



SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

SASKATOON STATION 4057180

52°09' N 106°36' W 497 m asl Estab. 1963

Preliminary DECEMBER 2021

Day	Temperature						Degree-days			Precipitation			Relative Humidity		Station Pressure (sea level)	
	Max	Normal Max	Min	Normal Min	Mean	Normal Mean	Growing	Heating	Cooling	Weighing Gauge	Comments	Snow-on-Ground 0900h	Max ½ hr Avg	Min ½ hr Avg	Max ½ hr Avg	Min ½ hr Avg
	°C	1991-2020	°C	1991-2020	°C	1991-2020	5°C base	18°C base	18°C base	mm		cm	%	%	mbar	mbar
1	6.1	-4.8	-0.4	-13.2	2.9	-9.0	0.0	15.1	0.0	0.0		2	83	50	1009	995
2	1.3	-5.4	-5.5	-13.2	-2.1	-9.3	0.0	20.1	0.0	1.9	snow	0	95	68	1015	1008
3	-3.9	-6.2	-10.2	-14.6	-7.1	-10.4	0.0	25.1	0.0	0.0		3	85	63	1022	1016
4	-4.9	-7.0	-15.6	-16.4	-10.3	-11.7	0.0	28.3	0.0	0.0		2	90	76	1022	1010
5	-13.4	-7.0	-22.9	-15.5	-18.2	-11.3	0.0	36.2	0.0	0.0		2	87	63	1028	1010
6	-14.6	-7.6	-23.5	-15.9	-19.1	-11.8	0.0	37.1	0.0	0.0		3	82	67	1026	1011
7	-13.6	-8.3	-21.2	-17.1	-17.4	-12.7	0.0	35.4	0.0	0.0		3	82	70	1011	1006
8	-0.5	-8.3	-17.6	-17.4	-9.1	-12.8	0.0	27.1	0.0	2.4	snow	4	89	74	1006	983
9	-0.9	-7.6	-11.0	-17.3	-6.0	-12.5	0.0	24.0	0.0	0.0		5	75	60	1001	992
10	-4.2	-6.5	-14.6	-16.2	-9.4	-11.4	0.0	27.4	0.0	0.0		5	76	59	1002	998
11	4.4	-6.9	-10.8	-14.5	-3.2	-10.7	0.0	21.2	0.0	0.0		5	76	54	998	984
12	-0.1	-7.1	-6.9	-14.8	-3.5	-11.0	0.0	21.5	0.0	0.2	very light snow	5	88	69	1006	989
13	-3.4	-6.8	-10.1	-15.0	-6.8	-10.9	0.0	24.8	0.0	0.0		5	94	84	1014	1006
14	-2.9	-7.0	-10.6	-15.2	-6.8	-11.1	0.0	24.8	0.0	0.2	very light snow	5	92	77	1011	999
15	-10.4	-5.2	-23.1	-14.9	-16.8	-10.1	0.0	34.8	0.0	0.0		5	82	69	1012	1003
16	-19.8	-6.6	-25.5	-14.9	-22.7	-10.8	0.0	40.7	0.0	0.0		5	81	71	1020	1012
17	-14.2	-6.0	-24.4	-15.0	-19.3	-10.5	0.0	37.3	0.0	0.3	very light snow	5	81	68	1027	1013
18	-14.3	-6.9	-26.4	-16.0	-20.4	-11.5	0.0	38.4	0.0	0.2	very light snow	5	79	72	1025	1000
19	-14.0	-6.2	-19.3	-14.8	-16.7	-10.5	0.0	34.7	0.0	0.0		5	82	69	1018	999
20	-11.6	-6.5	-21.6	-16.3	-16.6	-11.4	0.0	34.6	0.0	0.0		5	79	70	1021	1009
21	-9.1	-7.3	-16.6	-16.3	-12.9	-11.8	0.0	30.9	0.0	0.0		5	77	60	1009	1004
22	-8.6	-8.6	-11.8	-15.9	-10.2	-12.3	0.0	28.2	0.0	1.2	light snow	5	88	77	1006	1001
23	-6.3	-8.1	-15.2	-17.9	-10.8	-13.0	0.0	28.8	0.0	0.2	light snow	7	90	81	1001	982
24	-13.3	-7.2	-26.0	-16.3	-19.7	-11.7	0.0	37.7	0.0	0.2	light snow	5	82	67	1008	986
25	-23.9	-7.8	-28.4	-16.3	-26.2	-12.1	0.0	44.2	0.0	0.1	light snow	5	75	62	1017	1008
26	-24.8	-8.2	-27.0	-16.8	-25.9	-12.5	0.0	43.9	0.0	6.3	snow	6	74	66	1017	1013
27	-25.2	-7.9	-32.2	-18.0	-28.7	-13.0	0.0	46.7	0.0	0.0		8	72	67	1014	1005
28	-26.1	-9.2	-32.9	-17.7	-29.5	-13.5	0.0	47.5	0.0	0.0	very light snow	8	72	64	1008	1005
29	-26.5	-10.3	-31.6	-18.8	-29.1	-14.6	0.0	47.1	0.0	0.1	very light snow	8	72	63	1010	1002
30	-28.3	-11.7	-35.4	-19.7	-31.9	-15.7	0.0	49.9	0.0	0.1	very light snow	8	69	65	1010	1001
31	-27.6	-12.0	-33.2	-20.1	-30.4	-16.1	0.0	48.4	0.0	0.0		8	71	62	1018	1011
Total							0.0	1041.9	0.0	13.4			Extreme / Date	Extreme / Date	Extreme / Date	Extreme / Date
Avg	-11.4	-7.5	-19.7	-16.2	-15.6	-11.9	1991-2020 Normal			9.9	1991-2020 Normal					
Extreme	6.1		-35.4							167.6	Cumulative		95	50	1028	982
Date	1		30							352.3	Cumulative Normal		2	1	5	23

Note: Red numbers indicate manual calculation; Red cell indicate data not available

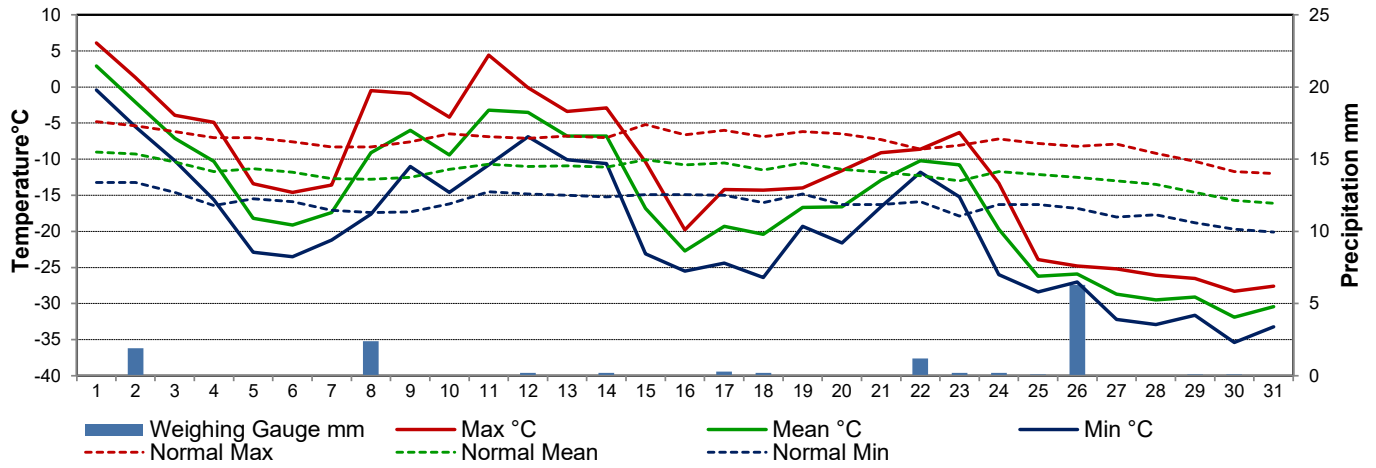
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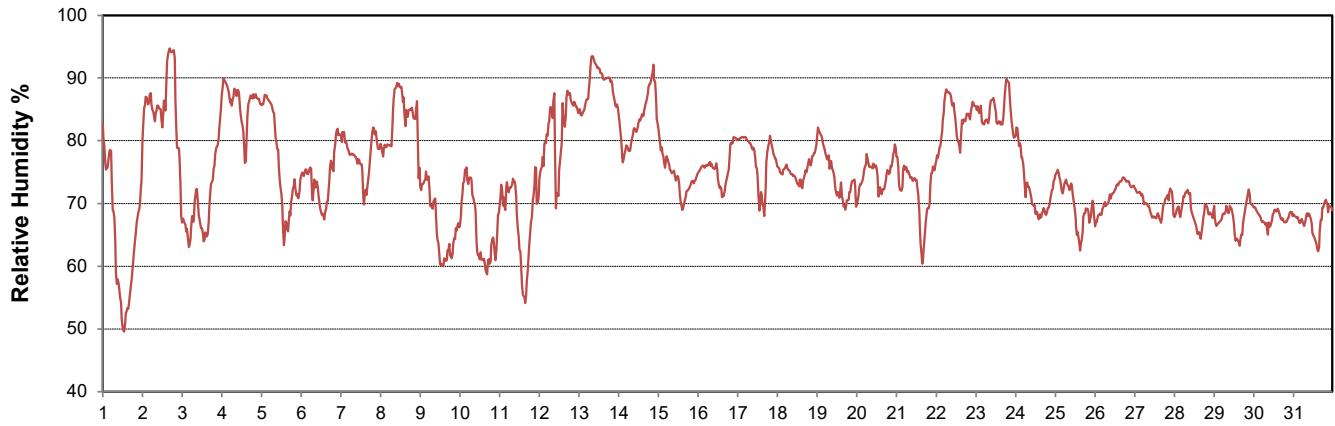
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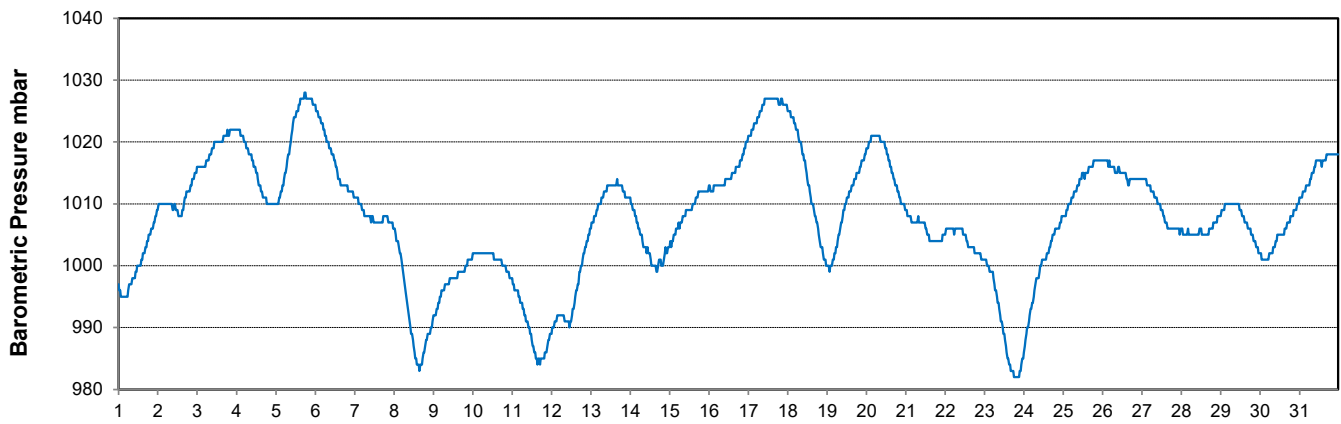
Temperature and Precipitation for December 2021



Relative Humidity for December 2021



Barometric Pressure Corrected to Sea Level for December 2021





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SASKATOON STATION 4057180

52°09' N 106°36' W 497 m asl Estab. 1963

Preliminary **DECEMBER 2021**

Day	Wind Gust (10 meter)			Wind Speed (10 meters) Daily Average	Soil Temperatures at 0900hrs								Radiation				
	Max	Direction	Time		Surface	5 cm	10 cm	20 cm	50 cm	100 cm	150 cm	300 cm	Bright Sunshine	Possible	% Possible	Global	Diffuse
	km/h			km/h	°C	°C	°C	°C	°C	°C	°C	°C	hours	hours		MJ/m ²	MJ/m ²
1	39.7	WNW	15:19	19.3	5.0	-1.0	-1.0	-0.5	2.5	5.5	7.0	9.0	0.0	8.1	0.0	1.6	1.6
2	44.0	NW	16:26	11.2	-4.0	-0.5	0.0	0.5	2.5	5.5	7.0	9.0	0.2	8.0	2.5	1.7	1.6
3	38.4	W	12:31	18.6	-9.5	-1.5	-0.5	0.5	2.5	5.5	7.0	8.5	7.5	8.0	93.8	4.2	4.4
4	19.9	NNE	23:49	8.5	-14.0	-4.0	-2.5	-0.5	2.5	5.5	7.0	8.5	0.2	8.0	2.5	2.5	2.4
5	42.1	N	8:33	20.4	-15.0	-5.5	-4.0	-2.0	2.0	5.5	7.0	8.5	5.3	7.9	66.8	4.7	4.5
6	26.9	WSW	4:53	12.6	-23.5	-9.5	-7.5	-4.5	1.5	5.5	7.0	8.5	1.1	7.9	13.9	3.2	3.0
7	22.2	SE	23:48	9.6	-20.5	-10.5	-8.5	-6.0	0.0	5.5	6.5	8.5	0.7	7.9	8.9	2.5	2.4
8	42.4	WNW	23:57	17.7	-9.0	-9.0	-8.0	-6.5	-0.5	5.0	6.5	8.5	0.4	7.9	5.1	1.9	1.9
9	42.8	W	0:17	19.3	-10.0	-6.5	-5.5	-5.0	-1.0	4.5	6.5	8.5	7.5	7.9	95.5	3.9	2.5
10	34.1	SW	18:21	14.5	-11.5	-7.0	-6.0	-4.5	-0.5	4.5	6.5	8.5	1.9	7.8	24.3	2.5	2.1
11	47.2	SW	16:07	19.2	-7.5	-6.5	-5.5	-4.5	-0.5	4.5	6.0	8.5	7.0	7.8	89.6	3.9	0.9
12	45.1	WSW	22:53	10.5	-4.5	-5.0	-4.5	-4.0	-0.5	4.0	6.0	8.0	4.0	7.8	51.3	3.3	1.5
13	35.1	SE	12:12	11.8	-5.5	-4.5	-4.0	-3.5	-0.5	4.0	6.0	8.0	1.5	7.8	19.3	2.2	1.9
14	39.4	WNW	23:21	15.9	-4.0	-4.0	-3.5	-3.0	0.0	4.0	6.0	8.0	0.0	7.8	0.0	1.5	1.5
15	46.1	WNW	1:59	24.8	-17.5	-5.0	-4.0	-2.5	0.0	4.0	5.5	8.0	4.0	7.8	51.6	3.1	1.7
16	23.7	WNW	0:20	10.5	-25.0	-8.0	-6.5	-4.0	0.0	4.0	5.5	8.0	5.1	7.7	65.9	4.5	1.5
17	24.2	NNE	1:53	8.8	-19.5	-8.5	-7.5	-5.5	-0.5	4.0	5.5	8.0	6.3	7.7	81.5	4.7	1.4
18	27.4	SE	12:11	10.7	-25.5	-10.5	-9.0	-6.5	-1.0	3.5	5.5	8.0	1.6	7.7	20.7	2.8	2.1
19	46.7	NW	17:08	21.1	-18.0	-9.5	-8.5	-7.0	-2.0	3.5	5.5	7.5	4.7	7.7	60.9	3.3	1.6
20	31.2	NW	0:00	13.3	-17.5	-10.5	-9.5	-7.5	-2.0	3.5	5.5	7.5	0.1	7.7	1.3	1.4	1.5
21	29.9	SW	12:19	13.7	-17.0	-10.0	-9.0	-7.0	-2.5	3.0	5.0	7.5	1.9	7.7	24.6	2.4	2.0
22	31.5	E	16:15	11.3	-10.5	-9.0	-8.0	-7.0	-2.5	3.0	5.0	7.5	0.0	7.7	0.0	1.6	1.7
23	42.7	NW	23:51	16.8	-12.5	-7.5	-7.0	-6.0	-2.5	3.0	5.0	7.5	2.8	7.7	36.3	2.7	2.4
24	48.3	WNW	2:11	24.8	-19.5	-7.0	-6.5	-5.5	-2.5	2.5	5.0	7.5	7.3	7.7	94.4	3.9	1.1
25	29.1	WNW	14:22	11.1	-26.0	-8.5	-7.5	-6.0	-2.0	2.5	4.5	7.5	5.1	7.7	66.0	3.7	1.6
26	34.4	NNE	19:01	13.9	-25.5	-9.5	-8.5	-7.0	-2.5	2.5	4.5	7.5	0.0	7.7	0.0	1.1	1.1
27	27.6	N	0:13	13.7	-31.0	-9.5	-8.5	-7.0	-2.5	2.5	4.5	7.0	6.7	7.8	86.5	4.0	1.9
28	20.4	SW	18:52	11.8	-27.5	-10.0	-9.0	-7.5	-3.0	2.5	4.5	7.0	1.8	7.8	23.2	2.8	2.7
29	29.9	WNW	2:22	16.2	-29.5	-10.0	-9.0	-7.5	-3.0	2.0	4.5	7.0	5.0	7.8	64.3	3.8	2.6
30	25.4	WNW	18:50	8.2	-37.0	-10.5	-9.5	-8.0	-3.5	2.0	4.0	7.0	2.2	7.8	28.2	2.8	2.4
31	27.4	WNW	11:44	13.6	-31.5	-11.0	-10.0	-8.5	-3.5	2.0	4.0	7.0	6.0	7.8	76.8	4.7	1.6
Total													97.9	242.1	40.4	92.9	63.1
Mean				14.6	-16.9	-7.4	-6.4	-5.0	-0.8	3.8	5.7	7.9	1991-2020 Normal				
Extreme	48.3	WNW	2:11		1971- 2000 Normal for Soil Temperatures								85.7	242.3	35.4	92.1	47.6
Date	24					-7.1	-6.6	-5.6	-1.7	2.0	3.8	6.4	No. of Bright Sunshine days = 27				

Note: Red numbers indicate manual calculation; Red cell indicate data not available

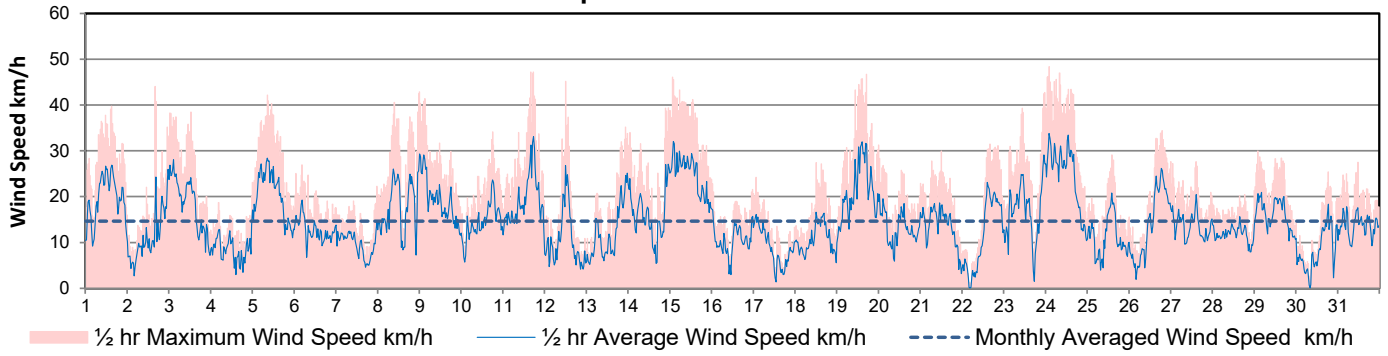
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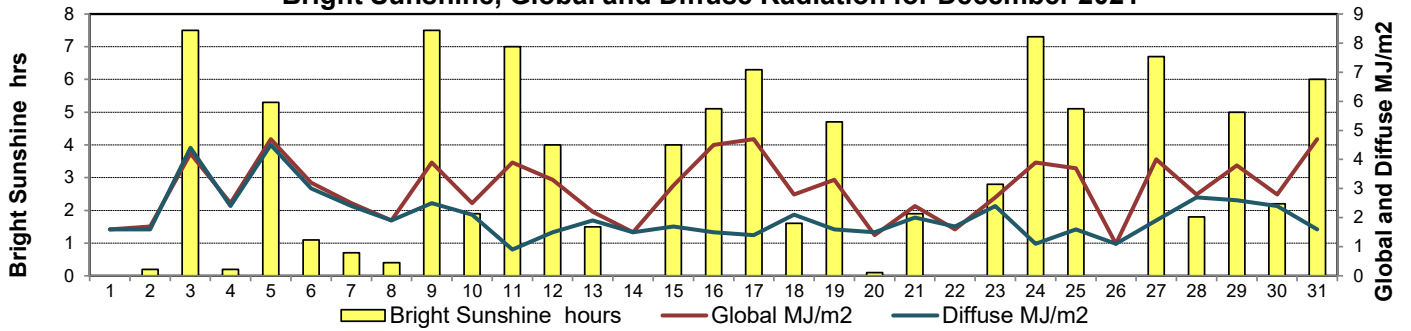
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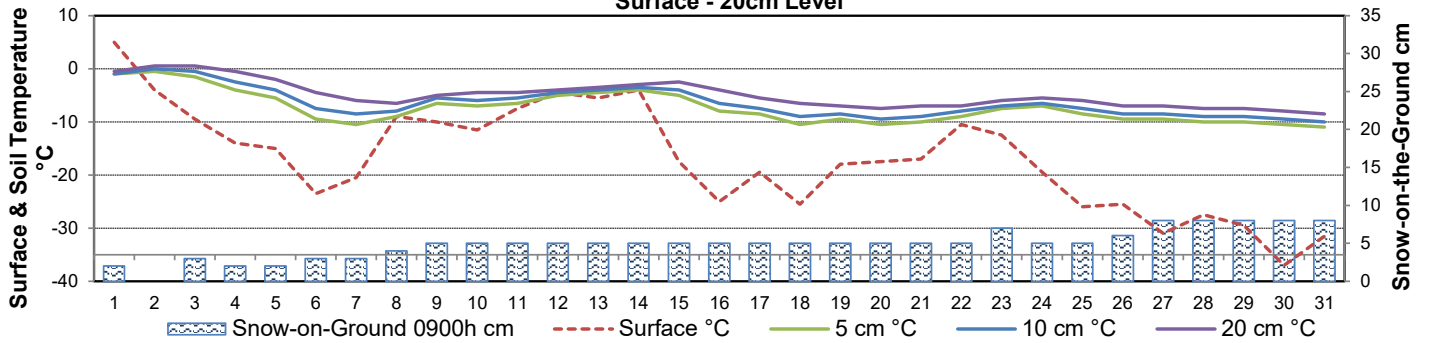
Wind Speed for December 2021



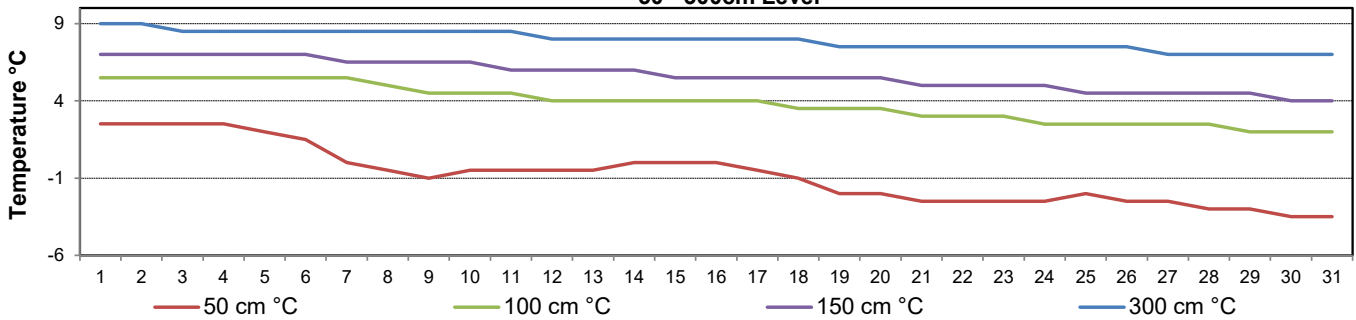
Bright Sunshine, Global and Diffuse Radiation for December 2021



Soil Temperatures for December 2021
Surface - 20cm Level



Soil Temperatures for December 2021
50 - 300cm Level





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Preliminary **DECEMBER 2021**

Extreme Records for December

Max/Min Temperature °C				Precipitation - Monthly mm				Wind Monthly km/h				CRS Bright Sunshine - Monthly					
S'toon Area	Date	Site	S'toon CRS	Date	S'toon Area	Date	Site	S'toon CRS	Date	S'toon Airport	Date	S'toon CRS**	Date	Hours	Year	No. of Days	Year
14.4	05/1939	SE	11.2	14/1997	59.2	1956	SA	48.2	1973	121 ^W	12/1955	89.4	1992	123.3	2006	27	1994*
-43.9	22/1892	SM	-42.2	31/1973	0.0	1906,'30	SE	0.4	2009					49.1	1973	17	1966*

**1975 forward * more than one year

Notable Events for CRS Saskatoon - December						Saskatoon Area Stations			Glossary	
Element	Type	Day	New Record	Old Record	Year	Station	Location	Period	Code	Description
Precipitation	Highest Daily Maximum	26	6.3	6.0	1984	SM	NWMP	c. 1892-1901	T	Trace of precipitation
						SE	Eby	1901-1941	Normal	30 year average beginning with the decade
Bright Sunshine	Greatest Number of Bright Sunshine days	27	27	27	1994	US	Univ. of Sask.	1915-1964	SOG	Depth of snow-on-the-ground in cm
						S	Saskatoon	1941-1942	na	not available
						SA	Saskatoon A	1942 -	Degree-days	
						NRC	Nat. Res. Council	1952-1966	Tm	Mean Temperature
						SRC	Sask. Res. Council	1963-	Growing	(Tm-5°C); if Tm ≤ 5°C then GDD = 0
						SWT	S'toon Water Treatment Plant	1974 -	Heating	(18°C-Tm); if Tm ≤ 18°C then HDD = 0
						SC	S'toon Central Ave	1974-1989	Cooling	(Tm-18°C); if Tm ≥ 18°C then CDD = 0
						S1	Saskatoon 1	1976-1978	Extreme Cooling	(Tm-24°C); if Tm ≥ 24°C then CDD = 0
						S2	Saskatoon 2	1977-1990		
						K	S'toon Kernen Farm	1993-2004		
						KCS	S'toon Kernen Farm CS	1996-		
						RCS	Environment Canada	2008-		
						SF	Sutherland Forestry	1943-1970		

NOTE: Diffuse radiation shield was mis-aligned from December 01 - December 08 inclusive

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Preliminary December 2021

Day	2 meter Wind Speed			Soil Moisture at 0900 hrs (rounded to the 0.5%)														
	Daily Average	Max ½ hr Avg	½ hr Extreme Max	10 cm	20 cm	50 cm												
	km/h	km/h	km/h	% by volume (soil type is Loam (45.5% Sand, 41.1% Silt, 13.3% Clay))														
1	15.0	19.7	31.0	7.5	7.0	7.0												
2	7.0	18.3	27.0	8.0	6.5	7.5												
3	14.0	20.6	32.1	7.5	6.5	7.5												
4	6.0	10.2	16.0	7.5	6.5	7.5												
5	16.0	21.5	33.3	7.5	6.5	7.0												
6	10.0	15.8	22.9		6.5	7.5												
7	7.0	10.7	18.3		6.0	7.5												
8	14.0	20.5	34.4		6.0	7.0												
9	16.0	23.7	35.0		6.0	7.0												
10	12.0	19.7	28.7		6.5	7.0												
11	15.0	27.1	40.2		6.0	7.0												
12	8.0	22.3	37.3		6.0	7.0												
13	9.0	21.0	32.7		6.0	7.0												
14	13.0	22.0	34.4		6.0	7.5												
15	20.0	25.8	39.6		6.5	7.5												
16	9.0	14.1	20.6		6.0	7.0												
17	7.0	13.3	19.5		6.0	7.0												
18	8.0	13.3	22.4		6.0	7.0												
19	17.0	25.7	38.5		5.5	7.0												
20	11.0	16.5	24.1		5.5	6.5												
21	11.0	15.9	25.2		5.5	7.0												
22	9.0	19.1	29.8		6.0	6.5												
23	13.0	23.3	35.0		6.0	6.5												
24	20.0	27.3	38.5		5.5	6.5												
25	9.0	16.9	24.7		5.5	7.0												
26	12.0	20.6	28.1		5.5	6.5												
27	12.0	17.3	24.1		6.0	6.5												
28	10.0	14.0	18.3		5.5	6.5												
29	14.0	17.6	26.4		5.5	7.0												
30	7.0	15.6	23.5		5.5	6.5												
31	12.0	22.0	22.0		5.5	6.5												
Total																		
Mean				8	6	7.0												
Extreme	20.0	27.3	40.2	8	7	7.5												
Date	15	24	11	2	1	2												

NOTE the 10 cm soil moisture became very unstable starting Dec 6.

Note: Red numbers indicate manual calculation; Red cell indicate data not available

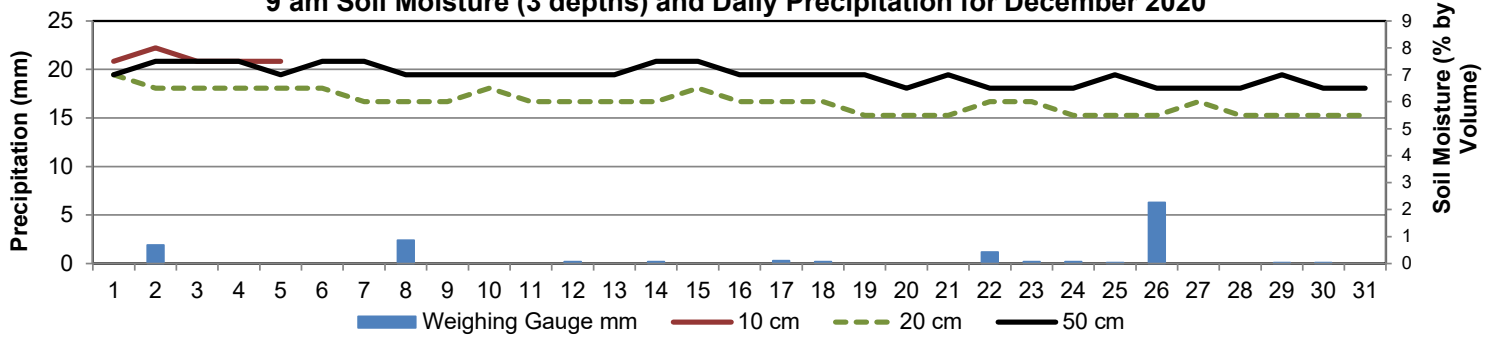
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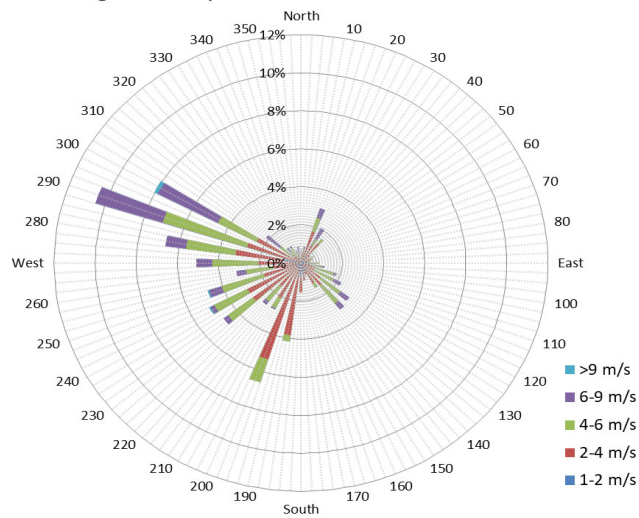
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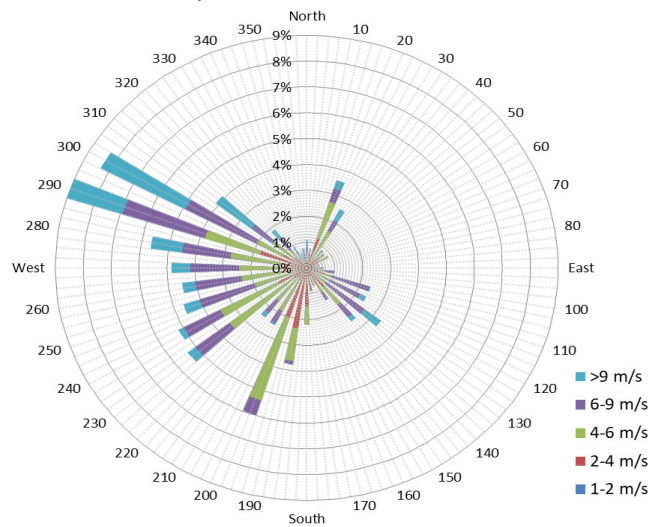
9 am Soil Moisture (3 depths) and Daily Precipitation for December 2020



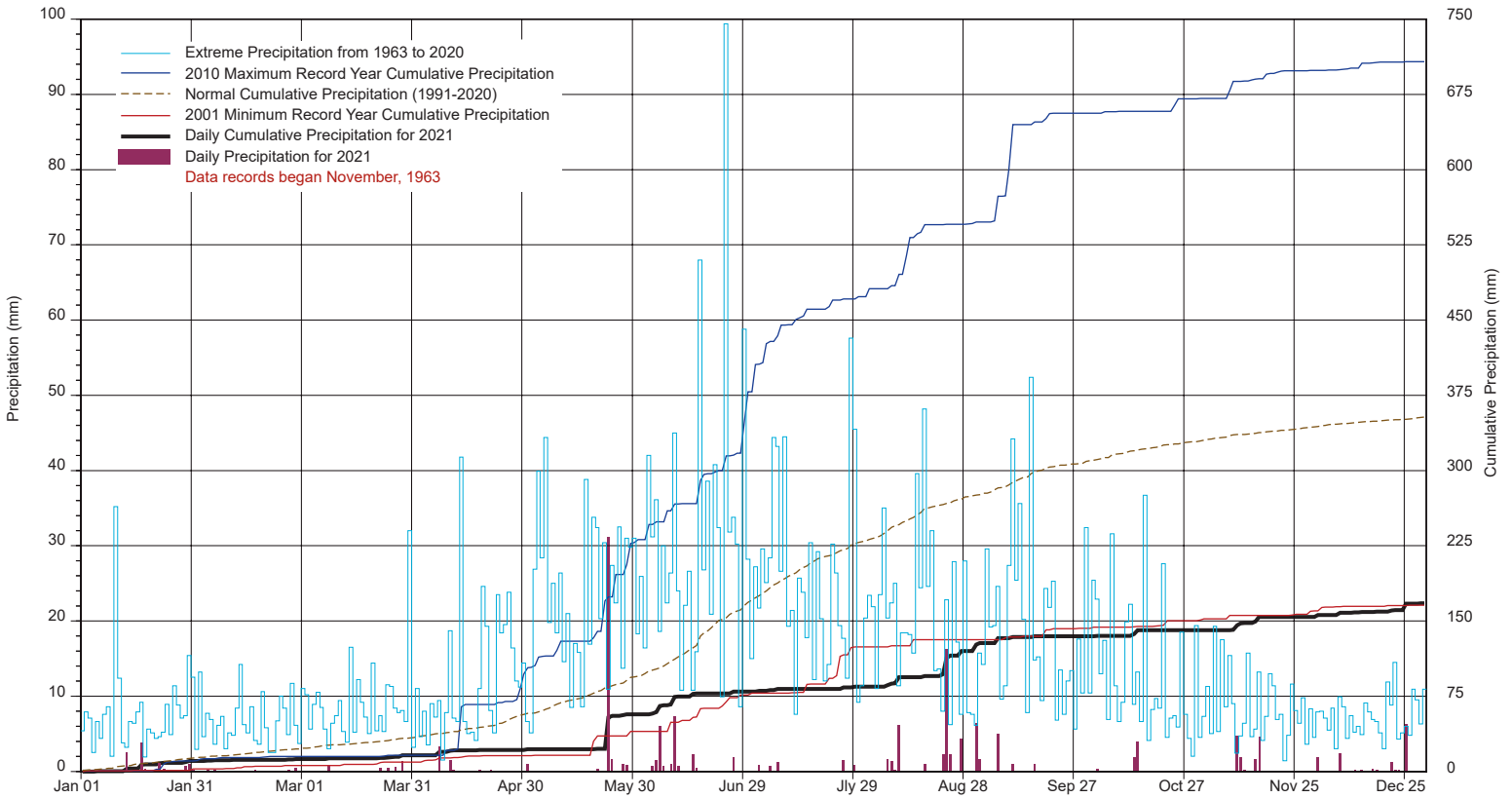
10 minute Average Wind Speed and Direction Saskatoon December 2021



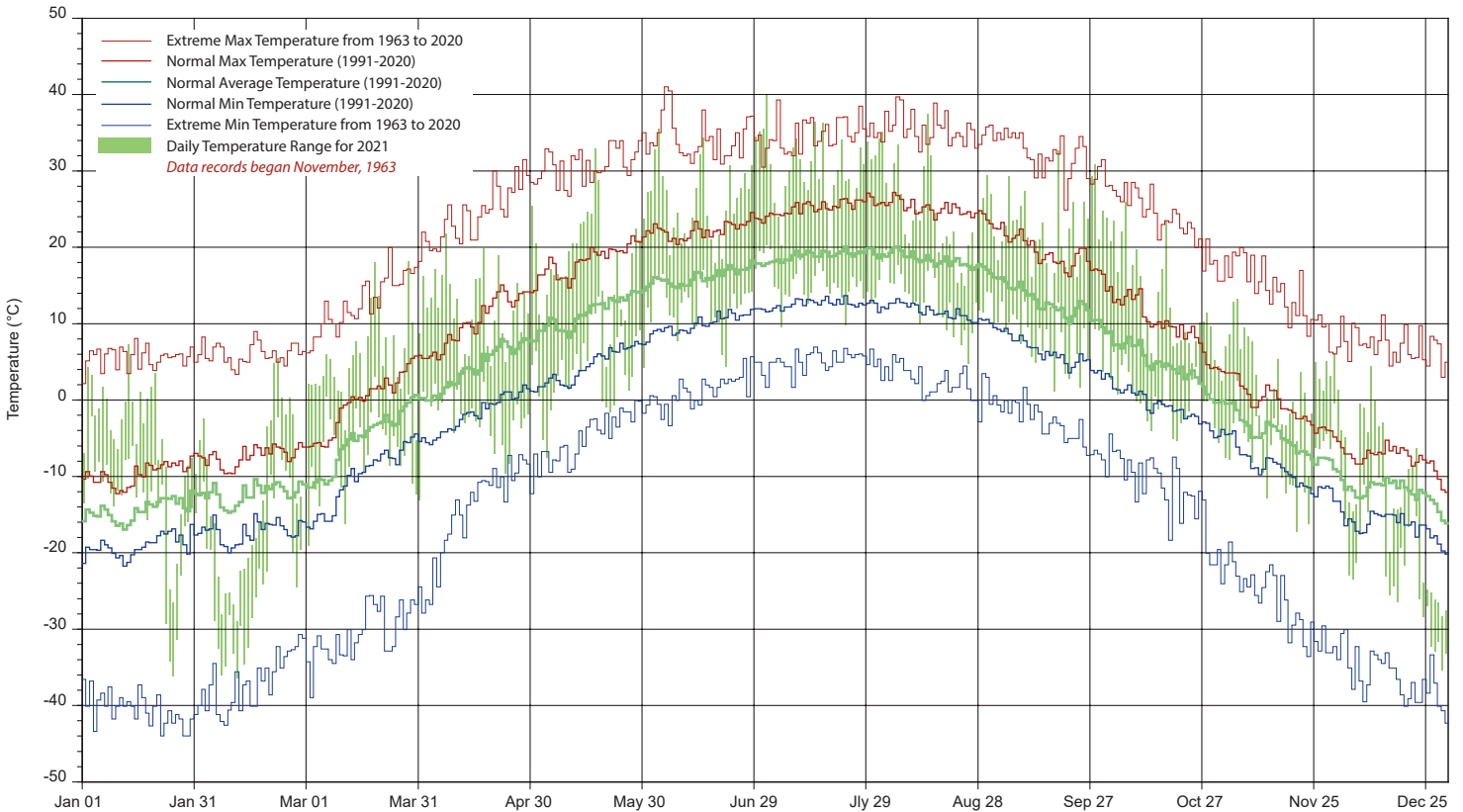
1/2 hr Maximum Wind Speed and Direction Saskatoon December 2021



SASKATCHEWAN RESEARCH COUNCIL SASKATOON CLIMATE REFERENCE STATION 2021 PRECIPITATION AND NORMALS



2021 TEMPERATURES AND NORMALS



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