

MONTHLY METEOROLOGICAL SUMMARY

SOMMAIRE METEOROLOGIQUE MENSUEL

Environment Canada

Environnement Canada

WINNIPEG INTL A (YWG) MONTH/MOIS: December/décembre 1999

DATE	TEMPERATURE			DEGREE-DAYS			REL HUMIDITY		PRECIPITATION			Snow On Ground
	MAX	MIN	MEAN	Heating	Growing	Cooling	MAX	MIN	Rainfall	Snowfall	Total	
	C	C	C	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	7.9	-4.2	1.9	16.1	0.0	0.0	92	63	0.0	0.0	0.0	0
2	6.3	-4.7	0.8	17.2	0.0	0.0	100	78	2.0	0.0	2.0	0
3	3.4	-6.5	-1.6	19.6	0.0	0.0	100	85	TR	0.0	TR	0
4	1.8	-8.4	-3.3	21.3	0.0	0.0	95	61	0.0	TR	TR	0
5	-5.6	-8.9	-7.3	25.3	0.0	0.0	91	82	0.0	TR	TR	0
6	3.4	-6.7	-1.7	19.7	0.0	0.0	88	64	0.0	0.0	0.0	0
7	4.3	-6.3	-1.0	19.0	0.0	0.0	89	58	0.0	0.0	0.0	0
8	0.2	-7.1	-3.5	21.5	0.0	0.0	92	70	0.0	0.0	0.0	0
9	-1.5	-9.3	-5.4	23.4	0.0	0.0	88	76	0.0	0.0	0.0	0
10	-1.6	-4.6	-3.1	21.1	0.0	0.0	91	61	0.0	0.0	0.0	0
11	2.5	-7.3	-2.4	20.4	0.0	0.0	92	65	0.0	TR	TR	0
12	-0.4	-10.0	-5.2	23.2	0.0	0.0	91	79	0.0	0.0	0.0	0
13	5.1	-9.8	-2.4	20.4	0.0	0.0	95	42	0.0	0.0	0.0	0
14	3.0	-10.7	-3.9	21.9	0.0	0.0	99	82	0.0	6.4	5.6	0
15	-8.9	-24.4	-16.7	34.7	0.0	0.0	86	58	0.0	TR	TR	6
16	-20.5	-28.0	-24.3	42.3	0.0	0.0	73	64	0.0	TR	TR	6
17	-8.5	-24.8	-16.7	34.7	0.0	0.0	90	64	0.0	TR	TR	6
18	0.1	-11.0	-5.5	23.5	0.0	0.0	97	77	0.0	TR	TR	6
19	-1.0	-20.6	-10.8	28.8	0.0	0.0	97	60	TR	9.2	9.2	6
20	-20.6	-29.1	-24.9	42.9	0.0	0.0	69	61	0.0	0.4	0.4	8
21	-21.6	-31.9	-26.8	44.8	0.0	0.0	72	60	0.0	0.0	0.0	7
22	-16.7	-29.6	-23.2	41.2	0.0	0.0	74	63	0.0	0.0	0.0	6
23	-7.3	-16.7	-12.0	30.0	0.0	0.0	95	81	1.0	TR	1.0	6
24	-2.8	-8.5	-5.7	23.7	0.0	0.0	92	83	0.0	0.0	0.0	6
25	5.4	-8.9	-1.8	19.8	0.0	0.0	83	43	0.0	0.0	0.0	5
26	-8.8	-19.8	-14.3	32.3	0.0	0.0	93	61	0.0	4.0	4.0	5
27	2.4	-25.9	-11.8	29.8	0.0	0.0	94	62	0.0	TR	TR	8
28	2.6	-2.9	-0.2	18.2	0.0	0.0	94	76	0.0	0.0	0.0	7
29	3.0	-16.7	-6.9	24.9	0.0	0.0	92	79	0.6	TR	0.6	6
30	-9.7	-20.5	-15.1	33.1	0.0	0.0	91	66	0.0	3.0	1.6	5
31	-8.2	-18.8	-13.5	31.5	0.0	0.0	93	77	0.0	0.4	0.4	5
TOTAL				826.3	0.0	0.0			3.6	23.4	24.8	totale
MEAN	-3.0	-14.3	-8.7				90	68				moyenne
NORMAL	-9.9	-19.4	-14.6	1013.7	0.0	0.0			1.6	20.1	18.6	normale

NOTE/AVIS:

1. Climatological Day / Journee Climatologique: 00 01 CST - 00 00 CST

2. 30 Yr Normals / Normales duree 30 ans.

3. TR = Trace.

4. No entry = Missing / Pas de valeur = Manquant.

WINNIPEG INTL A (YWG) MONTH/MOIS: December/decembre 1999

DRY BULB TEMPERATURES / TEMPERATURES DU THERMOMETRE SEC

HOUR / HEURE

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	36	32	34	29	20	18	14	21	9	18	36	46	71	67	79	72	39	32	20	6	-9	-2	-28	-10
2	-2	-3	2	13	17	13	23	18	23	28	36	34	39	50	62	57	48	40	33	15	2	-8	-14	-44
3	-31	-41	-46	-37	-50	-49	-35	-38	-39	-25	-2	15	24	25	32	24	17	17	17	16	21	20	20	16
4	16	15	3	-6	-14	-24	-28	-30	-32	-39	-38	-27	-27	-28	-28	-21	-29	-46	-60	-68	-66	-51	-73	-77
5	-80	-84	-79	-73	-74	-75	-75	-75	-77	-80	-75	-70	-70	-69	-67	-67	-66	-69	-71	-72	-73	-72	-70	-63
6	-57	-58	-60	-58	-56	-57	-57	-62	-63	-57	-38	-11	2	18	32	30	10	-13	-23	-18	-21	-21	-29	-43
7	-55	-51	-51	-56	-57	-55	-50	-49	-47	-33	-24	-3	20	34	41	30	33	24	16	5	-2	-5	-7	-13
8	-19	-19	-20	-15	-21	-31	-28	-40	-45	-41	-32	-24	-14	-2	-2	-2	-2	-3	-3	-23	-46	-55	-54	-71
9	-66	-63	-62	-81	-77	-83	-77	-80	-75	-71	-62	-43	-43	-26	-21	-23	-28	-47	-36	-33	-32	-34	-37	-39
10	-39	-43	-46	-42	-42	-41	-39	-40	-43	-39	-32	-23	-23	-26	-33	-34	-43	-38	-34	-34	-36	-32	-28	-20
11	-16	-16	-16	-13	-14	-14	-13	-15	-24	-28	-17	-2	6	11	12	22	12	-15	-14	-21	-54	-47	-52	-48
12	-61	-67	-73	-94	-88	-80	-68	-54	-60	-66	-39	-37	-28	-19	-5	-10	-24	-48	-54	-48	-76	-64	-56	-76
13	-86	-95	-80	-63	-55	-42	-28	-25	-18	-12	3	16	26	35	37	47	51	47	45	41	43	37	39	27
14	27	30	28	24	8	-2	1	-9	-11	-12	-11	-12	-15	-18	-20	-27	-45	-62	-75	-79	-68	-71	-96	-86
15	-91	-104	-122	-135	-146	-161	-167	-177	-195	-193	-199	-191	-188	-179	-175	-175	-184	-195	-210	-214	-236	-239	-226	-223
16	-223	-237	-248	-253	-260	-269	-267	-270	-269	-265	-255	-233	-223	-217	-211	-208	-212	-213	-209	-211	-215	-210	-206	-209
17	-215	-230	-239	-232	-243	-230	-234	-237	-237	-215	-207	-186	-169	-160	-146	-137	-131	-134	-132	-122	-111	-103	-94	-85
18	-87	-88	-102	-107	-105	-96	-98	-90	-69	-65	-53	-45	-34	-31	-31	-21	-13	-4	-1	0	-3	-12	-13	-9
19	-10	-15	-24	-27	-28	-28	-30	-31	-28	-26	-30	-67	-88	-100	-107	-111	-116	-134	-142	-158	-173	-184	-190	-201
20	-206	-215	-222	-231	-243	-252	-258	-269	-271	-270	-265	-259	-250	-240	-236	-228	-227	-240	-252	-246	-244	-252	-260	-272
21	-274	-269	-274	-295	-283	-297	-307	-310	-304	-295	-265	-248	-234	-218	-218	-217	-222	-232	-245	-263	-258	-272	-262	-269
22	-265	-274	-279	-269	-277	-272	-275	-283	-282	-289	-271	-243	-220	-205	-203	-205	-203	-198	-199	-191	-185	-186	-180	-174
23	-167	-164	-158	-154	-140	-130	-129	-119	-110	-103	-96	-88	-81	-73	-79	-87	-89	-88	-91	-93	-91	-90	-88	-87
24	-84	-83	-82	-80	-77	-76	-70	-66	-65	-62	-63	-53	-45	-35	-29	-31	-36	-51	-50	-47	-49	-54	-61	-60
25	-52	-37	-15	16	23	24	23	18	16	19	20	38	41	46	49	44	27	5	-17	-33	-41	-57	-70	-75
26	-87	-95	-106	-109	-118	-121	-123	-121	-127	-116	-106	-102	-100	-98	-93	-92	-93	-91	-98	-107	-116	-135	-156	-184
27	-197	-202	-212	-225	-238	-241	-256	-237	-238	-216	-195	-174	-163	-148	-140	-131	-114	-91	-64	-37	-20	9	11	5
28	24	9	21	17	16	22	10	-9	-12	-22	-26	-27	-28	-28	-28	-24	-26	-27	-27	-27	-27	-17	-8	-1
29	9	18	20	18	26	26	29	24	22	23	23	24	23	23	-44	-59	-71	-91	-105	-118	-126	-136	-147	-158
30	-167	-181	-188	-185	-193	-194	-187	-172	-163	-144	-138	-127	-121	-114	-109	-103	-105	-98	-105	-112	-122	-138	-159	-148
31	-153	-169	-172	-156	-160	-167	-171	-155	-140	-128	-117	-108	-106	-100	-92	-87	-83	-96	-97	-94	-101	-99	-109	-132

1. Unite = 0.1 C

1. Unit = 0.1 C

NOTE/AVIS:

WINNIPEG INTL A (YWG) MONTH/MOIS: December/decembre 1999

PRECIPITATION OCCURRENCES / EVENEMENT DES PRECIPITATIONS

HOUR / HEURE

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																									
2				R	R	R	R	R	R	R												R			
3																									
4			S	SG																					
5		S	S																						
6																									
7																									
8																									
9																									
10																									
11		S																							
12																									
13																									
14					S					S						IC									
15																									
16																									
17																		SW							
18																									
19	S	S	S	ZLS	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
20		S	S	S							IC	IC													
21																									
22																									
23																									
24																									
25																									
26																									
27																									
28																									
29									R	R	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
30																									
31																									

Note/Avis:
 R = Rain/pluie : S = Snow/neige : W = Showers/averse de : T = Thunderstorm/orage : L = Drizzle/bruine : Z = Freezing/verglacante
 SP = Snow Pellets/neige roulée : SG = Snow Grains/neige en grains : A = Hail/grele : IP = Ice Pellets/gresil

WINNIPEG INTL A (YWG) MONTH/MOIS: December/décembre 1999

		WINDS (km/h)													DES VENTS (km/h)													Pk Gust	Hour
Hour	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	Rafale	Hour		
1		S	S	SSW	S	S	SSW	SW	WSW	WNW	WNW	W	W	W	WSW	SW	SW	SSW	WSW	NNE	SW	S							
1	30	32	32	33	30	24	15	15	20	17	15	15	17	11	15	9	9	9	9	9	11	9	4	7	7	48	100		
2		SSW	S	W	WSW	W	WNW	W	C	N	N	SE	ESE	ESE	SE	ESE	E	E	ESE	ESE	E	E	C	ENE	ESE				
2	7	4	13	6	9	6	9	0	7	13	13	19	17	17	22	19	13	9	17	11	11	9	0	9	32	1200			
3		C	C	E	ESE	C	NNE	NE	E	ESE	ESE	SSE	SSE	SSE	S	S	S	S	SE	S	S	S	S	S					
3	0	0	9	4	0	4	6	9	9	17	13	13	15	17	15	17	15	11	9	6	9	9	15	17					
4		SSW	W	NW	NW	NW	NW	NNW	NNW	NW	NNW	NW	NW	NW	NW	NNW	NW	NW	NNW	NW	NW	NW	NNW	NNW					
4	15	19	33	35	33	39	32	26	30	24	28	24	37	39	28	32	24	13	19	15	17	32	24	20	57	400			
5		N	NNW	NNW	N	N	NNW	NW	N	NE	E	SE	SSE	SSE	S	S	S	S	S	S	S	S	S	S					
5	24	20	17	19	13	13	9	6	4	6	7	11	17	15	19	19	24	32	28	30	32	32	33	41	56	0			
6		S	S	S	S	S	S	S	S	S	S	S	S	S	SSW	SSW	S	S	S	S	S	S	S	S					
6	43	35	35	39	32	30	32	26	22	17	17	15	13	9	9	15	13	15	13	15	15	22	17	15	56	200			
7		S	S	S	SSE	S	SSE	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S					
7	13	17	19	17	17	17	20	20	24	24	24	30	28	30	30	32	28	26	28	26	24	26	24	22	44	1500			
8		S	SSW	SSW	SW	WSW	W	WNW	W	W	WNW	WNW	WNW	NW	NW	NW	WNW	W	W	WSW	SSW	SW	SW	SW					
8	20	20	17	13	13	13	15	17	13	15	15	19	19	20	26	17	9	9	13	7	13	11	17	13	39	1400			
9		SW	SW	SSW	S	SSW	SSE	S	SE	S	SE	C	NNW	NNW	N	NNE	N	N	N	NNW	N	NE	ENE	W					
9	13	13	11	9	7	7	15	9	11	6	4	0	6	15	19	19	19	11	9	13	11	11	7	6					
10		WNW	WNW	NE	ENE	C	E	SE	SE	SSE	S	S	S	S	S	S	S	SSE	SSE	S	S	S	S	S					
10	7	6	9	9	0	7	11	9	9	11	15	20	28	26	26	30	30	24	19	26	22	26	24	26	41	1500			
11		S	S	S	S	S	S	SSW	S	S	S	SSW	SSW	S	SSW	SSW	SSW	S	SSW	S	S	SSW	SW	SW					
11	26	26	24	26	24	26	24	20	17	17	17	19	20	13	19	13	13	11	7	9	11	13	11	37	200				
12		SSW	SW	SSW	S	S	WSW	SW	WSW	WSW	W	WNW	W	W	W	WSW	WSW	SSW	W	SW	SSW	S							
12	9	9	13	11	11	13	9	7	7	7	13	9	9	15	6	9	9	9	9	11	11	11	11	11					
13		S	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	S	S	S	S	S	S	S	S	S	S	S	S	S					
13	11	11	9	17	15	17	22	19	24	32	37	33	43	35	33	37	37	30	30	22	24	20	20	17	59	1200			
14		S	S	S	W	C	N	N	N	N	NNW	NNE	NW	NW	NW	NW	W	WNW	WNW	NW	NNW	NNW	NNW	N					
14	19	19	17	7	0	13	11	28	26	20	15	15	13	17	11	9	7	11	13	4	15	17	15	17	39	800			
15		N	N	N	N	N	N	N	N	N	NNW	N	NNW	N	NNW	N	NNW	NNW	NNW	NNW	NW	NNW	NW	N					
15	22	30	22	19	26	28	22	24	22	22	26	26	28	32	32	24	22	20	17	15	15	11	20	13	39	500			
16		N	NW	NW	NNW	N	NNW	NE	N	NW	NE	NNE	N	NNW	N	NNE	NE	NNE	NE	NE	NE	E	ENE	E					
16	13	11	13	13	9	9	11	11	6	6	6	7	7	4	11	13	13	13	11	13	7	11	13	7					
17		NNE	NE	E	SE	ESE	ESE	S	S	SSE	S	S	S	S	S	S	S	S	S	S	S	S	S	S					
17	4	9	7	9	7	13	9	9	9	19	15	19	22	26	22	30	26	26	26	26	28	26	30	26	41	1600			
18		S	S	S	S	S	S	S	S	SSE	S	SSE	SSE	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	SSE	SSE					
18	30	28	19	17	15	13	9	11	17	17	20	20	22	24	26	30	28	30	28	30	28	30	33	35	50	2300			
19		SSE	SSE	S	SSE	SSE	SSE	SSE	SE	C	WNW	NW	NW	NW	NW	NNW	NW	NW	NW	NW	NW	NW	NW	NW					
19	28	37	37	33	37	26	22	19	15	0	20	48	39	46	39	41	44	41	44	41	46	43	44	48	63	1200			
20		NNW	NNW	NNW	NW	NNW	NNW	NNW	NW	NW	NNW	NNW	NW	NW	NNW	NW	NNW	NW	NNW	W	W	W	W	NNW					
20	41	41	37	41	44	44	43	37	39	35	32	35	32	26	33	20	22	20	15	15	15	15	13	7	59	600			
21		WSW	WSW	W	W	W	W	WNW	WNW	WNW	W	W	W	W	WNW	W	W	W	W	W	W	WNW	W	W					
21	6	6	9	9	7	6	7	11	15	19	15	15	15	19	20	19	19	17	11	15	17	17	13	11					
22		W	W	SSW	SW	SSW	SSW	C	S	S	SSE	S	SSE	SSE	SSE	S	S	S	S	S	S	SSW	SSW	SSW					
22	9	9	4	6	6	6	0	4	6	7	6	7	9	7	13	11	9	7	11	15	11	11	9	11	13				
23		SSW	S	SSW	SSW	SSW	S	S	SSW	C	NW	NNW	N	NNE	NNE	NNE	NNE	ENE	C	E	SSE	SSW	SSW	NNE					
23	11	9	6	9	11	9	6	7	9	0	0	7	13	22	24	24	11	11	7	0	4	7	11	11	33	1500			
24		SSW	S	SSW	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S					
24	13	19	20	22	20	24	28	22	22	24	17	17	17	13	11	11	13	13	13	17	19	24	22	22	37	700			
25		SSW	SW	WSW	W	W	W	W	W	W	W	W	W	W	WNW	NW	NW	NNW	NNW	NW	NNW	NNW	NW	NW					
25	19	19	19	26	22	28	24	28	28	26	26	32	32	37	41	37	74	74	70	54	59	56	48	50	98	1800			
26		NNW	NNW	NNW	NNW	NNW	NW	NW	NW	NNW	NNW	NNW	NNW	NNW	S	SSW	SSW	SE	NE	NE	NE	NNE	NNE	N	NNW				
26	48	50	35	33	24	28	24	22	17	15	17	9	7	9	9	11	7	7	13	24	22	20	19	17	65	100			
27		N	N	NNW	N	NNW	NNW	NNW	W	WSW	SW	SW	S	S	S	S	S	S	S	S	SSW	SW	WNW	WNW					
27	17	15	19	15	13	11	11	6	13	13	13	15	24	30	35	35	41	44	37	30	15	26	26	22	56	1600			
28		WNW	WNW	NW	NW	N	N	N	N	N	N	NNW	NW	N	NNW	NW	WNW	S	S	S	S	S	SSW	S	N				
28	28	7	22	20	19	24	30	22	17	17	17	13	11	9	9	6	7	4	6	13	15	22	20	17	41	600			
29		SSW	SW	SW	W	W	W	W	W	W	NNW	NNW	N	N	N	N	NNE	NNE	N	N	NNE	NNE	NNE	NNW					
29	22	13	15	15	15	19	22	20	22	26	28	30	28	37	35	39	32	30	26	19	20	19	15	11	52	1200			
30		NNE	NE	NE	NE	C	C	NE	E	SSE	SSE	SSE	SSE	SE	SE	S	WSW	WNW	NW	NW	WNW	NW	NW						
30	13	11	4	6	0	7	7	9	15	9	11	4	9	9	7	7	11	20	33	28	20	17	15	46	1900				
31		WNW	WNW	SW	SW	S	S	SE	S	S	S	SSE	SSE	SSE	SE	ESE	E	E	NE	N	NNW	NNW	N	NNW					
31	15	11	4	9	9	7	9	7	17	19	19	19	20	17	19	13	7	7	7	9	22	30	22	24	37	2200			

SUMMARY / SOMMAIRE

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Pdir	W	ESE	S	NW	S	S	W	N	S	S	W	S	NW	N	NE	S	S	NW	NNW	W	S	SSW	S	W	NNW	S	N	N	NW	S	
avgV	16	11	10	27	20	21	24	15	10	18	18	10	25	14	22	10	18	23	35	29	13	8	10	18	39	20	22	16	23	11	14
dir2	NE																														

NOTE/AVIS: * indicates/indique < 24 hrs and/et >=18 hrs Pdir=Prevailing direction/Direction dominante dir2=2nd Pdir/2ieme Pdir