

# MONTHLY METEOROLOGICAL SUMMARY SOMMAIRE METEOROLOGIQUE MENSUEL

Environment Canada  
Environnement Canada

Prairie & Northern Region  
Région des Prairies et du Nord

**WINNIPEG INT'L A (YWG) MB.**

**MONTH: December 2004**

**MOIS: décembre 2004**

DATE	TEMPERATURE TEMPERATURE			DEGREE-DAYS DEGRES-JOURS			REL HUMIDITY HUMIDITE REL		PRECIPITATION PRECIPITATIONS			SNOW ON GROUND
	MAX	MIN	MEAN	HEATING	GROWING	COOLING	MAX	MIN	RAINFALL	SNOWFALL	TOTAL	
	°C	°C	°C moyenne	de chauffe base 18	de crois- sance base 5	de refri- geration base 18	%	%	de pluie hauteur mm	de neige hauteur cm	precip- totales mm	neige au sol cm
1	-14.2	-21.8	-18.0	36.0	0.0	0.0	99	78	M	M	TR	M
2	-8.8	-24.9	-16.9	34.9	0.0	0.0	91	57	M	M	0.5	M
3	4.3	-9.4	-2.6	20.6	0.0	0.0	99	81	M	M	2.5	M
4	4.1	-18.4	-7.2	25.2	0.0	0.0	85	58	M	M	TR	M
5	-9.5	-19.5	-14.5	32.5	0.0	0.0	88	63	M	M	1.0	M
6	-0.9	-10.4	-5.7	23.7	0.0	0.0	100	80	M	M	6.5	M
7	-4.7	-20.8	-12.8	30.8	0.0	0.0	100	80	M	M	TR	M
8	-6.7	-11.2	-9.0	27.0	0.0	0.0	98	90	M	M	2.5	M
9	-8.7	-15.0	-11.9	29.9	0.0	0.0	94	85	M	M	0.0	M
10	-7.6	-13.4	-10.5	28.5	0.0	0.0	98	90	M	M	TR	M
11	0.8	-8.3	-3.8	21.8	0.0	0.0	100	90	M	M	2.0	M
12	-2.4	-19.6	-11.0	29.0	0.0	0.0	92	72	M	M	TR	M
13	-14.5	-25.6	-20.1	38.1	0.0	0.0	86	69	M	M	0.0	M
14	-1.3	-16.7	-9.0	27.0	0.0	0.0	94	76	M	M	0.0	M
15	-1.7	-13.5	-7.6	25.6	0.0	0.0	100	80	M	M	0.0	M
16	-5.8	-18.7	-12.3	30.3	0.0	0.0	97	66	M	M	TR	M
17	4.3	-18.3	-7.0	25.0	0.0	0.0	94	68	M	M	2.0	M
18	-13.5	-30.0	-21.8	39.8	0.0	0.0	76	49	M	M	0.0	M
19	-10.8	-29.5	-20.2	38.2	0.0	0.0	94	60	M	M	4.0	M
20	-0.7	-20.9	-10.8	28.8	0.0	0.0	100	65	M	M	TR	M
21	-20.2	-27.7	-24.0	42.0	0.0	0.0	66	56	M	M	TR	M
22	-23.3	-32.6	-28.0	46.0	0.0	0.0	75	64	M	M	0.0	M
23	-24.3	-33.9	-29.1	47.1	0.0	0.0	70	55	M	M	0.0	M
24	-19.0	-30.1	-24.6	42.6	0.0	0.0	73	62	M	M	0.0	M
25	-19.0	-28.6	-23.8	41.8	0.0	0.0	76	62	M	M	0.0	M
26	-11.9	-26.4	-19.2	37.2	0.0	0.0	94	66	M	M	0.5	M
27	-11.6	-17.8	-14.7	32.7	0.0	0.0	97	74	M	M	1.0	M
28	-7.4	-21.3	-14.4	32.4	0.0	0.0	98	77	M	M	TR	M
29	-7.6	-21.6	-14.6	32.6	0.0	0.0	99	78	M	M	0.5	M
30	-6.2	-10.7	-8.5	26.5	0.0	0.0	98	93	M	M	16.5	M
31	-9.4	-21.1	-15.3	33.3	0.0	0.0	94	60	M	M	2.5	M
<b>TOTAL</b>	<b>-258.2</b>	<b>-637.7</b>		<b>1006.9</b>	<b>0.0</b>	<b>0.0</b>			<b>0.0</b>	<b>0.0</b>	<b>42.0</b>	<b>totale</b>
<b>MEAN</b>	<b>-8.3</b>	<b>-20.6</b>	<b>-14.5</b>				<b>91</b>	<b>71</b>				<b>moyenne</b>
<b>NORMAL</b>	<b>-9.7</b>	<b>-19.1</b>	<b>-14.4</b>	<b>1004.5</b>	<b>0.0</b>	<b>0.0</b>			<b>1.6</b>	<b>19.8</b>	<b>18.5</b>	<b>normale</b>

**NOTE/AVIS:**

1. Climatological Day / Journee Climatologique 00 01 CST - 00 00 CST
2. 30 Year Normals / Normales duree 30 ans.
3. TR - Trace

DEWPOINT TEMPERATURES / TEMPÉRATURE PRISE AU THERMOMETRE MOUILLE																								
Hour (Local Standard Time) / Heure (temps standard local)																								
DATE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-16.1	-16.3	-16.9	-18.1	-18.5	-18.7	-18.5	-18.2	-22.1	-21.7	-19.8	-20.2	-20.3	-20.4	-19.6	-19.3	-19.2	-19.6	-19.8	-19.5	-20.3	-18.4	-17.9	-18.5
2	-18.7	-18.6	-20.1	-22.4	-28.9	-26.7	-27.6	-26.8	-27.3	-27.7	-23.7	-21.4	-21.2	-21.2	-20.4	-20.3	-20.1	-19.2	-17.7	-18.2	-14.4	-13.0	-11.6	-11.3
3	-10.8	-9.4	-8.5	-7.8	-7.2	-6.5	-5.7	-4.9	-3.4	-1.8	-0.4	0.0	0.3	0.5	0.5	0.8	1.3	0.9	1.0	1.1	1.1	1.0	1.1	1.1
4	0.9	-2.2	-5.4	-8.7	-11.1	-12.6	-13.9	-16.2	-16.3	-17.1	-17.4	-17.8	-19.7	-18.8	-18.9	-19.6	-19.5	-19.1	-19.4	-20.4	-21.4	-22.2	-21.8	-22.6
5	-22.7	-22.6	-22.8	-23.1	-23.0	-22.8	-22.9	-22.4	-21.9	-21.1	-21.2	-21.0	-19.6	-19.3	-19.2	-18.7	-17.9	-17.0	-16.0	-15.0	-14.0	-13.4	-13.0	-12.2
6	-11.6	-11.8	-11.4	-10.2	-9.3	-8.6	-8.1	-7.3	-6.6	-5.7	-4.8	-4.1	-3.4	-2.8	-2.0	-1.5	-1.3	-1.6	-1.6	-1.5	-1.9	-2.8	-4.9	-5.5
7	-6.0	-6.0	-6.3	-6.7	-7.0	-7.2	-7.1	-7.1	-9.3	-8.7	-9.1	-8.7	-8.7	-9.4	-11.1	-12.5	-15.0	-14.7	-16.7	-20.3	-17.3	-15.0	-11.0	-11.2
8	-11.6	-11.0	-11.0	-11.1	-10.3	-10.2	-9.7	-9.6	-9.1	-8.6	-8.4	-7.8	-7.8	-8.2	-8.3	-8.2	-9.2	-10.4	-11.2	-11.3	-11.2	-11.3	-11.6	-11.6
9	-11.8	-12.4	-12.2	-12.4	-12.6	-12.9	-15.4	-15.9	-15.1	-14.3	-14.5	-14.5	-14.0	-11.9	-11.5	-10.6	-10.2	-11.2	-11.9	-12.2	-11.8	-12.1	-12.8	-13.1
10	-12.9	-12.7	-12.9	-13.2	-13.2	-13.2	-13.1	-13.2	-13.3	-12.6	-12.2	-12.4	-11.9	-11.7	-11.2	-11.2	-11.6	-12.7	-13.6	-12.7	-12.2	-10.7	-9.9	-8.9
11	-8.2	-7.9	-7.6	-7.0	-6.5	-6.4	-6.4	-6.6	-6.6	-6.8	-6.4	-5.9	-5.5	-5.3	-5.0	-4.6	-4.6	-4.2	-3.4	-2.3	-1.4	0.6	-0.3	-3.2
12	-3.9	-5.5	-6.3	-6.6	-8.0	-8.8	-9.6	-11.4	-11.6	-11.4	-10.7	-10.4	-11.0	-11.8	-12.3	-12.6	-15.7	-16.7	-17.2	-17.4	-17.8	-18.3	-19.3	-20.9
13	-22.4	-23.3	-25.2	-25.9	-25.9	-26.1	-27.1	-27.3	-26.2	-28.0	-25.0	-22.2	-20.4	-19.3	-18.5	-18.5	-18.7	-19.3	-19.7	-21.4	-19.3	-20.0	-18.9	-20.0
14	-18.5	-17.3	-16.6	-16.3	-16.1	-15.3	-15.7	-15.6	-15.2	-14.9	-13.5	-12.1	-10.9	-9.7	-9.3	-8.7	-8.1	-6.9	-5.8	-5.5	-5.3	-4.9	-4.9	-5.2
15	-5.4	-6.1	-6.7	-7.1	-7.1	-6.0	-5.2	-6.4	-7.8	-9.3	-7.8	-6.1	-5.7	-5.0	-5.6	-6.0	-7.1	-7.8	-9.6	-11.3	-12.7	-12.9	-10.7	-8.4
16	-7.4	-7.3	-6.3	-8.5	-12.6	-13.2	-13.2	-14.6	-15.6	-16.5	-16.2	-18.3	-17.5	-18.0	-18.7	-19.2	-19.9	-20.9	-21.1	-21.1	-22.1	-21.4	-22.0	-22.4
17	-20.8	-20.0	-18.7	-17.0	-15.1	-13.4	-11.9	-10.7	-9.6	-8.4	-7.0	-5.7	-3.5	-0.7	-0.2	-0.1	-0.4	-0.5	-3.8	-9.5	-11.8	-13.4	-15.6	-16.3
18	-18.4	-19.6	-20.3	-20.2	-20.7	-20.8	-21.4	-22.1	-23.7	-25.5	-27.1	-27.8	-29.0	-29.4	-30.4	-31.1	-31.1	-31.9	-32.9	-34.0	-34.3	-33.4	-33.7	-34.2
19	-33.7	-32.3	-32.1	-32.4	-32.5	-31.6	-30.6	-29.9	-28.8	-28.0	-27.1	-25.2	-23.0	-21.8	-20.4	-19.1	-18.6	-17.8	-16.8	-15.9	-14.5	-13.8	-13.4	-12.6
20	-11.8	-10.8	-10.3	-10.1	-9.5	-7.7	-5.8	-1.8	-0.7	-1.5	-1.9	-3.8	-5.4	-7.1	-10.0	-10.8	-13.8	-15.8	-16.8	-18.2	-22.4	-24.6	-24.5	-24.6
21	-25.3	-26.4	-26.4	-27.7	-28.1	-27.7	-27.6	-26.5	-26.1	-25.6	-25.9	-25.8	-25.8	-25.6	-25.3	-26.4	-28.6	-29.9	-30.7	-31.0	-31.0	-31.1	-31.2	-31.7
22	-32.0	-32.5	-33.1	-34.1	-34.1	-35.1	-34.9	-35.3	-36.7	-35.7	-33.1	-31.8	-30.4	-29.4	-28.7	-28.4	-28.7	-29.4	-30.6	-32.2	-33.6	-33.9	-34.1	-35.1
23	-34.8	-35.2	-34.5	-35.2	-36.4	-36.0	-37.2	-36.2	-37.6	-37.2	-34.8	-33.4	-32.1	-32.0	-31.2	-31.1	-31.7	-31.8	-32.0	-32.6	-32.5	-32.9	-32.3	-33.0
24	-32.0	-33.3	-33.8	-33.3	-34.1	-33.2	-32.8	-32.1	-32.2	-30.1	-29.0	-27.4	-26.1	-25.3	-25.5	-24.7	-24.9	-24.9	-25.0	-25.0	-25.3	-24.6	-24.6	-24.5
25	-24.5	-24.2	-23.8	-23.7	-23.8	-23.8	-24.1	-24.5	-24.7	-25.5	-26.3	-26.4	-26.7	-26.4	-26.2	-27.0	-27.6	-28.9	-29.7	-30.2	-31.0	-30.9	-30.7	-27.9
26	-29.6	-28.6	-28.9	-29.1	-29.6	-30.1	-29.3	-29.6	-29.7	-29.4	-28.2	-26.7	-25.1	-23.4	-22.7	-21.3	-20.4	-19.3	-17.8	-16.1	-14.4	-13.8	-13.7	-13.3
27	-12.8	-12.5	-14.9	-16.1	-17.1	-17.8	-18.9	-19.3	-19.8	-20.5	-21.0	-20.9	-20.7	-20.5	-20.3	-20.0	-19.9	-19.3	-17.6	-16.6	-16.6	-15.7	-14.9	-14.2
28	-13.6	-12.3	-11.3	-10.4	-9.4	-8.8	-9.4	-9.8	-10.3	-11.3	-10.5	-9.8	-10.1	-10.2	-11.0	-12.3	-14.7	-14.0	-15.5	-17.3	-16.8	-17.9	-17.5	-20.9
29	-21.8	-22.4	-20.9	-22.6	-17.7	-18.0	-16.0	-15.7	-13.0	-12.8	-12.0	-11.0	-8.9	-8.7	-8.3	-8.1	-8.9	-9.6	-9.5	-9.3	-8.6	-8.6	-8.7	-8.5
30	-8.2	-8.2	-8.0	-7.0	-6.7	-7.1	-7.0	-6.7	-6.7	-6.7	-7.0	-7.1	-7.4	-7.8	-7.8	-8.2	-8.0	-7.7	-7.5	-7.6	-7.9	-8.0	-8.7	-10.0
31	-11.5	-12.1	-12.5	-12.4	-12.5	-13.2	-14.2	-15.0	-15.7	-16.6	-18.6	-19.4	-20.1	-21.1	-22.2	-22.2	-22.9	-23.3	-23.6	-23.3	-23.5	-23.4	-23.6	-24.2

NOTE/AVIS: 1. Unit = °C 1. Unite = °C  
 2. No entry = Missing / Pas de valeur - Manquant

DATE		PRECIPITATION OCCURRENCES / EVENEMENT DES PRECIPITATIONS																							
		Hour (Local Standard Time) / Heure (temps standard local)																							
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1	S	S		S	S													S							
2	S	S	S												R			S	S		S		S		
3	S	S	S																						
4					S																				
5																		S	S	S	S	S	S		
6			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	ZL	ZL						
7				S	S	S	S	S	S	S	S	S	S	S	S	S						S	S		
8	S			S	S	S	S	S	S	S	S	ZL								S					
9																									
10				S	S	S	S	S	S	S	S	S	S												
11				S	S	S	S	S	S	S	S	S	S	S	S	S		ZR	ZR	ZR	R	S	S		
12				S	S	S	S	S	S	S	S	S	S	S	S	S									
13																									
14																									
15																									
16		SSG	S	S	S	S			S	S															
17		S			IC	S	S		S	S															
18																									
19											S	S	S	S	S	S	S	S	S	S	S	S	S		
20							ZR	ZL			S	S	S	S	S	S	S	S	S	S	S	S	S		
21	S				IC	IC	IC	IC	S	S	S	S	S	S	S	S									
22																									
23															IC	IC	IC	IC	IC	IC	IC	IC	IC		
24																									
25																									
26																			S	S	S	S	SW		
27	S	SW	SW	SW	SW	S	S	S	S	S	S	S	S	S	S	S	S	S	ZLS	ZLS	S	S	ZLS		
28	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S		
29									S	SG	SG	ZLSG	ZLSG	ZLSG	ZLSG	ZLSG	ZLSG	ZLSG	ZL	ZL	ZL	ZL	ZL		
30										ZRSIP	S	SIP	SIP	SIP	S	S	S	S	S	S	S	S	S		
31	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S		

NOTE/AVIS: R = Rain/Pluie    W = Showers/averse de    T = Thunderstorm/orage    L = Drizzle/brume    Z = Freezing/verglacante  
 S = Snow/neige    SG = Snow Grains/neige en grains    A = Hail/grele    IP = Ice Pellets/gresil    IC = Ice Crystals/cristaux de glace

Hour Heure	WINDS (km/h)																								Peak Gust	Hour Heure	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
16	W	WNW	NW	N	NNE	N	N	N	N	N	N	N	NNE	N	N	NE	NE	ENE	NE	NE	E	S	SSE	SSE	NNW	48	400
16	9	19	22	28	33	26	24	24	28	19	26	17	11	24	13	9	4	4	4	4	4	11	15	15	15	48	400
17	S	S	S	S	S	S	S	S	S	SSW	SSW	SW	WSW	W	NW	NW	NNW	NNW	N	N	NNW	NNW	N	N	NNW	76	1900
17	20	22	24	30	30	35	48	50	46	41	35	20	33	35	33	39	50	50	56	56	43	24	30	28	76	1900	
18	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	NW	C	C	N	50	100
18	32	37	24	26	28	30	35	28	30	33	30	32	35	30	26	20	9	13	11	7	4	4	0	0	50	100	
19	C	SSE	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	5	
19	0	9	9	13	15	19	24	24	33	30	43	41	48	52	56	41	50	56	56	52	50	57	52	56	74		
20	S	S	S	S	SSE	S	WSW	W	WNW	WNW	WNW	WNW	NNW	NNW	N	N	N	N	N	N	NNW	NNW	NNW	NNW	S		
20	56	54	46	41	33	17	13	6	7	15	22	22	26	30	28	32	32	32	39	44	37	37	37	43	69	100	
21	NNW	N	N	NNW	NNW	NNW	NNW	NNW	NNW	N	N	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	200
21	35	35	37	35	30	30	26	33	35	26	32	32	33	35	32	30	28	26	26	26	32	26	17	17	56	200	
22	NNW	NW	NNW	NW	NW	NNW	NNW	NW	C	NW	NNW	NNW	NNW	NNW	NW	C	NW	NNW	NNW	NW	NW	NW	NW	NW	NW		
22	15	17	13	13	13	11	13	9	0	4	6	4	15	9	6	0	6	13	11	15	15	13	13	15			
23	NNW	NNW	NNW	N	NNW	NNW	NNW	NNW	W	W	WNW	NW	NNW	NNW	C	C	C	S	SSE	S	SSE	SSE	SSE	S	S		
23	11	13	19	9	11	13	9	6	9	11	7	9	7	0	0	0	0	7	9	9	11	11	13	11			
24	S	SE	SE	SE	ESE	ESE	SE	SE	SSE	SSE	SSE	SSE	SE	ESE	ESE	ESE	ESE	E	E	ESE	SE	ESE	ESE	SE			
24	13	11	11	7	11	11	7	9	13	15	13	9	15	15	11	13	15	15	9	17	20	20	20	17			
25	SE	E	E	E	ENE	NE	ENE	ENE	ENE	ENE	ENE	NNE	NNE	NE	NE	NNE	NNE	NNE	NNE	NE	ENE	ENE	ENE	E			
25	9	15	13	11	9	19	19	15	15	17	13	15	15	15	17	15	17	11	17	11	6	6	9	13			
26	E	SE	ESE	ESE	ESE	SE	SE	SE	SE	SE	SSE	S	S	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	SSW	N	C			
26	11	13	15	19	17	15	17	13	17	17	15	19	13	15	17	15	20	19	19	19	15	6	4	0			
27	C	C	NNE	NE	NE	NNE	NE	NE	NNE	NNE	NNE	N	N	N	N	ENE	C	SSW	SSW	SSW	SSW	SSW	SSW	S			
27	0	0	20	20	20	19	20	20	20	20	17	6	6	4	4	4	0	9	9	9	11	19	19	19			
28	SSW	SSW	SW	SW	SW	W	W	W	WSW	SW	WSW	WSW	WSW	W	WNW	W	C	WNW	WNW	WNW	C	C	C	C	WNW	600	
28	15	19	15	11	13	19	19	13	9	13	17	17	15	15	11	11	6	0	9	6	0	0	0	0	32	600	
29	C	C	S	SE	SE	SSE	SSE	NE	NE	NNE	ENE	ESE	NNE	ENE	NNE	NE	NNE	NE	NE	NE	NE	NE	NE	NE			
29	0	0	4	6	7	13	6	7	4	11	7	9	11	7	11	13	15	6	13	9	11	11	9	9			
30	NE	NE	NE	ENE	E	E	E	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	NE	N			
30	11	13	11	11	19	26	24	17	19	19	22	24	26	24	22	22	30	35	35	39	43	44	44	54	0		
31	NNE	NNE	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	NNE	NNE	NNE	NNE	N		
31	52	52	46	46	44	39	41	41	50	39	39	39	41	37	19	33	26	24	30	28	26	26	30	20	65	800	

DATE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Pdir	N	S	N	S	S	NNW	NW	NNW	ESE	NE	SSE	NNE	W	NE	ENE	N
Avg V	17	35	23	37	30	30	10	9	13	14	14	12	11	8	26	37
dir 2				NNW					ENE							

NOTE/AVIS: Pdir = Prevailing direction/Direction dominante \* = indicates/indique < 24 hrs and/et >= 18hrs  
 Avg V = Average Daily Wind Speed (KMH) dir2 = 2nd Prevailing direction