



Environnement
Canada

Atmospheric
Environment
Branch

Division de
l'environnement
atmosphérique

MONTHLY METEOROLOGICAL SUMMARY
SOMMAIRE MÉTÉOROLOGIQUE MENSUEL

September 1997

Septembre 1997

WINNIPEG INT'L AIRPORT

LAT 49° 54N LONG 97° 17W		ALTITUDE 240 ÉLEVATION 240		MÈTRES (ASL) MÈTRES (NNM)		STANDARD TIME USED: HEURE NORMALE UTILISÉE:				CENTRAL CENTRALE									
DATE	TEMPERATURE TEMPÉRATURE			DEGREE DAYS DEGRÉS-JOURS			REL. HUMIDITY HUMIDITÉ REL.		ORAGE THUNDERSTORM	PRECIPITATION PRÉCIPITATIONS			NEIGE AU SOL SNOW ON GROUND	WINDS VENTS			INSOLATION EFFECTIVE BRIGHT SUNSHINE HEURES HOURS		
	MAXIMALE MAXIMUM	MINIMUM	MOYENNE MEAN	DE CHAUFFE HEATING	DE CROISSANCE GROWING	DE REFRIGÉRATION COOLING	MAXIMALE MAXIMUM	MINIMALE MINIMUM		PLUIE (HAUTEUR) RAINFALL	NEIGE (HAUTEUR) SNOWFALL	PRÉCIP. TOTAL TOTAL PRECIP		VITESSE MOYENNE AVERAGE SPEED	DIRECTION DOMINANTE PREVAILING	VITESSE MOYENNE MAX SUR 2 MIN & DIRECTION		MAX 2 MIN MEAN SPEED & DIRECTION	
	°C	°C	°C	Base 18°	Base 5°C	Base 18°	%	%		mm	cm	mm	cm	km/h		km/h			
1	19.7	5.8	12.8	5.2	7.8		89	49		TR		TR		20.5	N	N 30	0.0		
2	19.3	1.5	10.4	7.6	5.4		94	41						7.2	E	NNW 13	0.0		
3	22.0	5.0	13.5	4.5	8.5		86	46						15.9	S	S 26	0.0		
4	25.8	11.4	18.6		13.6	0.6	91	53	1	3.0		3.0		24.0	S	S 35	0.0		
5	22.2	15.3	18.8		13.8	0.8	95	64		0.5		0.5		23.0	W	W 39	0.0		
6	19.1	12.3	15.7	2.3	10.7		96	74		TR		TR		12.0	N	N 19	0.0		
7	26.8	12.5	19.7		14.7	1.7	97	55		0.5		0.5		15.8	SE	NW 30	0.0		
8	21.6	6.8	14.2	3.8	9.2		97	56						18.8	WNW	NW 30	0.0		
9	20.0	5.0	12.5	5.5	7.5		96	45						9.6	WNW	WNW 17	0.0		
10	25.2	6.2	15.7	2.3	10.7		95	44						14.9	SE	SE 28	0.0		
11	28.5	8.0	18.3		13.3	0.3	92	27						14.6	S	SSW 28	0.0		
12	21.9	15.9	18.9		13.9	0.9	85	54		0.2		0.2		29.6	SSE	SSE 48	0.0		
13	28.6	12.8	20.7		15.7	2.7	91	25						19.1	W	WSW 33	0.0		
14	17.9	6.4	12.2	5.8	7.2		81	41						17.6	NW	WNW 26	0.0		
15	18.9	1.8	10.4	7.6	5.4		96	47						17.8	E	SE 31	0.0		
16	22.3	10.8	16.6	1.4	11.6		97	49	1	19.5		19.5		29.6	W	WSW 43	0.0		
17	19.8	5.9	12.9	5.1	7.9		82	39						21.9	W	W 35	0.0		
18	14.5	4.7	9.6	8.4	4.6		91	56		1.0		1.0		12.2	NNE	NNE 22	0.0		
19	11.8	1.4	6.6	11.4	1.6		94	66		1.5		1.5		15.7	NNW	NNW 24	0.0		
20	14.9	-0.7	7.1	10.9	2.1		94	48						13.0	W	SSW 24	0.0		
21	26.2	6.2	16.2	1.8	11.2		79	31						19.8	SSW	WSW 33	0.0		
22	17.2	2.0	9.6	8.4	4.6		94	51		0.5		0.5		14.0	NNE	NNE 24	0.0		
23	22.2	-2.0	10.1	7.9	5.1		94	36						19.2	SSW	SSW 37	0.0		
24	30.4	10.4	20.4		15.4	2.4	78	25						25.7	W	WNW 48	0.0		
25	25.5	4.6	15.1	2.9	10.1		93	29						9.4	W	NW 19	0.0		
26	28.1	11.2	19.7		14.7	1.7	73	38						23.6	S	S 35	0.0		
27	25.1	12.8	19.0		14.0	1.0	92	34		4.0		4.0		19.2	S	W 37	0.0		
28	16.1	11.3	13.7	4.3	8.7		96	62		2.5		2.5		27.1	WNW	WNW 41	0.0		
29	12.8	3.4	8.1	9.9	3.1		96	70		3.0		3.0		30.0	NNW	WNW 41	0.0		
30	12.1	4.6	8.4	9.6	3.4		98	70						13.7	N	N 20	0.0		
	MEAN MOY.	MEAN MOY.	MEAN MOY.	TOTAL	TOTAL	TOTAL	MEAN MOY.	MEAN MOY.	TOTAL	TOTAL	TOTAL	TOTAL		MEAN MOY.	PREVAILING DOMINANTE	MAXIMUM MAXIMALE	TOTAL MISG		
	21.2	7.1	14.2	126.6	275.5	12.1	91	47	2	36.2	0.0	36.2		18.4	W	SSE 48			
NORMAL NORMALE	18.6	6.1	12.4	178.6	224.0	9.2				50.9	0.4	51.3		18.0	SSE		189.3		
DEGREE DAY SUMMARY/SOMMAIRE DE DEGRÉS-JOURS										DAYS WITH TOTAL PRECIPITATION: JOURS AVEC PRÉCIPITATIONS TOTALES:					DAYS WITH SNOWFALL: JOURS AVEC CHÔTES DE NEIGE:				
										mm					cm				
BELOW 18°C AU-DESSOUS DE 18°	THIS YEAR ANNÉE	PREVIOUS YEAR PRÉCÉDENTE	NORMAL NORMALE	ABOVE 5°C AU-DESSUS DE 5°C	THIS YEAR ANNÉE	PREVIOUS YEAR PRÉCÉDENTE	NORMAL NORMALE	0.5 1.0 2.0 10.0 50.0 OR OR OR OR OR MORE MORE MORE MORE MORE					0.2 1.0 2.0 10.0 50.0 OR OR OR OR OR MORE MORE MORE MORE MORE						
TOTAL FOR MONTH TOTAL DU MOIS	126.6	158.8	178.6	275.5	241.6	224.0	OU OU OU OU OU PLUS PLUS PLUS PLUS PLUS					OU OU OU OU OU PLUS PLUS PLUS PLUS PLUS							
ACCUMULATED SINCE JULY 1 ACCUMULÉS DEPUIS LE 1ER JUILLET	201.5	192.2	242.8	1667.0	1678.7	1721.1	10 7 5 1					11							

1. Climatological Day/Journée climatologique
2. Normal/Normale 1961-1990
3. TR = Trace
4. M = Missing/Manquant
5. No entry/Pas de valeur = No occurrence/Pas d'événement
6. C = Calm/Calmé



Hour ->	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Mean
D 1	135	150	153	152	137	127	113	112	115	110	107	94	84	85	85	84	74	73	75	72	64	57	49	44	98
A 2	47	33	23	32	29	14	14	15	78	60	67	68	73	62	62	62	51	63	40	12	14	44	44	52	45
T 3	50	46	45	36	34	35	32	55	60	69	81	74	73	71	85	90	96	85	80	89	84	82	81	83	67
E 4	85	87	88	86	86	88	90	96	103	116	126	137	142	145	148	155	153	159	157	170	171	172	171	171	129
5	168	164	161	157	154	151	144	138	147	149	143	137	131	138	135	138	150	148	153	158	158	160	152	148	149
6	135	132	134	137	137	135	134	134	135	138	139	137	138	141	138	138	137	140	139	140	137	132	129	121	136
7	124	136	127	123	124	122	120	131	143	149	148	150	157	157	158	158	163	171	156	145	141	147	140	138	143
8	134	134	138	131	123	104	90	90	97	113	116	111	104	109	110	114	104	104	104	80	81	69	69	57	104
9	64	61	48	71	89	94	72	93	109	110	110	110	103	101	105	96	77	67	62	63	60	40	58	34	79
10	81	63	73	63	55	54	60	81	98	105	102	101	101	106	111	119	121	119	119	116	115	115	116	105	96
11	108	94	97	86	72	59	58	79	95	110	121	109	80	78	72	71	79	89	96	104	111	112	111	113	92
12	118	120	119	119	115	108	107	106	107	111	109	114	125	137	137	144	151	153	149	141	145	146	151	154	129
13	161	162	160	154	148	143	141	140	143	142	143	138	127	124	103	94	70	44	54	61	61	65	68	67	113
14	64	65	62	61	61	54	50	50	49	48	58	44	44	45	44	42	38	29	39	34	26	25	39	41	46
15	43	24	19	9	16	20	22	41	47	46	49	48	57	61	63	69	67	65	61	64	68	67	69	79	49
16	95	106	122	137	157	161	164	167	170	174	148	133	130	119	110	107	96	84	77	74	69	65	53	55	116
17	52	49	46	39	38	36	35	40	42	41	37	34	37	44	39	50	51	55	59	62	65	64	50	48	46
18	38	32	32	43	42	39	37	51	57	49	56	71	65	44	56	63	69	68	71	62	55	56	50	43	52
19	54	58	57	58	57	56	56	57	62	64	69	67	62	62	57	47	44	42	39	46	43	42	35	18	52
20	4	-1	-14	-8	-9	-2	-1	11	39	50	41	37	35	25	27	33	29	31	35	32	24	17	15	20	20
21	23	21	20	19	18	19	19	23	34	44	57	63	66	66	67	79	80	88	102	99	97	97	97	93	58
22	73	69	64	85	74	74	75	79	87	90	90	99	86	79	75	64	54	49	49	34	38	43	23	3	65
23	14	-8	8	-16	-28	-33	-7	17	49	56	57	54	50	47	54	50	75	92	91	92	92	89	86	82	44
24	81	79	76	71	67	63	59	60	68	77	85	93	102	97	77	73	87	89	93	83	84	87	73	76	79
25	79	75	64	80	62	61	44	65	83	99	104	97	79	71	63	54	52	82	71	58	64	67	66	64	71
26	70	70	73	73	73	74	74	78	84	91	106	118	113	117	120	122	122	123	125	122	128	129	128	127	103
27	128	127	126	124	120	116	114	116	122	131	126	127	106	69	88	93	116	113	111	113	115	117	116	117	115
28	119	123	122	109	103	97	90	87	80	90	79	83	78	91	86	93	94	87	84	84	77	75	71	71	91
29	72	71	73	74	73	86	93	105	91	89	89	82	73	75	75	74	69	73	73	66	50	33	30	39	72
30	32	61	59	57	52	62	62	64	73	66	67	65	63	64	68	61	60	56	46	36	48	43	44	40	56
Mean	82	80	79	79	76	74	72	79	89	93	94	93	89	88	87	88	88	88	87	84	83	82	80	77	84
Moynne																									

*Temperatures In Tenths of Degrees Celsius
*Temperatures En Dixieme Degres Celsius

Hour ->	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	DIR.	Peak Wind Speed	Time
18	NW	N	C	C	NW	NNE	NNE	N	NE	NE	NE	E	NE	NNE	NE	E	E	N	N	N	NNE	NNE	N	NNE	N	31	19
19	NE	N	N	N	NW	NW	NW	NW	NW	NW	NW	N	NW	N	N	NW	NW	N	NW	NW	NW	NW	NW	NW	NW	41	17
20	NW	NW	NW	W	W	W	W	W	WSW	W	W	W	SW	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	33	23
21	SSW	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	46	14
22	W	W	NW	N	N	NNE	NNE	NE	NNE	NNE	N	NNE	NNE	NNE	NE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	33	13
23	NE	C	SE	C	C	C	SW	SW	SSW	SSW	S	SSW	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	52	16
24	SSW	SW	SW	SSW	SSW	SSW	SSW	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	67	16
25	NW	NW	NW	N	W	W	W	W	W	NW	W	W	N	N	NW	NNE	E	NE	E	ESE	SE	SE	SSE	SSE	W	15	13
26	SSE	SSE	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	48	12
27	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	54	16
28	NW	NW	W	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	61	14
29	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	59	8
30	NW	N	N	NW	NW	N	N	NW	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	59	8

EQUAL TO OR OVER	10	15	20	25	30	35	40	45	50	55	60	65	70	Wind Speed in km/hr
NUMBER OF HOURS	593	464	294	175	112	41	12	4	0	0	0	0	0	
NUMBER OF DAYS	30	29	26	21	17	11	5	2	0	0	0	0	0	
MAX CONSECUTIVE HOURS	89	58	36	21	21	5	3	3	0	0	0	0	0	

Hourly Relative Humidity at:
Humidite Horaire a:

Winnipeg Int'l Airport

September 1997
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Hour ->	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Mean	
D 1	79	78	83	82	79	84	81	88	86	82	75	58	56	54	53	49	51	52	57	66	81	84	88	89	72	
A 2	89	92	92	90	90	93	93	94	90	62	61	56	55	49	46	43	41	45	43	46	53	67	77	70	68	
T 3	75	84	83	81	80	84	86	82	71	63	57	53	49	46	50	46	47	46	46	60	66	64	67	71	65	
E 4	72	76	78	81	83	83	83	79	74	70	64	61	57	56	55	53	59	63	64	81	87	91	89	91	73	
5	94	94	95	95	95	94	91	83	82	82	73	68	64	65	64	70	73	75	77	85	84	90	86	89	82	
6	90	88	91	95	95	95	96	96	96	96	94	90	83	81	76	75	74	74	76	82	87	92	94	95	88	
7	94	94	90	90	93	94	95	94	92	83	72	65	56	56	56	68	75	71	71	87	93	95	97	96	83	
8	97	97	95	86	88	85	81	80	78	71	65	64	56	59	60	59	59	60	61	61	76	85	85	91	75	
9	92	93	92	94	94	95	96	96	92	83	78	71	66	60	60	59	47	45	48	60	73	83	86	87	77	
10	90	93	95	93	91	89	94	94	82	67	58	50	46	44	44	45	46	47	52	59	64	73	79	86	70	
11	88	92	88	83	83	84	86	86	75	64	53	41	30	29	27	29	31	35	43	52	59	64	61	65	60	
12	63	63	71	75	71	69	69	65	64	57	54	58	58	71	69	75	85	85	81	80	79	77	74	77	70	
13	80	84	84	84	89	89	91	88	82	71	61	54	46	41	33	32	28	25	31	42	46	52	55	62	60	
14	64	67	68	72	73	79	81	72	60	55	59	46	45	49	44	41	44	45	51	62	73	76	76	81	62	
15	80	81	85	89	90	92	96	93	75	66	62	58	55	52	50	48	47	47	49	55	60	60	64	66	68	
16	70	76	82	88	95	95	93	97	96	89	77	67	63	55	50	49	52	51	58	66	66	70	67	67	73	
17	67	66	70	68	70	75	78	77	69	62	55	49	45	43	40	40	39	42	48	58	63	71	82	82	61	
18	83	85	89	90	91	91	87	88	81	65	64	71	63	56	70	75	79	80	87	86	88	85	90	91	81	
19	91	92	92	94	94	94	93	93	93	89	85	81	74	71	72	66	70	68	74	84	91	92	94	94	85	
20	93	92	91	92	91	92	94	92	92	81	68	60	54	52	51	48	49	49	58	61	63	63	64	64	70	
21	60	65	70	68	69	71	73	70	59	53	46	41	34	32	31	33	34	36	49	61	65	70	70	79	56	
22	87	88	89	90	91	90	93	94	89	90	93	89	69	64	55	54	51	53	62	77	81	83	85	87	79	
23	85	88	93	89	89	89	91	94	86	77	67	55	47	41	40	36	40	44	48	52	56	56	57	66	66	
24	57	55	56	54	57	57	59	63	56	50	45	41	36	31	25	27	32	34	42	59	60	62	77	78	51	
25	70	81	84	79	88	88	92	93	84	71	58	46	38	34	32	29	29	38	43	47	51	56	58	65	61	
26	67	73	72	65	67	68	70	67	60	56	52	45	40	38	41	42	43	46	50	52	58	61	63	63	57	
27	64	67	69	71	78	83	82	83	78	72	62	58	43	34	37	40	40	46	82	85	88	91	92	92	70	
28	94	95	96	90	90	85	84	84	76	78	67	68	67	70	66	68	68	63	62	67	63	63	71	73	76	
29	71	74	74	72	70	82	86	92	94	93	91	83	79	78	77	76	74	75	76	84	90	92	96	96	82	
30	93	96	96	96	97	97	98	96	94	84	74	73	73	72	72	70	70	70	81	84	84	88	89	89	85	
Mean	80	82	84	83	84	86	86	86	80	72	66	61	55	53	52	52	53	55	59	67	72	75	77	80	71	
Moyenne																										

Note/AVIS: 1. Climatological Day/Journee Climatologique 0001 C.S.T. - 0000 C.S.T.
2. Hours are C.S.T./Les heures sont a l'heure normale de la localite
3. Unit/Unite = percent/pour cent

DAILY WEATHER SUMMARY FOR SEPTEMBER, 1997 AT WINNIPEG, MANITOBA

1. Cloudy to overcast with early morning showers, clearing late afternoon. Maximum temperature slightly below normal, minimum below normal. Winds moderate, decreasing to light early evening.
2. Sunny. Maximum temperature slightly below normal, minimum well below normal. Winds light.
3. Mainly sunny. Maximum temperature near normal, minimum below normal. Winds light, with a period of moderate early to late afternoon, and increasing again to moderate late evening.
4. Mainly sunny, becoming cloudy to overcast late afternoon, with thunderstorms and showers early to late evening. Maximum temperature above normal, minimum slightly above normal. Winds moderate, decreasing slightly to be light occasionally moderate by early evening.
5. Mainly sunny becoming cloudy to overcast early afternoon, with rain late afternoon. Maximum temperature near normal, minimum above normal. Winds light, increasing to moderate mid morning, decreasing to light mid evening.
6. Overcast with drizzle ending mid morning, becoming cloudy late afternoon. Maximum temperature near normal, minimum above normal. Winds light.
7. Mix of sun and cloud, showers early evening. Temperatures above normal. Winds light, increasing to moderate late morning, decreasing to light late afternoon.
8. Mix of sun and cloud. Temperature near normal. Winds light, increasing to moderate near noon, decreasing to light early evening.
9. Mix of sun and cloud. Maximum temperature near normal, minimum slightly below normal. Winds light.
10. Mainly sunny. Maximum temperature above normal, minimum near normal. Winds light, occasionally moderate in the afternoon.
11. Mainly sunny. Maximum temperature well above normal, minimum near normal. Winds light, occasionally moderate in the afternoon.
12. Cloudy to overcast with showers mid to late afternoon, clearing early evening. Maximum temperature slightly above normal, minimum well above normal. Winds increasing to moderate overnight, continuing moderate occasionally strong through the day, decreasing to light late evening.
13. Mainly sunny. Maximum temperature well above normal, minimum above normal. Winds light, except for a period of moderate early to late afternoon.
14. Mix of sun and cloud. Temperatures near normal. Winds light, increasing to be light to moderate mid morning, decreasing to light early evening.
15. Mainly sunny. Maximum temperature near normal, minimum below normal. Winds light, increasing to be moderate early evening.
16. Overcast with thunderstorms turning to showers early morning, becoming sunny late morning. Temperatures above normal. Winds moderate.
17. Mainly sunny. Temperatures near normal. Winds light to moderate, increasing to moderate mid morning, decreasing to light early evening.
18. Cloudy to overcast with showers from late morning to early evening. Maximum temperature slightly below normal, minimum near normal. Winds light, occasionally moderate in the mid to late afternoon.
19. Cloudy to overcast with showers overnight and again in the early evening. Maximum temperature below normal, minimum slightly below normal. Winds light, occasionally moderate early to mid afternoon.
20. Mix of sun and cloud. Maximum slightly below normal, minimum below normal. Winds light, increasing to moderate mid evening.
21. Mainly sunny. Maximum temperature well above normal, minimum near normal. Winds light to moderate, increasing to moderate late morning, decreasing to light early evening.
22. Cloudy with showers mid to late morning, clearing early afternoon. Maximum temperature near normal, minimum slightly below normal. Winds light, except for a period of moderate early to late afternoon.
23. Sunny. Maximum temperature above normal, minimum below normal. Winds light, increasing to moderate late morning.
24. Sunny. Maximum temperature well above normal, minimum above normal. Winds light to moderate, increasing to moderate occasionally strong near noon, decreasing to light early evening.
25. Sunny. Maximum temperature well above normal, minimum near normal. Winds light.
26. Mainly sunny. Temperatures well above normal. Winds increasing to moderate by mid morning.
27. Mainly sunny, becoming overcast with showers by early evening. Temperatures well above normal. Winds decreasing to light overnight, continuing light except for occasional periods of moderate mid afternoon to early evening.
28. Cloudy to overcast, showers overnight and again mid afternoon. Maximum temperature near normal, minimum well above normal. Winds light, increasing to be moderate to strong mid morning, decreasing to moderate early evening.
29. Overcast with rain to late morning, and again mid afternoon, clearing in the evening. Maximum temperature slightly below normal, minimum near normal. Winds moderate to strong, decreasing to light early evening.
30. Visibility less than 1 km in fog very early morning, otherwise cloudy to overcast, clearing early evening. Maximum temperature slightly below normal, minimum near normal. Winds light.