km/h in late evening. Pea size hail and heavy precipitation, power outages at Sprague. Strong winds late evening and next morning at many Southern Manitoba points. Possible tornado at Piney, hail reported there. Possible funnel cloud 5 miles North of Winnipeg near drive in in late evening.
28. Warm. Mostly sunny. Thunder to 00:10 5:11 AM to 6:14 AM. Showers to 00:12 AM 5:30 AM to 5:57 AM. Mostly light winds but S gust to 50 Km/h in morning.
29. Warm, cloudy but becoming sunny mid morning. Thunder 4:40 AM to 5:35 AM. Showers 4:29 AM to 7:31 AM. Mostly light winds but WSW gust to 37 Km/h in morning. Very strong winds in some parts of Southern Manitoba.
30. Warm. Mostly sunny. Smoke 4:15 AM to 9:45 AM. Light fog in morning. Visibility restricted. Light winds. Possible funnel cloud near MacDonald. Confirmed funnel cloud near Portage. It touched down at drive in theatre wrecked ticket office, moved sign 50 feet and overturned a trailer.
31. Very warm. Mostly sunny. Mostly light winds but S gust to 37 Km/h in late evening.

1983

HOURLY DEWPOINT TEMPERATURES AT WINNIPEG INTERNATIONAL AIRPORT FOR THE MONTH OF AUGUST

LOCAL STANDARD TIME

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.	15.6	15.6	16.0	16.2	15.0	14.9	15.3	16.0	16.0	16.4	17.0	15.7	15.3	14.8	15.2	14.8	14.0	15.6	15.0	15.4	15.5	15.2	15.9	15.8
2.	15.3	15.6	15.6	15.7	15.7	15.9	15.9	16.4	17.6	18.1	18.7	19.1	19.8	20.2	20.5	20.8	21.0	22.2	22.0	22.0	20.0	17.9	17.5	17.7
3.	17.6	17.6	17.9	17.5	17.4	18.1	18.6	19.7	21.1	21.8	21.7	21.3	21.2	20.4	20.3	20.0	19.4	20.2	20.0	21.0	18.8	18.8	18.5	19.2
4.	19.7	19.7	19.4	19.3	18.9	19.0	19.1	19.4	19.9	20.0	20.1	20.2	20.1	21.0	21.0	21.1	20.6	20.6	20.3	18.5	18.1	19.6	20.3	18.2
5.	17.1	16.2	16.5	16.6	16.9	17.1	16.9	18.2	19.5	19.6	16.7	15.6	13.8	12.6	10.6	11.5	11.9	10.7	12.2	10.2	11.8	12.4	12.6	12.5
6.	12.5	12.0	11.8	12.1	12.3	10.5	10.8	11.3	10.5	10.6	10.7	11.2	10.3	10.6	11.3	12.0	14.3	16.2	17.2	18.0	18.2	18.5	17.6	17.1
7.	17.0	17.0	17.3	17.3	17.3	17.1	17.2	17.4	17.9	18.3	19.1	18.2	17.6	16.8	13.3	14.3	12.0	8.8	8.2	9.0	10.9	11.2	11.7	11.7
8.	11.3	11.2	10.8	10.5	10.4	10.3	10.3	11.7	12.2	11.3	11.1	10.8	11.1	11.2	11.1	10.3	10.8	12.6	12.6	12.6	10.4	11.1	11.2	11.6
9.	11.1	10.9	11.3	10.8	10.8	10.6	10.4	11.5	9.8	9.8	12.0	12.0	11.3	11.6	12.2	12.6	12.0	12.3	13.0	13.8	12.9	12.2	12.1	12.8
10	13.5	13.7	13.8	14.1	13.8	13.2	13.5	13.9	14.2	15.8	16.1	14.7	13.5	11.7	9.3	11.8	12.2	12.5	13.8	10.0	13.0	13.6	12.1	10.9
11	10.8	9.7	10.4	9.8	8.6	8.8	10.3	13.6	14.2	15.1	13.7	12.2	12.8	11.0	12.1	12.0	12.1	12.2	11.4	11.8	11.8	13.6	13.9	14.2
12	14.1	13.9	13.9	13.8	13.6	13.5	13.8	14.0	14.6	14.9	15.3	15.1	14.9	15.2	15.3	15.6	16.9	18.5	18.4	17.7	18.2	18.1	14.7	14.7
13	11.3	9.2	8.3	9.4	12.0	13.6	15.3	16.6	15.9	14.9	15.6	14.8	14.2	11.5	12.0	11.6	9.9	8.8	8.4	10.5	10.5	10.8	9.8	9.4
14	9.6	9.3	9.3	9.3	9.0	8.8	9.0	9.1	9.8	9.4	9.7	9.4	9.2	8.4	8.1	8.6	9.2	9.1	9.9	10.4	10.7	11.5	12.6	13.0
15	13.0	13.0	13.2	13.0	13.0	13.0	13.2	13.8	14.2	14.9	15.4	16.0	13.8	6.7	4.2	5.3	6.8	5.4	5.9	7.2	7.8	7.5	8.8	9.2
16	9.8	11.1	10.8	12.8	12.2	11.0	10.6	11.0	11.7	12.0	12.6	13.4	13.5	14.5	14.2	14.8	14.0	12.2	12.2	12.3	13.6	14.2	13.4	13.4
17	13.6	13.4	13.8	13.6	13.7	13.4	12.9	14.0	14.8	13.6	13.1	12.5	11.8	10.3	10.8	11.5	11.7	12.2	12.2	12.7	14.1	15.3	14.6	14.0
18	14.9	14.3	14.0	14.2	13.4	13.0	14.6	15.0	15.6	16.9	16.6	16.0	17.3	17.5	16.6	15.8	14.9	17.8	16.5	15.8	17.3	18.4	18.1	18.8
19	18.5	18.1	14.3	14.9	13.8	11.3	9.2	8.1	8.5	7.9	7.3	7.2	6.9	5.4	5.4	5.0	3.3	5.7	6.7	7.3	7.4	6.8	7.0	5.4
20	6.9	6.4	6.7	6.6	6.6	6.9	7.6	9.3	9.0	9.6	9.4	11.2	12.1	12.0	12.1	12.2	12.7	12.2	10.6	11.0	11.6	12.1	12.4	12.5
21	12.4	12.8	12.9	12.8	13.0	13.0	12.8	13.2	13.4	13.6	13.5	14.2	15.2	15.0	14.6	14.8	13.4	12.4	11.4	10.1	10.9	10.8	10.1	9.5
22	9.1	8.6	8.2	8.6	10.8	9.7	9.2	10.4	11.6	12.2	9.4	9.9	9.6	9.3	8.6	9.2	8.2	7.5	7.3	9.5	9.7	10.1	9.2	9.4
23	11.2	12.4	12.4	12.6	12.8	12.9	13.2	13.0	12.6	12.8	13.4	12.2	11.6	12.6	12.3	10.2	12.2	11.7	15.1	15.2	14.9	14.9	15.3	15.2
24	15.6	15.7	16.0	15.8	16.0	15.5	15.5	16.6	17.0	17.0	17.6	17.9	19.1	19.4	19.6	20.3	18.7	19.2	19.3	19.8	20.3	20.3	20.3	20.2
25	20.3	20.0	19.3	16.4	16.1	15.6	15.8	16.4	17.5	18.7	18.2	19.3	19.1	19.3	19.7	19.7	18.3	19.3	18.8	16.6	16.7	17.3	17.6	18.3
26	18.2	15.9	15.0	15.6	15.6	14.9	15.8	16.1	17.6	17.4	16.0	15.0	14.4	14.2	14.3	15.3	13.6	14.5	12.8	13.7	14.1	14.2	14.2	14.3
27	14.2	14.6	14.6	14.6	14.2	14.1	15.3	15.8	15.8	16.5	16.5	16.6	17.6	16.2	17.9	17.0	17.6	18.4	17.3	17.6	16.5	16.8	16.9	15.8
28	15.5	15.6	15.3	14.9	15.2	15.2	15.3	16.0	16.0	16.1	17.9	18.1	18.5	17.3	11.5	9.8	11.6	11.5	13.0	14.7	14.8	14.6	14.5	14.6
29	14.4	14.6	14.8	14.4	14.4	15.6	16.8	15.4	15.9	16.6	17.0	17.6	17.7	16.6	16.2	15.1	15.2	15.0	13.9	18.5	16.3	15.2	15.9	15.3
30	16.0	15.5	15.0	15.0	15.0	13.8	13.7	15.8	17.0	17.3	17.7	17.3	17.0	15.4	13.9	14.9	14.6	14.6	15.3	15.0	14.6	15.4	15.3	15.2
31	14.8	14.4	14.6	14.6	14.8	15.0	15.0	15.4	16.5	17.6	18.4	17.5	17.3	17.9	16.9	16.8	15.3	16.0	15.6	14.6	14.1	14.3	15.5	17.2

MEAN	14.0	13.8	13.7	13.6	13.6	13.4	13.6	14.3	14.8	15.0	15.1	14.9	14.7	14.1	13.6	13.7	13.5	13.6	13.8	14.0	14.0	14.3	14.3	14.1
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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	15.5	10.1	19.5	19.8	14.6	13.2	14.9	11.2	11.7	13.1	11.9	15.4	11.8	9.7	10.6	12.6

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

DATE	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MEAN	13.1	16.0	3.8	10.0	12.7	9.4	13.0	18.0	18.1	15.1	16.1	14.9	15.8	15.4	15.8

17	SSE SSE S	SSE SSV S	SSE S	SSE S	S	SSW SSW SSW	WSW W	W	WNW NNW N	N	N	NNE NNE	1011												
4	15	9	22	6	11	19	15	17	22	24	22	17	4	6	13	22	19	15	11	6	6	S	39		
18	NNE N	NNE NE	NNE NE	E	E	SSE SSE S	SSW SSW SSW	S	SSE SSE S	S	SSE SSE S	S	S	1627											
7	7	7	6	7	6	11	13	17	15	13	15	13	19	17	26	41	17	15	19	13	19	28	26	S	56
19	S	SW W	W	W	W	W	W	W	W	W	W	W	W	1052											
20	20	30	33	24	37	39	30	26	26	37	41	31	35	33	35	30	28	24	13	15	11	11	NNW	57	
20	N	N	WSW W	NNE C	SSE SSE SE	SSE SSE SE	SSE SSE SE	SSE SSE SE	SSE SSE SE	SSE SSE SE	SSE SSE SE	SSE SSE SE	SSE SSE SE	1752											
9	4	4	6	4	4	0	4	13	19	11	9	11	15	4	4	15	17	24	22	17	13	9	9	E	39
21	E	E	E	ENE NNE	NNE N	N	NNW NNW N	NW NNW NNW	NNW NNW	NNW NNW	NNW NNW	NNW NNW	NNW NNW	1710											
13	9	9	7	7	11	9	11	9	15	15	22	15	15	20	24	24	15	9	13	11	13	11	11	NW	33
22	W	W	W	W	WSW W	NNW NNW	ENE W	W	W	NNW W	NNW NNW	N	C	C	C	C	C	C	C	C	C	C	C	WSW	
11	9	9	9	15	13	11	6	2	6	2	2	7	11	15	22	2	15	11	9	0	0	0	0	9	
23	W	SSW SSW	SSW C	C	SE SE	ENE ENE	ESE ESE	ESE ESE	ESE ESE	ESE ESE	ESE ESE	ESE ESE	ESE ESE	1325											
6	4	7	9	6	0	0	2	4	2	6	15	19	17	15	19	11	13	4	17	13	17	19	20	SE	31
24	SE	NNE ESE	NW NE	SE SE	ENE ENE	ENE ENE	ESE ESE	ESE ESE	ESE ESE	ESE ESE	ESE ESE	ESE ESE	ESE ESE	0240											
22	13	11	11	9	9	6	6	13	13	6	7	6	0	6	7	17	4	6	11	9	7	4	7	N	33
25	SSE S	SSW SSW	WSW SSW	SW C	SW SSW	SW SSW	SSW SSW	SSW SSW	SSW SSW	SSW SSW	SSW SSW	SSW SSW	SSW SSW	1533											
13	7	11	11	11	11	9	13	0	13	19	19	17	17	20	13	15	11	6	9	0	2	2	9	WSW	37
26	S	WSW W	W	S	SSW SW	W C	C	C	C	NNW NNW	W N	WNW W	W	WNW W	W	WNW W	W	WNW W	W	WNW W	W	WNW W	W	C	0022
4	15	11	9	7	4	6	6	0	0	0	4	13	13	15	4	9	17	13	6	6	4	0	0	SSW	37
27	C	C	C	S	ENE C	SSE S	E C	ENE ESE	E ESE	E ESE	E ESE	E ESE	E ESE	2341											
0	0	0	0	2	4	0	7	9	4	0	4	9	17	17	0	0	7	9	22	9	9	4	28	E	50
28	SW SE	SSE SE	S S	SSE S	S S	SW WSW	W	W	WNW NNW	NW NNW NNW	NW NNW NNW	NW NNW NNW	NW NNW NNW	0801											
13	17	19	6	11	13	24	22	31	31	20	15	15	6	17	24	20	22	15	7	6	7	0	0	S	50
29	NE NE	N C	C	WSW E	NNE N	SSE ENE	E ESE	E ESE	E ESE	E ESE	E ESE	E ESE	E ESE	0439											
6	6	9	0	0	19	30	9	11	7	2	11	11	6	6	4	2	0	0	0	0	4	6	4	WSW	37
30	S	C	C	C	C	SSE S	C	ESE SSW	SE SE	SSE SSW	S S	S C	SE SSE SSE	S	S	S	S	S	S	S	S	S	S	S	
7	0	0	0	0	0	6	4	0	2	6	7	11	13	13	9	6	0	0	9	13	11	11	11		
31	S	S	S	S	S	S	S	S	S	SSW S	S S	SSW S	S S	SSW S	S S	SSW S	S S	SSW S	S S	S S	S S	S S	S S	S	
13	13	15	13	15	15	17	17	13	13	9	11	17	11	13	15	17	13	24	22	19	17	22	20	2245	

MEAN 10.6 9.7 10.0 10.9 11.2 11.5 14.3 14.4 15.7 15.8 16.7 17.0 18.2 18.2 15.2 15.4 15.0 10.4 10.5 11.2