

MONTHLY METEOROLOGICAL SUMMARY

SOMMAIRE METEOROLOGIQUE MENSUEL

Environment Canada

Environnement Canada

WINNIPEG INTL A (YWG) MONTH/MOIS: December/décembre 2002

DATE	TEMPERATURE TEMPERATURE			DEGREE-DAYS DEGRES-JOURS			REL HUMIDITY HUMIDITE REL		PRECIPITATION PRECIPITATIONS			Snow On Ground neige au sol cm
	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	
1	-6.4	-17.9	-12.2	30.2	0.0	0.0	84	63	TR	TR	TR	TR
2	-17.9	-24.3	-21.1	39.1	0.0	0.0	73	54	0.0	0.0	0.0	TR
3	-14.9	-24.4	-19.7	37.7	0.0	0.0	71	52	0.0	0.0	0.0	TR
4	-10.7	-21.4	-16.1	34.1	0.0	0.0	74	48	0.0	TR	TR	TR
5	-10.0	-13.5	-11.8	29.8	0.0	0.0	80	64	0.0	0.4	0.2	TR
6	-4.9	-12.3	-8.6	26.6	0.0	0.0	77	65	0.0	0.0	0.0	TR
7	-7.2	-18.8	-13.0	31.0	0.0	0.0	75	54	0.0	0.0	0.0	TR
8	-7.9	-22.5	-15.2	33.2	0.0	0.0	69	49	0.0	0.2	TR	TR
9	2.5	-8.7	-3.1	21.1	0.0	0.0	89	64	0.0	0.0	0.0	TR
10	5.4	-9.5	-2.1	20.1	0.0	0.0	91	57	0.0	0.0	0.0	TR
11	6.3	-9.0	-1.4	19.4	0.0	0.0	78	51	0.0	0.0	0.0	TR
12	-2.3	-10.0	-6.2	24.2	0.0	0.0	89	75	0.0	TR	TR	TR
13	3.4	-2.8	0.3	17.7	0.0	0.0	85	56	0.0	0.0	0.0	TR
14	1.0	-5.0	-2.0	20.0	0.0	0.0	82	70	TR	0.0	TR	0
15	0.0	-3.2	-1.6	19.6	0.0	0.0	81	51	0.0	0.0	0.0	0
16	-2.0	-5.4	-3.7	21.7	0.0	0.0	62	44	0.0	TR	TR	0
17	0.9	-4.3	-1.7	19.7	0.0	0.0	75	63	0.0	0.0	0.0	0
18	1.2	-1.1	0.0	18.0	0.0	0.0	84	62	TR	4.0	3.5	0
19	-1.0	-3.6	-2.3	20.3	0.0	0.0	84	77	TR	5.0	3.5	6
20	-3.5	-6.5	-5.0	23.0	0.0	0.0	79	69	0.0	2.0	2.0	8
21	-5.1	-10.6	-7.9	25.9	0.0	0.0	77	69	0.0	0.5	0.5	10
22	-7.0	-14.5	-10.8	28.8	0.0	0.0	77	70	0.0	1.0	1.0	11
23	-10.7	-13.8	-12.3	30.3	0.0	0.0	78	68	0.0	TR	TR	12
24	-10.8	-23.2	-17.0	35.0	0.0	0.0	77	65	0.0	0.0	0.0	12
25	-7.2	-18.4	-12.8	30.8	0.0	0.0	76	65	0.0	0.0	0.0	12
26	-6.2	-16.0	-11.1	29.1	0.0	0.0	77	61	0.0	0.0	0.0	12
27	-0.6	-11.9	-6.3	24.3	0.0	0.0	71	61	0.0	0.0	0.0	12
28	-5.8	-18.8	-12.3	30.3	0.0	0.0	93	71	0.0	0.0	0.0	12
29	-1.1	-8.1	-4.6	22.6	0.0	0.0	78	67	0.0	0.5	0.5	12
30	-0.3	-15.3	-7.8	25.8	0.0	0.0	81	65	0.0	1.0	1.0	12
31	-11.9	-17.4	-14.7	32.7	0.0	0.0	76	66	0.0	TR	TR	10
TOTAL				822.1	0.0	0.0			TR	14.6	12.2	totale
MEAN	-4.3	-12.7	-8.5				79	62				moyenne
NORMAL	-9.7	-19.1	-14.4	1004.5	0.0	0.0			1.6	19.8	18.5	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 (WVG) MONTH/MOIS: December/décembre 2002

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	-64	-72	-76	-78	-82	-94	-104	-114	-120	-120	-120	-117	-119	-119	-120	-121	-130	-140	-155	-146	-158	-154	-164	-169
2	-179	-193	-204	-212	-221	-230	-236	-240	-243	-233	-226	-213	-198	-198	-189	-187	-192	-205	-206	-209	-210	-214	-213	-218
3	-228	-236	-237	-225	-223	-223	-211	-198	-209	-195	-174	-160	-156	-154	-153	-153	-162	-186	-201	-202	-210	-215	-220	-196
4	-204	-202	-205	-211	-205	-202	-197	-194	-193	-189	-177	-163	-146	-134	-116	-113	-114	-116	-116	-120	-127	-126	-121	-111
5	-107	-106	-106	-104	-102	-103	-102	-116	-118	-118	-118	-116	-115	-113	-112	-110	-116	-129	-125	-127	-115	-112	-106	-101
6	-108	-114	-114	-116	-118	-118	-109	-114	-122	-116	-99	-75	-59	-57	-55	-60	-55	-55	-77	-69	-62	-50	-58	-67
7	-88	-74	-74	-76	-78	-83	-90	-118	-122	-123	-117	-98	-95	-83	-88	-98	-101	-130	-146	-171	-177	-153	-154	-173
8	-187	-201	-212	-212	-219	-216	-214	-210	-206	-194	-172	-146	-129	-110	-107	-99	-100	-107	-109	-111	-105	-100	-96	-90
9	-79	-66	-51	-43	-37	-39	-59	-64	-75	-60	-32	-13	1	15	24	24	2	-21	-22	-30	-76	-62	-52	-67
10	-71	-85	-88	-74	-77	-84	-86	-84	-68	-58	-41	-12	14	34	41	53	41	25	11	7	0	-2	-6	-9
11	-6	-18	-20	-28	-46	-44	-46	-47	-48	-47	-25	10	29	50	61	61	44	16	8	-41	-21	-36	-42	-74
12	-88	-73	-74	-76	-64	-78	-77	-69	-66	-58	-43	-38	-34	-27	-24	-24	-27	-34	-36	-34	-33	-32	-30	-27
13	-26	-28	-28	-26	-26	-22	-20	-20	-18	-12	-4	9	19	24	30	33	27	18	12	16	18	16	6	-7
14	-5	3	-2	-5	-11	-16	-32	-36	-38	-50	-41	-34	-24	-19	-15	-12	-11	-12	-15	-19	-20	-21	-22	-23
15	-22	-20	-16	-12	-11	-10	-12	-13	-16	-17	-19	-12	-8	-4	-3	-2	-4	-10	-19	-22	-25	-23	-27	-30
16	-30	-28	-32	-36	-45	-51	-53	-53	-49	-47	-42	-36	-35	-32	-27	-24	-29	-29	-21	-21	-21	-27	-31	-38
17	-40	-41	-42	-39	-38	-35	-33	-32	-32	-28	-26	-21	-18	-16	-7	-6	1	-5	-3	-2	2	4	3	6
18	8	9	9	11	10	3	8	-2	-6	-7	-5	-2	4	4	3	3	3	-1	-2	-2	-2	-3	-5	-8
19	-10	-10	-15	-19	-20	-19	-21	-26	-28	-28	-28	-28	-28	-29	-29	-30	-32	-33	-32	-32	-31	-28	-29	-31
20	-36	-37	-39	-39	-41	-50	-51	-54	-58	-63	-58	-56	-57	-55	-57	-58	-58	-56	-58	-60	-59	-58	-57	-56
21	-55	-54	-53	-53	-51	-53	-66	-78	-91	-97	-86	-72	-65	-62	-61	-59	-61	-65	-68	-70	-77	-77	-75	-76
22	-77	-77	-77	-77	-77	-77	-74	-71	-71	-72	-78	-83	-89	-88	-102	-106	-118	-126	-133	-138	-135	-135	-126	-118
23	-110	-111	-114	-116	-116	-120	-123	-125	-125	-121	-118	-118	-114	-111	-108	-115	-118	-125	-136	-128	-118	-112	-110	-111
24	-108	-110	-119	-118	-138	-184	-198	-209	-223	-213	-188	-177	-174	-164	-163	-156	-156	-163	-167	-174	-173	-179	-195	-197
25	-181	-181	-174	-167	-160	-159	-167	-165	-158	-144	-135	-116	-91	-76	-90	-100	-125	-130	-130	-128	-122	-118	-130	-128
26	-133	-155	-156	-145	-140	-139	-135	-135	-153	-127	-108	-96	-76	-69	-64	-67	-81	-93	-96	-100	-105	-110	-111	-112
27	-118	-114	-118	-112	-100	-100	-98	-92	-76	-53	-41	-31	-28	-13	-9	-9	-15	-27	-36	-48	-59	-57	-50	-53
28	-68	-81	-125	-114	-135	-132	-168	-167	-178	-175	-159	-129	-104	-92	-65	-61	-62	-69	-73	-84	-81	-85	-87	-73
29	-64	-63	-65	-65	-69	-78	-79	-78	-78	-75	-74	-67	-62	-56	-46	-39	-30	-32	-35	-30	-21	-19	-14	-14
30	-12	-8	-7	-9	-14	-14	-11	-30	-44	-67	-82	-90	-103	-108	-112	-118	-122	-133	-134	-141	-145	-146	-135	-135
31	-138	-141	-141	-142	-146	-157	-164	-160	-156	-164	-167	-160	-156	-158	-157	-151	-144	-159	-164	-146	-146	-139	-135	-128

NOTE/AVIS:

1. Unit = 0.1 C

1. Unite = 0.1 C

WINNIPEG INTL A (YWG) MONTH/MOIS: December/décembre 2002

PRECIPITATION OCCURRENCES / EVENEMENT DES PRECIPITATIONS

HOURLY / 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			ZL																					
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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 INTLA (YWG) MONTH/MOIS: December/decembre 2002

		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	Hour	
1		NE	NE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NE	NE	NNE	NNE	NE	NE	N	N	N	N	N	N	NNE			
2		11	13	15	13	20	26	20	15	15	19	17	17	19	15	19	17	13	9	7	11	13	22	19	22		
3		24	20	24	20	19	17	13	13	11	9	7	9	9	11	15	11	13	11	9	11	9	9	7	33	200	
4		6	6	6	4	4	4	11	6	6	0	6	4	4	9	13	11	7	9	9	0	4	4	11	9		
5		7	9	9	9	11	15	17	15	17	15	17	20	19	19	22	20	22	26	20	22	15	15	15	33	1500	
6		15	15	15	13	11	11	13	17	15	17	19	15	11	7	6	4	6	9	9	11	15	20	20	22	2300	
7		26	28	28	28	26	20	17	11	11	9	15	22	24	20	28	22	20	13	11	11	11	11	11	35	100	
8		15	17	15	15	11	11	9	22	9	6	6	13	19	26	22	22	17	17	13	15	20	20	15	37	1500	
9		13	13	15	15	13	13	7	11	13	9	11	13	26	22	33	33	30	26	32	32	35	39	37	39	2100	
10		37	32	30	24	17	13	11	7	7	11	11	13	15	15	13	6	7	9	11	7	4	6	7	11	100	
11		6	4	9	11	11	13	11	13	13	17	15	22	19	20	22	20	17	17	19	22	22	17	17	19	1400	
12		20	20	20	17	17	20	26	20	19	17	20	19	20	15	13	7	6	13	6	7	6	7	11			
13		7	0	4	7	4	7	6	6	0	7	9	6	9	15	11	9	7	4	0	0	0	0	4	7		
14		6	11	11	15	13	13	17	20	24	28	26	28	37	30	28	26	22	20	20	22	22	20	17	13	1200	
15		15	11	9	9	15	9	17	17	22	15	26	20	22	20	24	17	7	9	9	7	7	9	11	37	1100	
16		9	11	13	11	15	17	19	20	26	22	22	32	28	26	35	33	32	32	28	35	30	26	35	28	1700	
17		28	30	33	33	30	30	33	32	32	37	35	28	33	26	30	32	30	24	22	28	28	33	30	35	400	
18		33	30	28	30	26	24	30	32	30	28	33	33	28	32	26	22	24	30	22	26	22	20	15	17	100	
19		20	19	19	15	15	9	15	15	15	11	11	13	13	11	7	7	ENE	NNE	N	N	N	NNW	NW			
20		17	17	17	17	17	22	22	24	22	24	24	24	32	28	28	24	22	26	24	22	32	22	32	46	0	
21		24	30	35	39	30	28	32	35	43	26	22	26	22	28	32	20	30	28	28	26	28	24	30	26	700	
22		28	28	20	22	20	22	24	24	20	15	19	15	22	20	20	24	20	24	24	24	24	20	24	24	2000	
23		24	26	24	26	26	26	20	19	26	30	32	32	33	33	24	20	20	20	20	26	24	33	37	48	0	
24		39	33	37	41	41	41	37	32	35	30	32	26	26	19	19	22	17	15	13	11	13	9	9	54	500	
25		11	7	9	13	17	13	13	7	11	0	7	4	6	9	11	13	6	13	11	15	11	15	11	13		
26		13	11	13	15	15	17	17	19	15	9	13	15	9	13	13	13	13	13	11	9	13	11	7	11		
27		11	11	13	15	15	13	15	15	11	19	26	24	26	24	22	24	28	28	28	32	28	26	28	32	1900	
28		24	28	30	28	26	26	24	22	22	30	30	28	26	33	33	32	32	28	22	19	11	11	11	19	1400	
29		22	15	0	6	6	6	4	4	6	4	0	0	4	0	7	9	9	4	4	0	0	0	6	9		
30		9	9	15	20	17	15	20	24	26	24	22	17	20	22	20	22	28	26	20	24	24	30	26	24	2200	
31		24	13	17	15	19	17	20	39	35	43	39	46	50	46	48	37	41	43	43	41	28	32	17	28	1300	
32		33	22	24	20	22	15	13	15	15	11	4	7	9	6	9	7	13	7	9	11	13	15	11	13	100	

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	NNE	NE	N	WSW	N	SSW	NW	SSW	W	S	SSW	N	S	NNW	ESE	SE	SE	E	NW	NNW	NW	NW	NW	SW	SSW	S	W	NNWE	NW	NNW	
avgV	16	13	6	16	13	19	16	22	14	16	15	5	20	14	24	31	27	12	23	29	22	26	25	10	13	21	25	5	21	33	14
dir2																								S	S			E			

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