



SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

SASKATOON STATION 4057180

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

Preliminary **DECEMBER 2022**

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	-15.9	-4.8	-23.6	-13.2	-19.8	-9.0	0.0	37.8	0.0	1.1	light snow	8	82	74	1011	1007
2	-23.0	-5.4	-29.2	-13.2	-26.1	-9.3	0.0	44.1	0.0	0.0		8	78	70	1019	1011
3	-12.4	-6.2	-24.5	-14.6	-18.5	-10.4	0.0	36.5	0.0	0.1	light snow	8	74	59	1019	1010
4	-2.8	-7.0	-13.6	-16.4	-8.2	-11.7	0.0	26.2	0.0	0.0		5	85	57	1013	1003
5	-13.5	-7.0	-23.6	-15.5	-18.6	-11.3	0.0	36.6	0.0	0.1	light snow	4	81	55	1016	1013
6	-22.2	-7.6	-32.4	-15.9	-27.3	-11.8	0.0	45.3	0.0	0.3	light snow	4	78	63	1022	1013
7	-13.0	-8.3	-33.7	-17.1	-23.4	-12.7	0.0	41.4	0.0	0.3	light snow	4	78	67	1021	1009
8	-7.4	-8.3	-15.5	-17.4	-11.5	-12.8	0.0	29.5	0.0	0.0		4	80	74	1015	1009
9	-3.4	-7.6	-10.4	-17.3	-6.9	-12.5	0.0	24.9	0.0	0.0		4	86	66	1008	1004
10	-7.2	-6.5	-17.3	-16.2	-12.3	-11.4	0.0	30.3	0.0	0.0		3	87	71	1014	1009
11	-4.3	-6.9	-8.1	-14.5	-6.2	-10.7	0.0	24.2	0.0	0.0		4	82	70	1013	1008
12	-7.1	-7.1	-12.6	-14.8	-9.9	-11.0	0.0	27.9	0.0	2.5	light snow	4	91	81	1019	1013
13	-11.1	-6.8	-13.2	-15.0	-12.2	-10.9	0.0	30.2	0.0	0.2	light snow	5	88	80	1021	1018
14	-8.3	-7.0	-14.8	-15.2	-11.6	-11.1	0.0	29.6	0.0	0.2	light snow	6	87	79	1020	1018
15	-10.0	-5.2	-17.2	-14.9	-13.6	-10.1	0.0	31.6	0.0	0.0		6	84	72	1023	1020
16	-15.3	-6.6	-19.8	-14.9	-17.6	-10.8	0.0	35.6	0.0	0.0		5	85	81	1023	1019
17	-13.8	-6.0	-21.2	-15.0	-17.5	-10.5	0.0	35.5	0.0	0.0		6	85	71	1025	1019
18	-20.8	-6.9	-27.0	-16.0	-23.9	-11.5	0.0	41.9	0.0	0.0		5	73	67	1028	1025
19	-23.6	-6.2	-28.2	-14.8	-25.9	-10.5	0.0	43.9	0.0	1.9	light snow	5	74	68	1031	1027
20	-23.4	-6.5	-32.0	-16.3	-27.7	-11.4	0.0	45.7	0.0	0.2	light snow	7	74	68	1034	1031
21	-25.9	-7.3	-31.3	-16.3	-28.6	-11.8	0.0	46.6	0.0	0.9	light snow	7	73	68	1035	1031
22	-22.9	-8.6	-31.2	-15.9	-27.1	-12.3	0.0	45.1	0.0	0.0		7	76	69	1038	1035
23	-23.8	-8.1	-34.7	-17.9	-29.3	-13.0	0.0	47.3	0.0	0.3	light snow	8	75	65	1039	1030
24	-15.7	-7.2	-25.6	-16.3	-20.7	-11.7	0.0	38.7	0.0	0.2	light snow	8	76	62	1030	1011
25	-13.9	-7.8	-17.2	-16.3	-15.6	-12.1	0.0	33.6	0.0	5.3	snow	16	84	76	1023	1005
26	-7.1	-8.2	-14.3	-16.8	-10.7	-12.5	0.0	28.7	0.0	0.0		16	88	79	1021	993
27	-7.5	-7.9	-13.0	-18.0	-10.3	-13.0	0.0	28.3	0.0	4.6	snow	15	90	86	995	989
28	-12.4	-9.2	-17.5	-17.7	-15.0	-13.5	0.0	33.0	0.0	3.9	snow	15	86	79	1003	990
29	-10.9	-10.3	-15.3	-18.8	-13.1	-14.6	0.0	31.1	0.0	0.1		18	89	81	1007	1003
30	-9.8	-11.7	-15.9	-19.7	-12.9	-15.7	0.0	30.9	0.0	0.0		17	90	78	1007	998
31	-15.5	-12.0	-21.7	-20.1	-18.6	-16.1	0.0	36.6	0.0	0.0		19	85	80	1006	997
Total							0.0	1098.6	0.0	22.2			Extreme / Date	Extreme / Date	Extreme / Date	Extreme / Date
Avg	-13.7	-7.5	-21.1	-16.2	-17.4	-11.9	1991-2020 Normal			9.9	1991-2020 Normal					
Extreme	-2.8		-34.7							275.4	Year to date 2022 Cumulative		91	55	1039	989
Date	4		23							352.3	Year to date Cumulative Normal		12	5	23	27

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

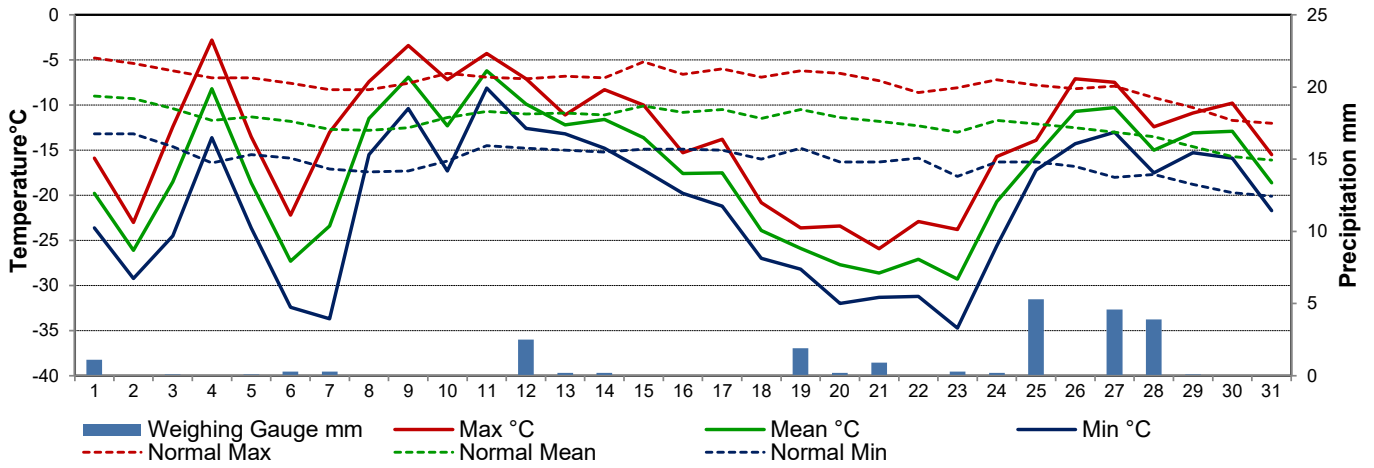
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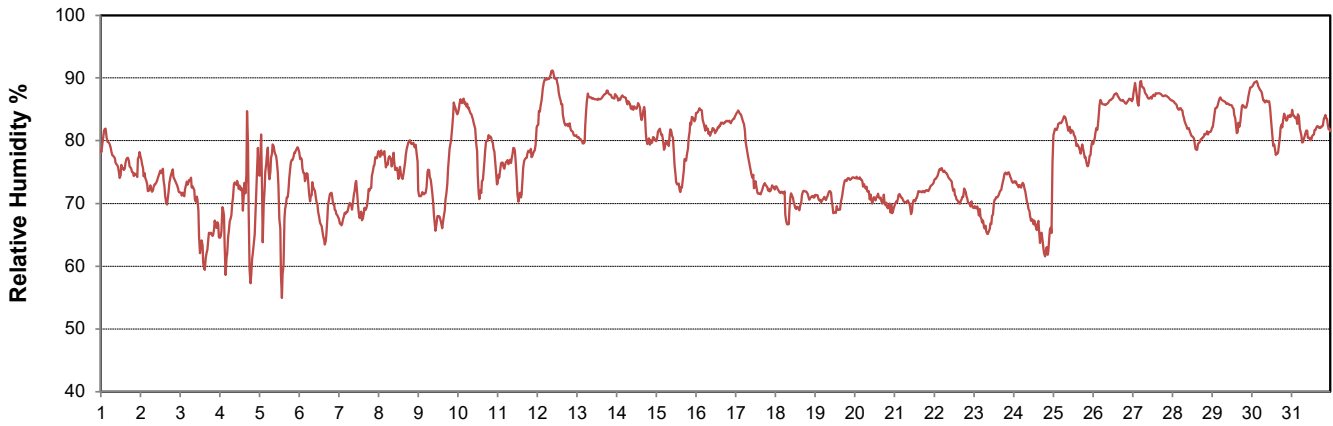
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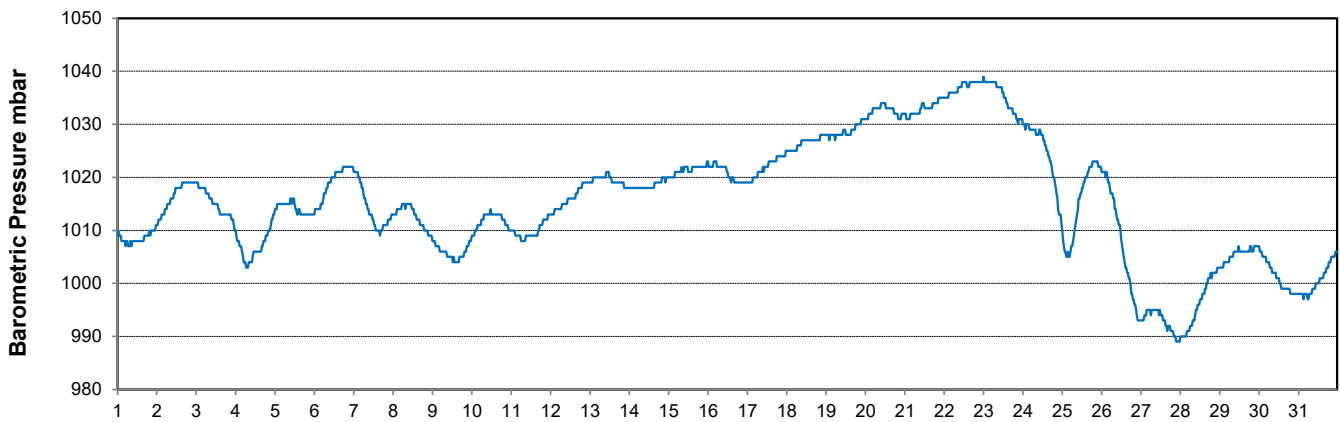
Temperature and Precipitation for December 2022



Relative Humidity for December 2022



Barometric Pressure Corrected to Sea Level for December 2022





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SASKATOON STATION 4057180

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

Preliminary DECEMBER 2022

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	37.5	E	0:02	17.7	-22.0	-3.0	-2.0	-0.5	2.5	6.0	7.0	9.0	1.7	8.1	21.0	2.7	2.4
2	33.7	WSW	20:46	13.9	-26.5	-3.0	-2.5	-1.0	2.5	6.0	7.0	9.0	3.7	8.0	46.0	4.1	2.4
3	38.5	WSW	12:19	19.8	-22.5	-4.0	-3.0	-1.5	2.0	5.5	7.0	8.5	6.3	8.0	78.7	4.0	2.1
4	57.1	NW	17:55	26.5	-7.0	-4.0	-3.5	-2.0	1.5	5.5	7.0	8.5	3.1	8.0	38.8	3.0	1.6
5	25.5	NNW	2:04	6.4	-25.0	-4.0	-3.0	-2.0	1.5	5.5	7.0	8.5	4.6	8.0	57.9	4.4	1.6
6	30.9	NNE	6:17	10.8	-29.0	-5.5	-4.5	-2.5	1.5	5.5	6.5	8.5	7.3	7.9	92.2	5.0	1.3
7	32.3	S	11:53	13.9	-30.0	-7.0	-6.0	-4.0	1.0	5.0	6.5	8.5	5.8	7.9	73.4	4.9	2.3
8	37.9	SE	12:47	13.3	-13.5	-6.5	-6.0	-4.5	0.0	5.0	6.5	8.5	7.4	7.9	94.0	3.7	1.1
9	27.0	NW	22:13	12.4	-7.5	-6.0	-5.0	-4.0	0.0	5.0	6.5	8.5	0.3	7.9	3.8	2.1	2.1
10	45.1	SE	22:06	13.5	-19.5	-5.5	-4.5	-3.5	0.0	4.5	6.5	8.5	6.2	7.8	79.2	4.9	2.0
11	44.5	SE	2:36	15.0	-6.0	-5.0	-4.5	-3.5	0.0	4.5	6.0	8.0	3.4	7.8	43.5	2.9	1.7
12	32.9	N	1:50	13.1	-7.5	-4.5	-4.0	-3.0	0.0	4.5	6.0	8.0	0.0	7.8	0.0	1.8	1.8
13	20.3	WNW	14:36	7.3	-12.5	-4.0	-3.5	-3.0	0.0	4.0	6.0	8.0	0.0	7.8	0.0	1.8	1.8
14	47.9	N	20:21	15.6	-14.0	-4.0	-3.0	-2.5	0.5	4.0	6.0	8.0	0.6	7.8	7.7	2.0	1.9
15	36.2	NNW	0:05	16.4	-15.5	-3.5	-3.0	-2.5	0.5	4.0	6.0	8.0	6.5	7.8	83.9	3.6	1.0
16	14.5	E	18:30	6.2	-21.0	-4.0	-3.0	-2.5	0.5	4.0	5.5	8.0	0.4	7.7	5.2	2.4	2.0
17	41.4	NE	8:15	20.8	-18.0	-4.0	-3.5	-2.5	0.5	4.0	5.5	8.0	0.1	7.7	1.3	2.0	2.0
18	37.2	NE	14:16	19.4	-20.5	-4.5	-3.5	-3.0	0.5	4.0	5.5	8.0	4.9	7.7	63.4	2.9	1.9
19	23.4	NE	2:13	12.2	-25.5	-5.0	-4.0	-3.0	0.0	4.0	5.5	7.5	0.0	7.7	0.0	2.2	2.2
20	17.8	NNW	1:11	7.1	-29.0	-5.5	-4.5	-3.5	0.0	4.0	5.5	7.5	6.6	7.7	85.5	4.7	1.5
21	28.5	NW	16:23	13.5	-29.0	-6.0	-5.0	-4.0	0.0	4.0	5.5	7.5	3.1	7.7	40.2	3.4	2.2
22	34.4	NNW	7:56	14.4	-23.5	-6.5	-5.5	-4.5	-0.5	3.5	5.5	7.5	5.3	7.7	68.7	3.7	1.8
23	30.3	SE	21:47	9.0	-32.0	-6.5	-6.0	-4.5	-0.5	3.5	5.0	7.5	2.9	7.7	37.6	3.2	2.3
24	47.1	SE	21:52	23.3	-20.5	-7.0	-6.5	-5.0	-1.0	3.5	5.0	7.5	0.8	7.7	10.4	2.2	2.2
25	59.8	SE	0:27	15.8	-15.5	-7.0	-6.0	-5.0	-1.0	3.5	5.0	7.5	1.1	7.7	14.2	2.7	2.6
26	42.8	SE	19:11	16.5	-13.0	-6.0	-5.5	-5.0	-1.5	3.0	5.0	7.5	0.9	7.7	11.6	1.9	1.8
27	43.0	E	22:13	15.7	-11.5	-5.5	-5.0	-4.5	-1.5	3.0	5.0	7.0	0.0	7.8	0.0	1.5	1.6
28	37.9	E	2:00	17.3	-14.5	-5.0	-4.5	-4.0	-1.0	3.0	4.5	7.0	0.2	7.8	2.6	2.3	2.3
29	21.0	WNW	6:17	9.4	-12.0	-4.5	-4.0	-3.5	-1.0	3.0	4.5	7.0	1.1	7.8	14.2	2.3	2.1
30	25.9	SE	11:40	10.4	-12.0	-4.5	-4.0	-3.5	-1.0	3.0	4.5	7.0	7.2	7.8	92.4	5.5	1.4
31	17.9	WNW	20:00	7.0	-16.5	-4.0	-3.5	-3.0	-1.0	3.0	4.5	7.0	0.4	7.8	5.1	2.2	1.9
Total													91.9	242.2	37.9	96.0	58.9
Mean				14.0	-18.5	-5.0	-4.3	-3.3	0.2	4.2	5.8	7.9	1991-2020 Normal				
Extreme	59.8	SE	0:27		1971- 2000 Normal for Soil Temperatures								85.7	242.3	35.4	92.1	47.6
Date	25					-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

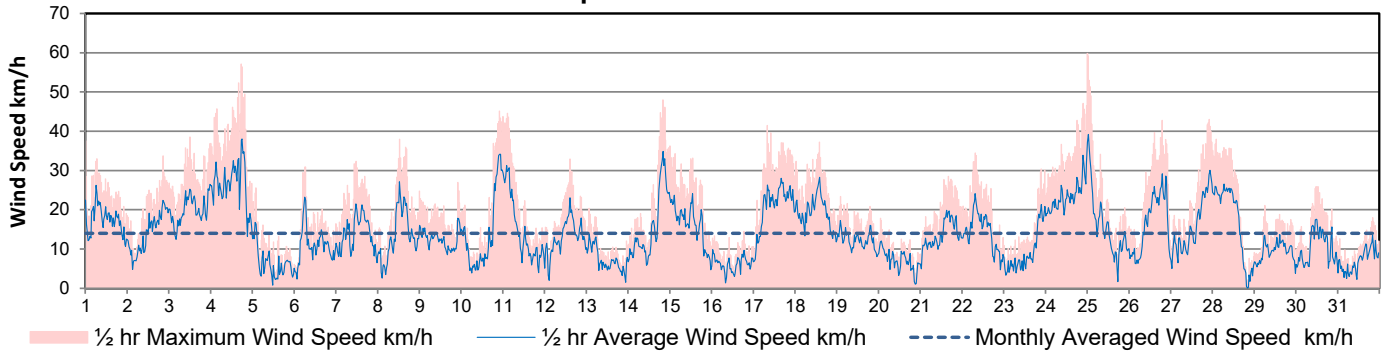
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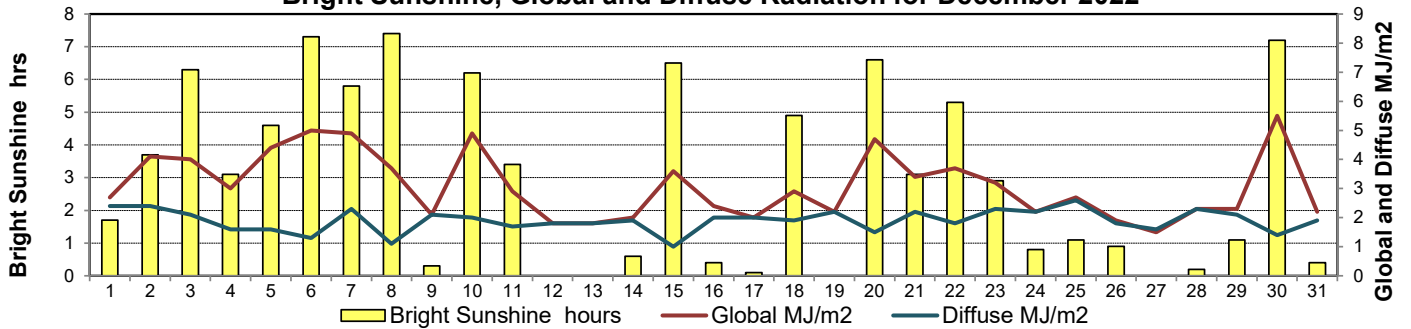
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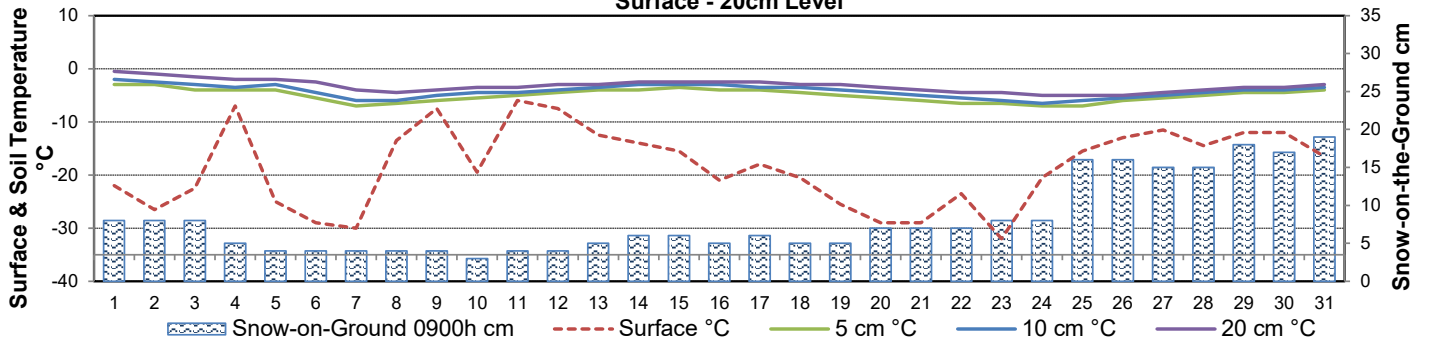
Wind Speed for December 2022



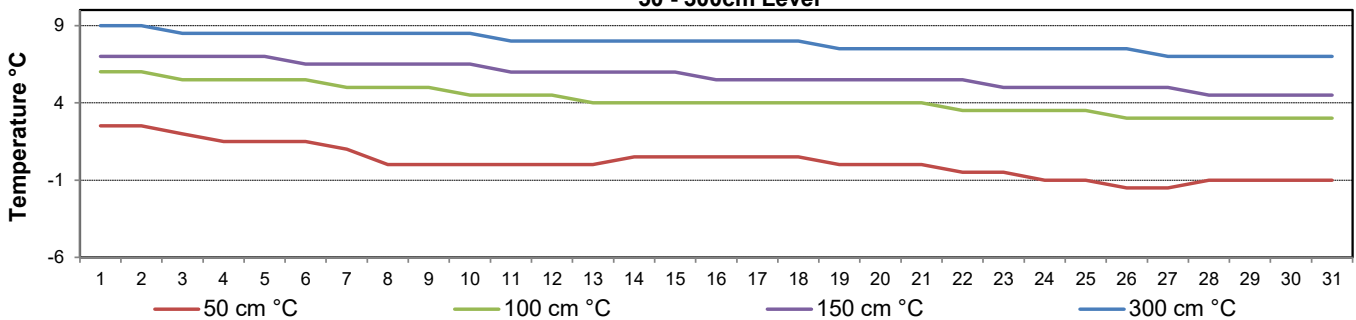
Bright Sunshine, Global and Diffuse Radiation for December 2022



Soil Temperatures for December 2022
Surface - 20cm Level



Soil Temperatures for December 2022
50 - 300cm Level





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Preliminary **DECEMBER 2022**

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	43.0	1977	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	1.2	1997					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	SM	NWMP	c. 1892-1901	T	Trace of precipitation
Temperature	Lowest Maximum Daily	2	-23.0	-23.0	1991	SE	Eby	1901-1941	Normal	30 year average beginning with the decade
	Lowest Minimum Daily	7	-33.7	-32.2	1972	US	Univ. of Sask.	1915-1964	SOG	Depth of snow-on-the-ground in cm
Heating Degree-days	Highest daily HDD	2	44.1	43.6	1970	S	Saskatoon	1941-1942	na	not available
						SA	Saskatoon A	1942 -	Degree-days	
Precipitation	Maximum Daily	25	5.3	5.1	1989	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		

The last time the Dec 31 snow depth was 19cm or deeper was in 2006. The maximum recorded Dec 31 snow depth was 22 cm in 1982.

2022 was the 8th driest year at CRS Saskatoon over the last 59 years of data gathering.

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Preliminary December 2022

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	14.0	19.5	29.8	2.0	6.0	7.5												
2	12.0	18.8	26.4	1.5	6.0	7.5												
3	17.0	22.1	36.8	1.5	6.5	7.5												
4	22.0	30.6	48.8	1.5	6.0	8.0												
5	5.0	13.9	20.6	1.5	6.0	8.0												
6	8.0	17.7	25.2	1.0	6.0	7.5												
7	10.0	17.4	28.7	0.5	6.0	7.5												
8	10.0	21.1	32.7	1.0	5.5	7.0												
9	8.0	13.7	21.2	0.5	5.5	7.0												
10	10.0	29.2	40.8	1.0	6.0	7.0												
11	12.0	24.9	40.2	1.5	5.5	7.0												
12	11.0	18.9	27.5	1.5	6.0	7.5												
13	5.0	11.8	19.5	1.5	6.5	7.5												
14	12.0	27.9	40.2	1.5	6.5	7.5												
15	13.0	19.7	29.3	1.5	6.0	7.5												
16	3.0	7.2	12.0	1.5	6.0	7.5												
17	17.0	22.8	33.3	1.0	6.0	7.5												
18	16.0	22.8	32.1	1.0	6.0	7.5												
19	10.0	14.6	20.0	0.5	5.5	7.5												
20	5.0	10.4	14.9	1.0	6.0	7.5												
21	11.0	16.4	24.7	0.5	5.5	7.0												
22	12.0	19.3	29.8	1.0	5.5	7.5												
23	7.0	16.9	25.2	1.0	5.5	7.0												
24	18.0	25.4	40.2	1.0	5.5	6.5												
25	13.0	29.8	50.6	1.0	5.0	6.5												
26	14.0	24.0	36.2	1.0	5.5	7.0												
27	12.0	23.1	39.1	1.0	5.5	7.5												
28	14.0	21.3	31.0	1.0	6.0	7.0												
29	8.0	12.1	17.7	1.0	6.0	7.0												
30	6.0	12.7	22.4	1.0	6.0	7.0												
31	3.0	17.0	17.0	1.5	6.0	7.0												
Total																		
Mean				1	6	7.3												
Extreme	22.0	30.6	50.6	2	6.5	8												
Date	4	4	25	1	3	4												

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

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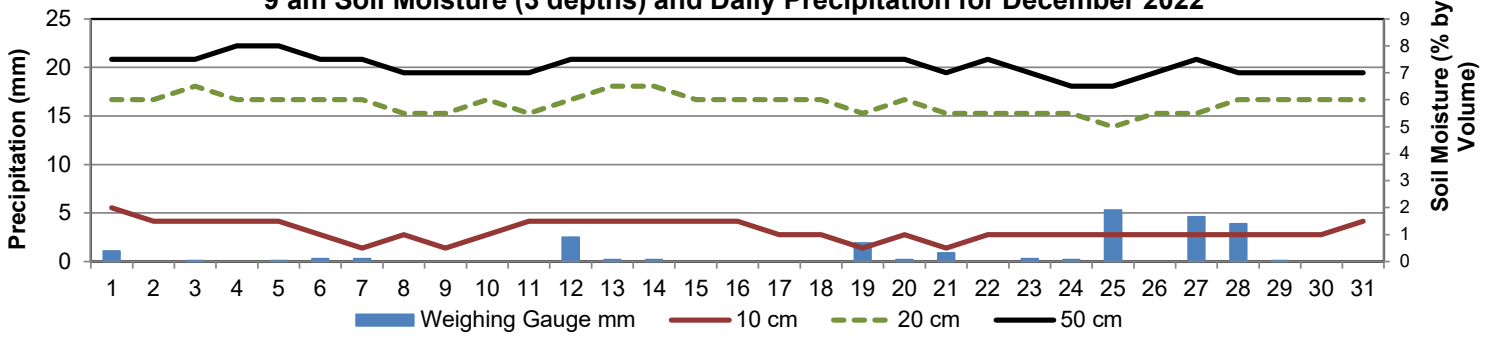


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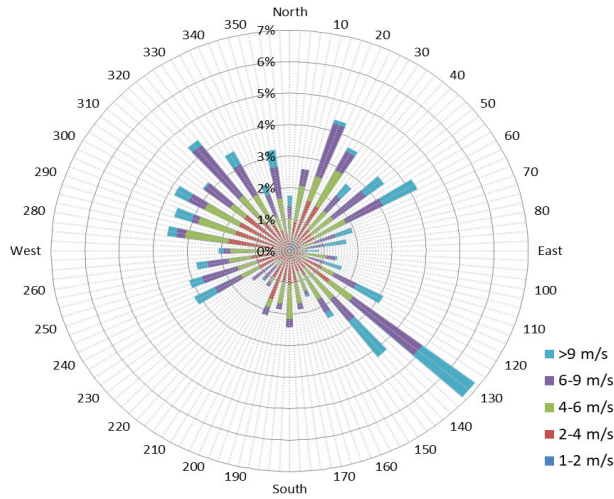
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9 am Soil Moisture (3 depths) and Daily Precipitation for December 2022



1/2 hr Maximum Wind Speed and Direction Saskatoon December 2022



10 minute Average Wind Speed and Direction Saskatoon December 2022

