



Environment Canada
Environnement Canada

MONTHLY METEOROLOGICAL SUMMARY
SOMMAIRE MÉTÉOROLOGIQUE MENSUEL

October 1998

Atmospheric Division de
Environnement l'Environnement
Branch atmosphérique

WINNIPEG INT'L AIRPORT

Octobre 1998

LAT 49° 54N LONG 97° 17W		ALTITUDE 240 METRES (ASL) ÉLEVATION 240 MÈTRES (NMM)		STANDARD TIME USED: HEURE NORMALE UTILISÉE:		CENTRAL CENTRALE													
DATE	TEMPERATURE TEMPÉRATURE			DEGREE DAYS DEGRÉS-JOURS			REL. HUMIDITY HUMIDITÉ REL		PRECIPITATION PRÉCIPITATIONS				WINDS VENTS				INSOLATION EFFECTIVE BRIGHT SUNSHINE HEURES HOURS		
	MAXIMALE MAXIMUM	MINIMUM	MOYENNE MEAN	DE CHAUFFE HEATING	DE CROISSANCE GROWING	DE REFFRAÏCHISSEMENT COOLING	MAXIMALE MAXIMUM	MINIMALE MINIMUM	ORAGE THUNDERSTORM	PLUIE (HAUTEUR) RAINFALL	NEIGE (HAUTEUR) SNOWFALL	PRÉCIP. TOTAL TOTAL PRECIP	NEIGE AU SOL SNOW ON GROUND	VITESSE MOYENNE AVERAGE SPEED	DIRECTION PRÉVALEANTE 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	11.8	-3.8	4.0	14.0			97	40						14.7	W	NNW	26	0.0	
2	13.3	-6.3	3.5	14.5			92	40						9.7	ESE	ESE	19	0.0	
3	15.6	2.0	8.8	9.2	3.8		94	42						18.6	SE	SE	28	0.0	
4	15.7	5.0	10.4	7.6	5.4		91	48		1.5		1.5		21.2	E	E	35	0.0	
5	11.2	7.9	9.6	8.4	4.6		100	92		28.0		28.0		20.7	ESE	ESE	33	0.0	
6	10.6	6.8	8.7	9.3	3.7		100	90		4.0		4.0		20.5	N	NW	37	0.0	
7	14.5	2.9	8.7	9.3	3.7		98	57						15.8	NW	NW	28	0.0	
8	18.9	5.7	12.3	5.7	7.3		90	49						32.8	S	S	52	0.0	
9	22.0	7.1	14.6	3.4	9.6		96	41						20.9	S	NW	31	0.0	
10	8.9	4.2	6.6	11.4	1.6		100	76		TR		TR		21.8	NE	NE	28	0.0	
11	11.5	5.3	8.4	9.6	3.4		100	83	1	14.0		14.0		25.1	E	E	33	0.0	
12	11.5	1.7	6.6	11.4	1.6		100	76		3.0	TR	3.0		33.7	WNW	NW	46	0.0	
13	6.6	1.6	4.1	13.9			100	76		TR		TR		15.4	SE	NW	28	0.0	
14	7.6	5.0	6.3	11.7	1.3		100	76	1	5.5		5.5		24.3	SE	SE	35	0.0	
15	10.0	5.8	7.9	10.1	2.9		100	91						15.0	S	S	24	0.0	
16	8.8	4.9	6.9	11.1	1.9		98	85						26.2	NE	NNE	41	0.0	
17	5.3	2.3	3.8	14.2			93	80		TR		TR		29.7	N	N	41	0.0	
18	6.2	-1.2	2.5	15.5			99	66		TR		TR		15.4	NW	NNW	24	0.0	
19	7.2	-2.8	2.2	15.8			100	75		0.5		0.5		23.7	NW	NW	39	0.0	
20	9.4	-5.2	2.1	15.9			100	59		0.2		0.2		8.6	W	WNW	11	0.0	
21	15.8	-2.7	6.6	11.4	1.6		95	54						15.7	S	SSW	26	0.0	
22	22.2	3.6	12.9	5.1	7.9		88	33						17.0	SSW	SW	24	0.0	
23	18.9	2.7	10.8	7.2	5.8		97	52						13.9	S	S	26	0.0	
24	7.6	-0.3	3.7	14.3			100	86						18.5	NNE	ENE	33	0.0	
25	7.6	-1.7	3.0	15.0			100	96		TR		TR		7.3	NE	NNE	13	0.0	
26	10.0	3.6	6.8	11.2	1.8		100	97		1.0		1.0		20.0	S	S	31	0.0	
27	17.1	-2.0	7.6	10.4	2.6		100	29						15.6	NW	NW	28	0.0	
28	14.4	-4.4	5.0	13.0			85	39						9.0	SE	ESE	19	0.0	
29	8.2	3.6	5.9	12.1	0.9		100	71		1.5		1.5		16.8	ESE	ESE	22	0.0	
30	9.8	0.2	5.0	13.0			100	57						18.4	NW	NW	33	0.0	
31	7.2	-5.7	0.8	17.2			97	62						12.7	N	N	19	0.0	
	MEAN 11.8 MOY.	MEAN -1.5 MOY.	MEAN 6.7 MOY.	TOTAL 351.9	TOTAL 71.4	TOTAL 0.0	MEAN 97 MOY.	MEAN 65 MOY.	TOTAL 2	TOTAL 59.2	TOTAL 0.0	TOTAL 59.2		MEAN 18.7 MOY.	PREVAILING S DOMINANTE	MAXIMUM S MAXIMALE	TOTAL 52	TOTAL 0.0	
NORMAL NORMALE	11.3	0.1	5.7	380.9	74.9	0.3				24.6	4.9	29.5		19.0	SSE			149.8	
DEGREE DAY SUMMARY/SOMMAIRE DE DEGRÉS-JOURS										DAYS WITH TOTAL PRECIPITATION: JOURS AVEC PRÉCIPITATIONS TOTALES:					DAYS WITH SNOWFALL: JOURS AVEC CHÛTES DE NEIGE:				
BELOW 18°C AU-DESSOUS DE 18°C		THIS YEAR ANNÉE	PREVIOUS YEAR ANNÉE	NORMAL NORMALE	ABOVE 5°C AU-DESSUS DE 5°C		THIS YEAR ANNÉE	PREVIOUS YEAR ANNÉE	NORMAL NORMALE	mm					cm				
		EN COURS	PRÉCÉDENTE				EN COURS	PRÉCÉDENTE		0.5 OR	1.0 OR	2.0 OR	10.0 OR	50.0 OR	0.2 OR	1.0 OR	2.0 OR	10.0 OR	50.0 OR
TOTAL FOR MONTH TOTAL DU MOIS		351.9	400.3	380.9			71.4	87.3	74.9	MORE OU	MORE OU	MORE OU	MORE OU	MORE OU	MORE OU	MORE OU	MORE OU	MORE OU	MORE OU
ACCUMULATED SINCE JULY 1 ACCUMULÉS DEPUIS LE 1ER JUILLET		508.9	601.8	623.7	ACCUMULATED SINCE APRIL 1 ACCUMULÉS DEPUIS LE 1ER AVRIL		1921.8	1212.0	1796.0	PLUS	PLUS	PLUS	PLUS	PLUS	PLUS	PLUS	PLUS	PLUS	PLUS

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	25	32	16	-1	-5	-15	-9	-5	24	64	82	94	102	101	110	111	111	103	72	26	16	0	-19	7	43	
A 2	-10	-22	-28	-43	-51	-55	-57	-56	3	57	72	92	114	118	125	126	130	125	96	32	71	68	62	60	43	
T 3	55	47	42	33	27	23	25	22	41	69	107	120	133	149	149	151	148	134	108	113	106	96	92	77	86	
E 4	72	68	72	69	57	52	55	54	71	83	111	125	141	147	148	148	146	139	131	128	119	117	108	84	102	
5	79	80	82	85	82	84	85	88	89	93	95	103	107	110	109	111	105	101	101	103	101	105	104	101	96	
6	100	100	100	100	100	100	99	98	99	100	105	104	102	97	97	101	92	79	72	69	69	69	69	72	91	
7	71	78	78	67	56	46	39	32	53	77	95	104	119	130	137	139	142	138	114	81	85	69	76	72	87	
8	72	67	58	62	58	60	61	68	79	98	114	137	162	172	181	183	182	174	163	153	146	140	139	129	119	
9	119	114	104	100	91	87	78	73	90	127	157	170	202	217	187	162	147	112	107	107	108	107	101	97	124	
10	89	68	68	58	58	51	44	43	51	58	60	62	65	66	66	71	69	68	65	64	62	62	60	61	62	
11	59	58	56	55	53	54	53	55	61	68	69	80	89	92	96	97	97	96	98	100	103	107	109	113	80	
12	114	96	91	64	64	49	36	29	26	25	28	30	34	35	30	27	25	26	24	20	23	30	28	28	41	
13	28	25	20	18	24	20	17	17	23	31	37	46	51	57	58	65	64	62	63	62	58	58	57	58	42	
14	57	57	54	53	52	51	52	53	54	59	66	70	74	70	65	58	58	59	59	59	63	65	63	62	60	
15	63	65	69	70	68	68	69	68	67	62	58	66	78	89	96	96	96	97	92	94	90	87	84	82	78	
16	79	79	75	78	77	78	82	81	84	86	86	85	86	81	74	73	72	68	68	67	66	62	57	52	75	
17	49	49	51	50	51	45	42	38	37	39	45	51	46	48	48	45	51	47	44	41	39	31	27	26	44	
18	24	23	25	24	23	19	13	-9	13	20	23	33	38	50	49	45	50	51	49	50	49	56	60	51	35	
19	37	39	45	36	34	34	29	26	30	31	41	48	57	62	62	56	51	51	49	49	25	3	-7	-16	36	
20	-25	-21	-20	-24	-24	-33	-20	-16	1	20	46	61	62	72	82	90	92	92	72	65	69	75	30	19	30	
21	9	7	2	-2	-9	-10	-16	-18	4	20	62	84	108	124	142	150	151	131	117	104	92	81	77	74	62	
22	68	66	57	49	40	38	48	47	57	94	121	154	184	199	216	220	219	185	163	160	142	132	128	114	121	
23	102	95	77	68	65	55	33	32	57	83	113	142	163	179	186	183	175	157	126	116	111	98	89	75	108	
24	57	24	34	30	27	23	24	32	38	61	72	64	58	58	64	62	60	58	57	56	55	58	30	20	47	
25	-3	-13	-14	-11	-11	-1	11	13	20	28	35	46	57	59	63	68	75	75	74	69	59	58	58	58	36	
26	59	59	58	58	52	51	45	36	38	42	51	62	67	77	85	97	98	91	87	89	90	90	89	86	69	
27	83	75	64	51	39	30	13	32	46	72	104	126	155	171	162	158	144	109	50	59	31	4	19	26	76	
28	-18	7	-25	-30	-42	-32	-17	-32	-13	58	92	101	116	130	136	142	138	109	67	70	81	71	65	59	51	
29	51	42	44	44	47	47	47	55	57	67	70	74	72	79	72	72	72	72	73	76	77	77	79	80	64	
30	80	70	66	58	57	56	44	45	48	55	60	67	73	83	90	97	88	66	38	21	16	22	25	16	56	
31	25	13	2	11	2	-5	-10	-29	-20	13	37	55	62	66	59	66	58	16	12	-24	-22	-26	-43	-39	12	
Mean	54	50	46	41	37	35	33	31	43	60	75	86	96	103	105	106	103	93	81	74	71	66	62	58	67	
Moyenne																										

*Temperatures In Tenths of Degrees Celsius
*Températures 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	
D	1	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	NNW	41	11	
A	15	13	13	13	11	15	13	13	13	19	26	24	24	24	13	19	20	13	17	13	15	9	11	7	4	NNW	41	11
Y	2	NNE	NNE	ENE	C	NNE	NNE	NW	NNE	NE	ESE	SE	SE	ESE	SE	ESE	E	E	E	ENE	E	E	ESE	ESE	ESE	33	15	
O	6	7	4	0	4	6	4	7	4	9	7	11	19	6	15	11	15	13	11	11	15	15	17	15	ESE	33	15	
F	3	ESE	ESE	ESE	ESE	ESE	ESE	SE	SE	SSE	SE	SSE	SSE	SE	SSE	SSE	SSE	SSE	SE	ESE	SE	SE	SE	SE	SE	41	14	
M	19	19	19	17	15	19	17	15	17	15	20	28	24	19	19	20	15	15	13	19	24	22	20	17	SE	41	14	
O	4	SE	SE	SE	SE	SSE	SE	SE	ESE	ESE	SE	ESE	ESE	ESE	E	E	E	E	E	E	E	E	E	NE	E	44	18	
N	17	17	17	22	17	17	19	19	19	17	19	22	24	26	24	30	35	31	24	28	22	17	20	9	E	44	18	
T	5	NNE	NE	ENE	NE	ENE	E	E	E	ESE	ESE	ESE	ESE	ESE	SE	ESE	SE	ESE	ESE	ESE	E	SSE	C	N	SE	46	12	
H	13	17	22	15	13	15	13	19	19	26	26	28	33	30	28	28	22	26	30	30	26	11	0	7	SE	46	12	
	6	N	N	ENE	ENE	ENE	N	N	N	WSW	N	N	N	N	NNW	NNW	NNW	NW	NW	NW	NW	NW	NW	NW	NW	54	17	
	9	11	11	13	11	11	7	9	11	13	15	22	24	22	30	26	31	37	33	31	31	28	28	28	NW	54	17	
	7	NW	NW	NW	NW	NW	NW	W	W	NW	WSW	W	W	W	W	WSW	W	WSW	C	S	S	S	S	S	NW	39	3	
	22	26	28	26	20	19	17	15	17	20	19	19	15	17	13	15	11	4	0	7	7	13	15	13	NW	39	3	
	8	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	SSE	69	13	
	19	19	19	20	22	24	26	26	31	39	41	39	37	50	52	46	46	31	35	35	31	31	35	33	SSE	69	13	
	9	S	S	S	S	S	S	S	SSW	SSW	WSW	WSW	WSW	W	NW	NW	NW	NW	NNW	N	NNW	N	NNW	NNW	NW	41	14	
	28	26	24	20	17	17	17	17	20	17	17	15	20	24	30	31	26	20	22	19	17	15	22	20	NW	41	14	
	10	N	NNW	N	N	N	N	N	N	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	ENE	ENE	E	E	NE	35	14	
	17	11	13	24	26	22	20	19	15	26	26	26	22	28	24	26	24	26	19	28	17	20	20	24	NE	35	14	
	11	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	48	16
	24	19	24	20	28	22	28	24	20	20	24	22	30	24	30	31	31	33	26	28	26	26	24	19	E	48	16	
	12	SE	S	W	NW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	W	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	59	7	
	15	17	17	41	46	35	43	39	39	43	41	35	33	44	37	30	33	39	30	26	35	28	24	NNW	59	7		
	13	NNW	NW	NNW	N	NNW	NNW	N	N	NNE	NE	NE	6	13	7	9	13	11	11	19	19	22	20	20	NW	35	1	
	26	28	19	15	19	17	15	17	13	11	11	9	6	13	7	9	13	11	11	19	19	22	20	20	NW	35	1	
	14	SE	SE	SE	SE	SE	SE	ESE	SE	SE	SSE	SSE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	SSE	SSE	SE	46	11	
	22	22	24	28	26	24	28	20	31	26	35	31	28	24	20	22	17	20	19	24	22	24	24	22	SE	46	11	
	15	S	S	S	S	S	SSW	SSW	SSW	S	S	SSW	SSW	S	S	SSE	ENE	ESE	SE	SE	SE	SE	SE	SE	SSE	31	1	
	22	20	22	22	24	22	17	15	15	15	17	15	15	9	15	19	13	4	4	9	15	15	7	9	SSE	31	1	
	16	NE	ENE	ENE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NE	NE	NNE	56	19	
	15	17	20	19	13	15	28	24	28	22	22	35	31	24	31	35	35	28	24	33	41	30	31	28	NNE	56	19	
	17	NE	NNE	NNE	NNE	N	N	N	N	NNE	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	54	10
	30	26	31	30	31	33	28	30	28	26	37	30	39	31	39	41	30	28	26	26	26	24	22	20	N	54	10	

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
D 1	---	---	---	---	1004	---	1050	1004	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
A 2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
T 3	---	---	---	---	---	---	---	1005	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
E 4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
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12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
13	1055	1081	1012	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
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17	1010	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
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28	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
EQUAL TO OR OVER	----->	1000	1200	1400	1600	1800	2000	2100	2200	2300	2400	2500	2600	2700	---	---	---	---	---	---	---	---	---	---
NUMBER OF HOURS	----->	86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NUMBER OF DAYS	----->	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAX CONSECUTIVE HOURS	----->	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1016 1004 1019 1036 1010
 1016 1027 1028 1065
 Windchill
 in W/sq.M.