



SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

SASKATOON STATION 4057180

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

Preliminary NOVEMBER 2023

Day	Temperature						Degree-days			Precipitation			Relative Humidity		Station Pressure (sea level)	
	Max	Normal Max	Min	Normal Min	Mean	Normal Mean	Growing	Heating	Cooling	Geonor all-season ppt Gauge	Notes	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	1.0	3.8	-4.3	-3.8	-1.7	0.0	0.0	19.7	0.0	0.0		2	87	64	1019	1014
2	5.3	3.6	-5.0	-4.5	0.2	-0.4	0.0	17.8	0.0	0.0		2	90	58	1014	1008
3	2.4	3.6	-1.0	-4.4	0.7	-0.4	0.0	17.3	0.0	0.0		1	79	67	1017	1014
4	4.1	3.6	-1.5	-4.0	1.3	-0.2	0.0	16.7	0.0	1.7	light rain	0	93	73	1016	1005
5	2.7	3.5	0.2	-6.1	1.5	-1.3	0.0	16.5	0.0	3.1	light rain	0	96	90	1006	1001
6	3.2	1.9	0.2	-7.1	1.7	-2.6	0.0	16.3	0.0	0.2	light rain	0	96	85	1007	1006
7	2.6	1.5	0.7	-7.1	1.7	-2.8	0.0	16.3	0.0	0.1	mist	0	94	88	1006	1002
8	4.1	0.8	-0.4	-7.3	1.9	-3.3	0.0	16.1	0.0	1.4	very light snow	1	95	56	1014	1005
9	-0.1	-0.9	-3.6	-8.9	-1.9	-4.9	0.0	19.9	0.0	0.3	very light snow	0	90	72	1020	1014
10	3.5	-0.9	-6.7	-8.8	-1.6	-4.8	0.0	19.6	0.0	0.0		0	95	61	1019	1010
11	8.1	0.0	-2.1	-9.7	3.0	-4.9	0.0	15.0	0.0	0.0		0	84	46	1010	995
12	8.7	0.5	-1.2	-9.0	3.8	-4.3	0.0	14.2	0.0	0.0		0	73	39	1020	997
13	8.3	2.0	-2.8	-7.5	2.8	-2.8	0.0	15.2	0.0	0.0		0	75	40	1019	999
14	8.8	1.3	-0.6	-7.6	4.1	-3.2	0.0	13.9	0.0	0.0		0	78	38	1008	999
15	6.6	1.3	-3.3	-8.1	1.7	-3.4	0.0	16.3	0.0	0.0		0	73	30	1009	1006
16	4.1	0.2	-8.0	-8.3	-2.0	-4.0	0.0	20.0	0.0	0.0		0	85	39	1011	1004
17	10.7	-1.1	-3.2	-8.8	3.8	-5.0	0.0	14.2	0.0	0.0		0	79	39	1011	1004
18	12.2	-1.1	-1.6	-9.3	5.3	-5.2	0.3	12.7	0.0	0.0		0	86	40	1010	1005
19	11.6	-1.3	-1.0	-9.7	5.3	-5.5	0.3	12.7	0.0	0.0		0	87	43	1007	1002
20	5.8	-1.6	-3.9	-10.1	1.0	-5.9	0.0	17.0	0.0	0.0		0	82	25	1027	1007
21	2.5	-2.4	-8.0	-11.3	-2.8	-6.9	0.0	20.8	0.0	0.0		0	66	34	1027	1009
22	-2.6	-2.4	-14.7	-10.8	-8.7	-6.6	0.0	26.7	0.0	0.0		0	77	51	1028	1010
23	-7.9	-2.1	-18.4	-11.2	-13.2	-6.7	0.0	31.2	0.0	0.0		0	82	32	1034	1028
24	2.7	-2.7	-10.6	-11.4	-4.0	-7.1	0.0	22.0	0.0	0.0		0	85	57	1031	1017
25	1.3	-3.2	-8.1	-12.2	-3.4	-7.7	0.0	21.4	0.0	0.3	very light snow	0	90	53	1019	1011
26	-6.0	-4.3	-15.0	-12.6	-10.5	-8.4	0.0	28.5	0.0	0.0		0	88	65	1020	1017
27	0.1	-3.6	-7.6	-11.3	-3.8	-7.5	0.0	21.8	0.0	0.0		0	88	74	1018	1008
28	6.7	-3.5	-3.1	-11.5	1.8	-7.5	0.0	16.2	0.0	0.0		0	84	48	1010	1007
29	2.5	-3.9	-5.3	-11.2	-1.4	-7.6	0.0	19.4	0.0	0.0		0	83	57	1011	1005
30	-0.7	-4.0	-8.4	-11.5	-4.6	-7.8	0.0	22.6	0.0	0.1	very light snow	0	84	60	1012	1010
Total							0.6	558.0	0.0	7.2			Extreme / Date	Extreme / Date	Extreme / Date	Extreme / Date
Avg	3.7	-0.4	-4.9	-8.8	-0.6	-4.6	1991-2020 Normal			13.8	1991-2020 Normal					
Extreme Date	12.2		-18.4				3.9	678.7	0.0	239.5	Year to date 2023 Cumulative		96	25	1034	995
	18		23							342.4	Year to date Cumulative Normal		5	20	23	11

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

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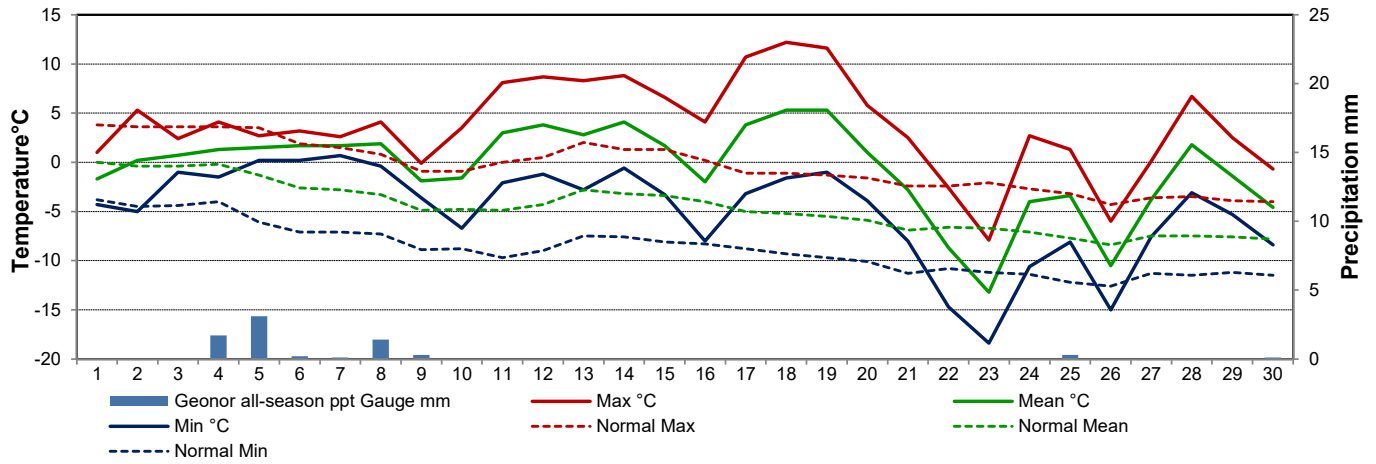


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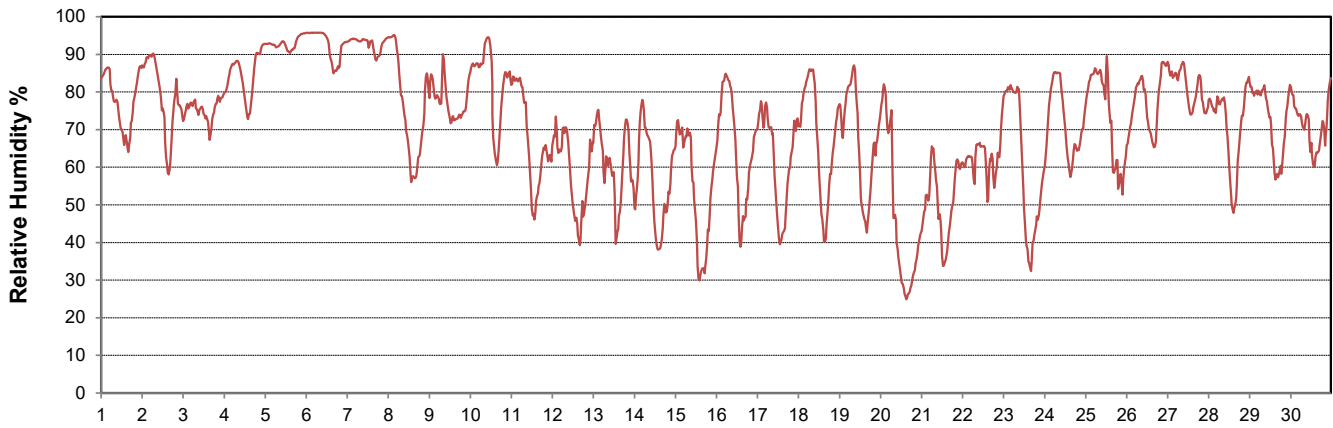
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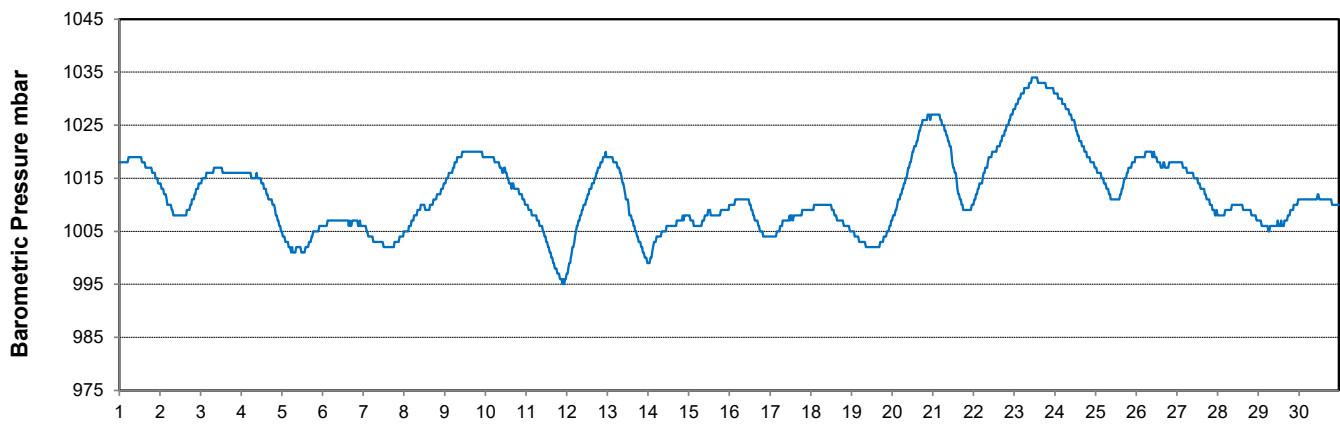
### Temperature and Precipitation for November 2023



### Relative Humidity for November 2023



### Barometric Pressure Corrected to Sea Level for November 2023





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SASKATOON STATION 4057180

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Preliminary NOVEMBER 2023

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				°C	°C	°C	°C	°C	°C	°C	°C	hours	hours		MJ/m <sup>2</sup>	MJ/m <sup>2</sup>
1	17.5	NNE	8:21	7.3	-3.0	-0.5	0.0	1.0	5.0	9.0	10.0	11.0	3.0	9.6	31.3	4.5	3.6
2	26.0	N	21:55	10.6	-2.5	-0.5	0.0	0.5	4.5	8.5	10.0	10.5	4.0	9.5	41.9	4.7	2.8
3	18.1	SSE	19:42	8.7	-1.0	0.0	0.5	0.5	4.5	8.5	9.5	10.5	0.0	9.5	0.0	1.8	1.8
4	45.5	SE	21:24	14.7	-1.5	0.0	0.5	1.0	4.5	8.0	9.5	10.5	0.0	9.4	0.0	2.9	2.8
5	39.2	SE	0:35	14.8	1.0	0.5	1.0	1.0	4.5	8.0	9.5	10.5	0.0	9.4	0.0	1.5	1.5
6	18.3	SE	23:27	5.6	0.5	1.5	2.0	2.0	4.5	8.0	9.5	10.5	0.0	9.3	0.0	1.7	1.7
7	28.1	SE	8:35	10.6	1.5	2.5	3.0	3.0	5.0	8.0	9.0	10.5	0.0	9.2	0.0	0.9	0.9
8	59.3	NW	15:01	23.2	-0.5	2.0	2.5	3.0	5.0	8.0	9.0	10.5	4.4	9.2	47.9	5.0	1.8
9	32.7	NW	0:21	12.0	-2.0	1.0	2.0	2.5	5.0	7.5	9.0	10.5	0.0	9.1	0.0	2.0	2.0
10	33.6	SSE	14:47	13.0	-5.5	0.5	1.5	1.5	5.0	7.5	9.0	10.0	4.5	9.1	49.6	4.4	1.6
11	41.8	S	14:40	19.1	-2.0	0.5	1.0	1.5	4.5	7.5	9.0	10.0	6.4	9.0	71.0	4.9	1.9
12	40.4	W	13:20	18.2	0.5	0.5	1.0	1.5	4.5	7.5	8.5	10.0	8.3	9.0	92.6	5.9	1.5
13	45.3	SSE	12:43	17.4	1.0	0.5	1.0	1.5	4.5	7.5	8.5	10.0	5.6	8.9	62.9	4.4	2.8
14	61.9	WNW	1:45	23.8	-1.0	0.5	1.0	1.5	4.5	7.5	8.5	10.0	8.5	8.9	96.0	5.8	1.0
15	34.2	WNW	13:38	14.2	-4.0	0.5	1.0	0.5	4.0	7.0	8.5	10.0	6.5	8.8	73.9	5.4	1.3
16	39.8	WSW	14:07	15.9	-8.0	0.0	0.5	1.0	4.0	7.0	8.5	10.0	7.8	8.8	89.1	5.7	1.6
17	35.3	WNW	15:02	12.4	-1.0	0.0	0.5	0.5	4.0	7.0	8.5	9.5	8.0	8.7	92.0	5.4	1.0
18	18.9	SSW	1:43	9.8	-2.0	0.0	0.5	1.0	4.0	7.0	8.0	9.5	8.2	8.7	94.8	5.1	0.8
19	30.8	SW	14:09	12.5	-1.5	0.0	0.5	1.0	4.0	7.0	8.0	9.5	7.1	8.6	82.6	4.6	1.3
20	71.6	WNW	13:42	26.7	3.0	0.0	0.5	1.5	3.5	7.0	8.0	9.5	8.2	8.6	95.9	5.0	1.1
21	30.1	SE	11:39	10.4	-7.0	-0.5	0.5	0.5	3.5	6.5	8.0	9.5	2.2	8.5	25.9	2.8	2.2
22	31.8	N	1:36	15.8	-6.0	-0.5	0.0	0.5	3.5	6.5	8.0	9.5	0.0	8.5	0.0	1.7	1.7
23	21.5	SSW	23:10	7.4	-20.0	-3.5	-1.5	0.5	3.5	6.5	8.0	9.5	7.9	8.4	93.9	5.7	0.9
24	41.1	SW	14:00	19.5	-9.5	-5.0	-4.0	-2.0	3.0	6.5	7.5	9.5	7.8	8.4	93.3	5.0	1.1
25	52.6	NNW	16:05	19.8	-7.0	-4.0	-3.0	-2.5	2.5	6.5	7.5	9.5	0.9	8.3	10.8	1.1	1.0
26	33.7	NW	1:32	12.1	-17.5	-5.5	-4.0	-2.5	2.0	6.0	7.5	9.0	1.6	8.3	19.3	2.4	2.1
27	28.4	SW	22:02	13.3	-7.5	-4.5	-4.0	-3.0	1.5	6.0	7.5	9.0	4.1	8.2	49.8	3.6	2.0
28	43.9	W	11:49	17.2	-2.5	-4.0	-3.0	-2.5	1.5	5.5	7.5	9.0	7.8	8.2	95.1	4.3	0.8
29	47.2	NW	15:40	17.2	-4.5	-3.5	-3.0	-2.0	1.5	5.5	7.0	9.0	5.4	8.2	66.2	3.5	1.4
30	32.1	WNW	13:14	13.1	-2.5	-3.0	-2.5	-1.5	1.5	5.5	7.0	9.0	0.0	8.1	0.0	1.2	1.3
Total													128.2	264.2	48.5	112.9	49.3
Mean				14.5	-3.7	-0.8	-0.1	0.4	3.8	7.1	8.5	9.9	1991-2020 Normal				
Extreme	71.6	WNW	13:42		1971- 2000 Normal for Soil Temperatures								97.4	270.2	36.0	118.5	60.8
Date	20					-2.2	-1.7	-0.5	3.0	5.6	6.8	8.1	No. of Bright Sunshine days = 22				

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

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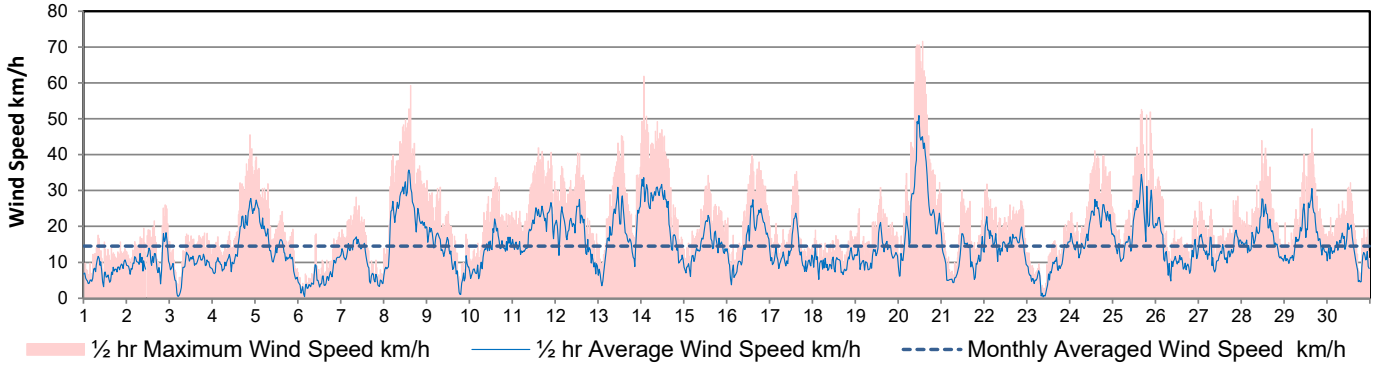


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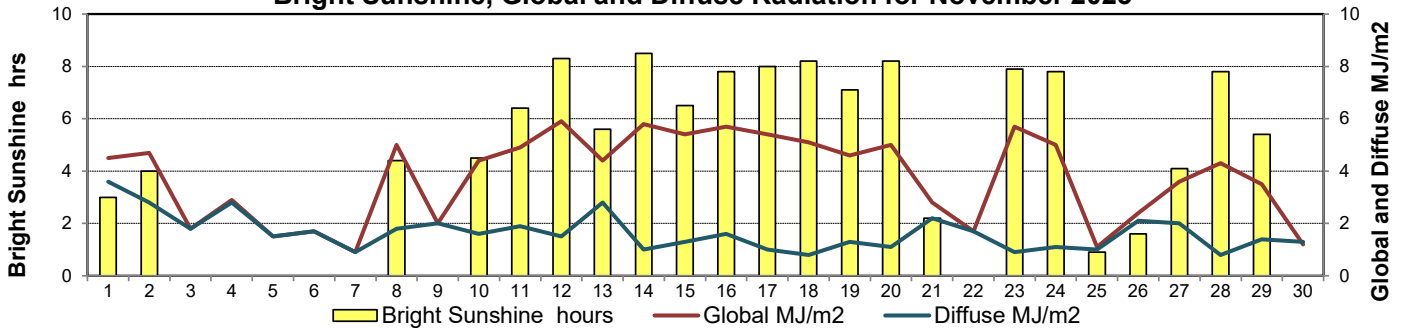
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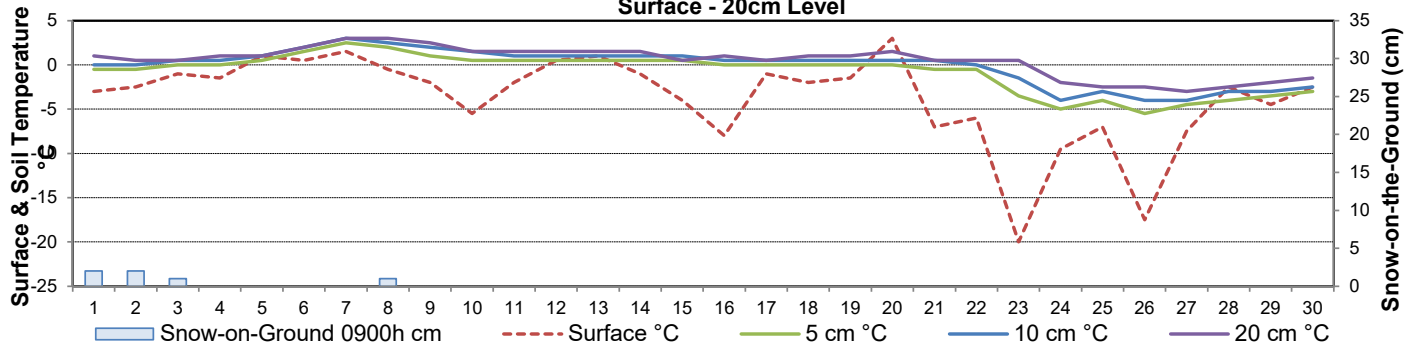
**Wind Speed for November 2023**



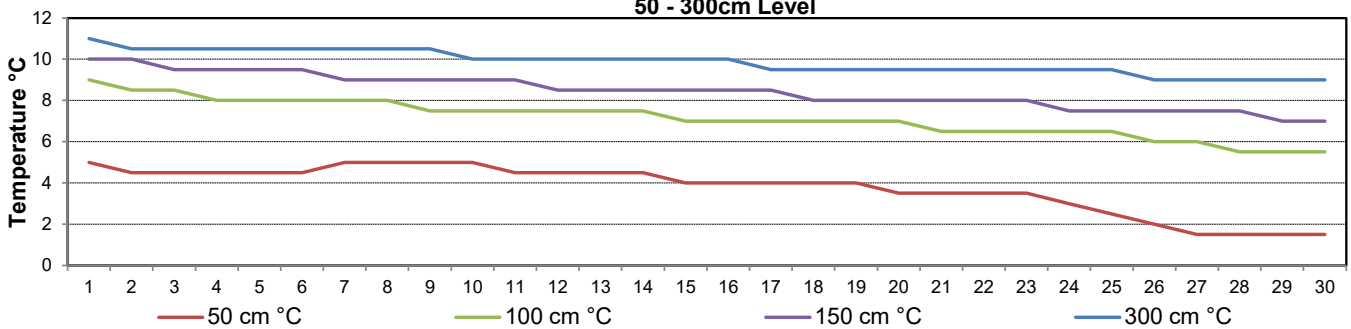
**Bright Sunshine, Global and Diffuse Radiation for November 2023**



**Soil Temperatures for November 2023**  
Surface - 20cm Level



**Soil Temperatures for November 2023**  
50 - 300cm Level





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Preliminary NOVEMBER 2023

Extreme Records for November

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
21.7	03/1903	SE	20.0	06/2016	57.3	1940	SE	48.2	1973	100 <sup>W</sup>	17/1976	101	1976	188.5	1976	30	1976
-39.4	30/1893	SM	-33.5	24/1985	0.0	2002*	SWT*	0.4	2009					37.2	1972	10	1972

\*\*1975 forward \* more than one year

Notable Events for CRS Saskatoon - November						Saskatoon Area Stations			Glossary	
Element	Type	Day	New Record	Old Record	Year (day)	SM	NWMP	c. 1892-1901	T	Trace of precipitation
Temperature	Highest Maximum Daily	18	12.2	12.2	2009	SE	Eby	1901-1941	Normal	30 year average beginning with the decade
		19	11.6	9.5	1989	US	Univ. of Sask.	1915-1964	SOG	Depth of snow-on-the-ground in cm
Autumn highest Mean Average Temperature			6.9	6.7	2009	S	Saskatoon	1941-1942	na	not available
						SA	Saskatoon A	1942 -	<b>Degree-days</b>	
						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	<b>Fall maintenance Nov 21 and 28 2023</b> - installed recalibrated bright sunshine recorder - replaced snow depth screens - fall maintenance on Geonor all-season snow gauge. - replaced dessicant where needed	
					K	S'toon Kernen Farm	1993-2004			
					KCS	S'toon Kernen Farm CS	1996-			
					RCS	Environment Canada	2008-			
					SF	Sutherland Forestry	1943-1970			

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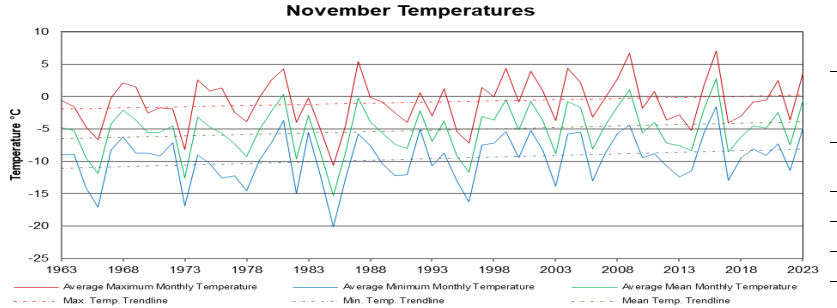
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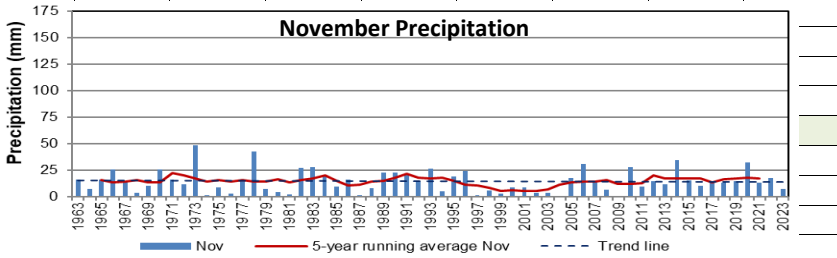
52°09' N 106°36' W 497 m asl Estab. 1963

Preliminary **November 2023**

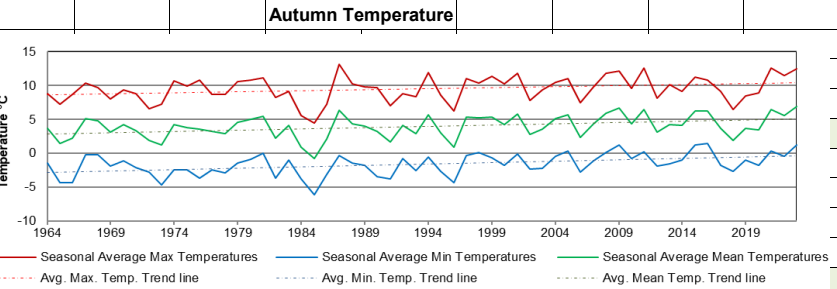
Day	2 meter Wind Speed			Soil Moisture at 0900 hrs (rounded to the 0.5%)		
	Daily Average	Max ½ hr Avg	½ hr Extreme Max	10 cm	20 cm	50 cm
	km/h	km/h	km/h	% by volume (soil type is Loam (45.5% Sand, 41.1% Silt, 13.3% Clay))		
1	4.0	8.0	13	5.5	6.5	8.5
2	7.0	12.8	21	5.5	6.5	8.0
3	4.0	7.8	14	6.5	6.5	8.5
4	10.0	19.8	39	8.5	6.5	8.5
5	11.0	20.6	30	12.0	6.5	8.5
6	3.0	9.2	15	12.5	6.5	8.5
7	7.0	12.5	22	12.5	6.5	8.5
8	16.0	24.8	48	13.0	6.5	8.5
9	8.0	13.1	25	13.0	7.0	8.5
10	6.0	12.6	24	9.0	6.5	8.5
11	11.0	18.8	33	7.0	6.5	8.5
12	13.0	19.1	32	12.0	6.5	8.0
13	11.0	23.0	37	10.5	6.5	8.5
14	17.0	24.7	52	11.5	6.5	8.0
15	10.0	16.5	27	9.0	6.5	8.0
16	11.0	20.7	33	5.5	6.5	8.0
17	9.0	16.9	27	6.5	6.5	8.0
18	6.0	9.7	14	6.5	6.5	8.5
19	8.0	15.8	25	9.0	6.5	8.5
20	18.0	35.4	56	10.5	6.5	8.5
21	6.0	12.2	24	5.5	6.5	8.5
22	11.0	15.2	24	5.5	7.0	8.5
23	4.0	11.5	17	3.5	6.5	8.0
24	15.0	21.1	34	3.5	6.0	8.0
25	14.0	24.6	41	3.5	6.5	8.5
26	8.0	15.8	26	3.5	6.0	8.0
27	9.0	14.1	23	3.5	6.5	8.0
28	12.0	19.6	32	4.0	6.5	8.0
29	12.0	21.2	36	4.5	6.5	8.0
30	9.0	14.9	24	4.5	6.5	8.0
Total						
Mean				8	7	8.3
Extreme	18.0	35.4	56.3	13	7	8.5
Date	20	20	20	8	9	1



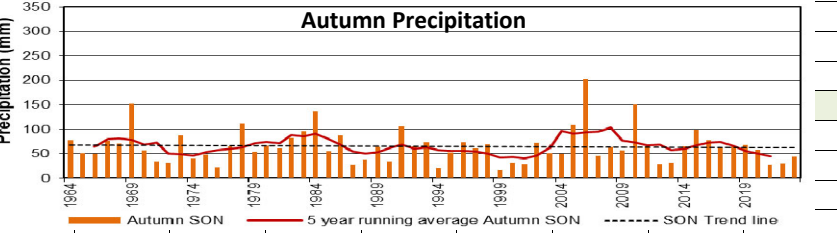
Sixth warmest Average Mean November Temperatures (1963-2023)



Sixteen driest total measured November precipitation (1964-2023)



Highest Autumn Mean Average Temperature (6.9C) (1964-2023)



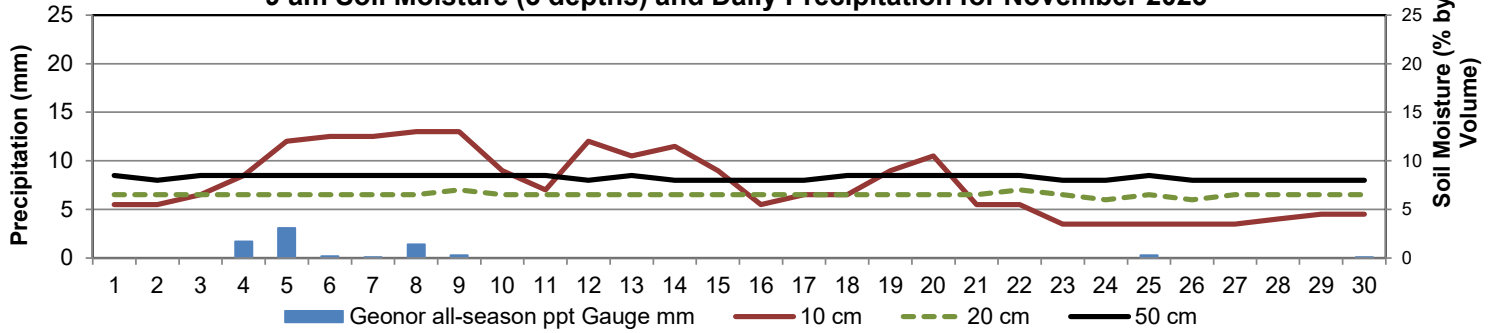
Sixteenth driest autumn (1964-2023)

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

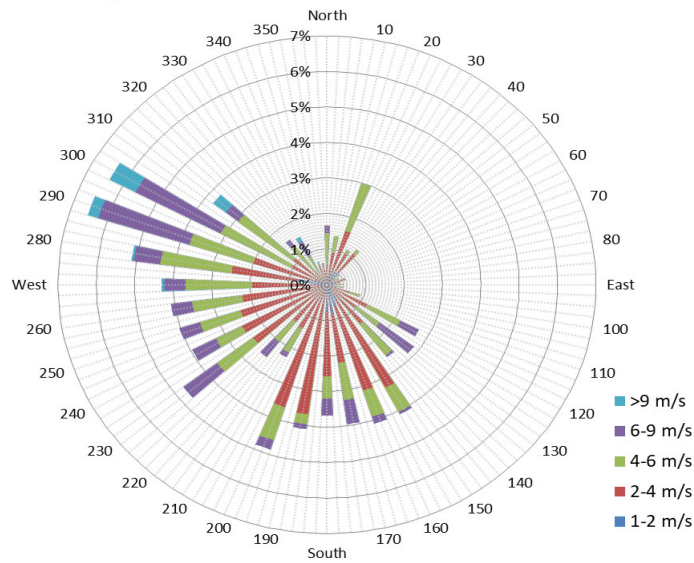
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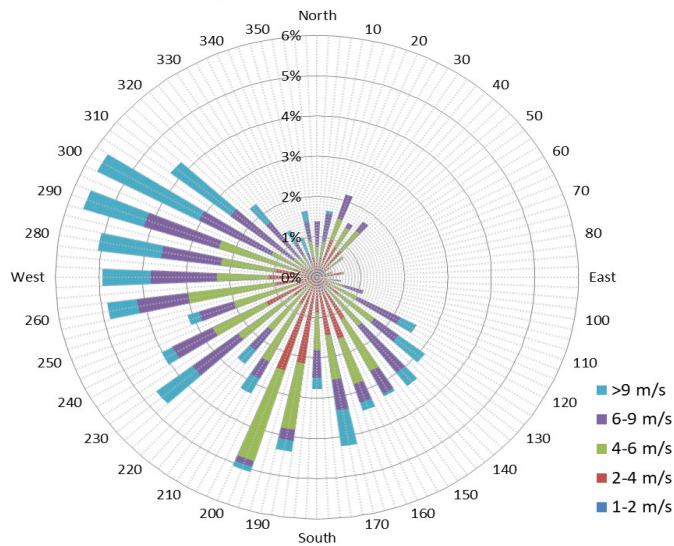
### 9 am Soil Moisture (3 depths) and Daily Precipitation for November 2023



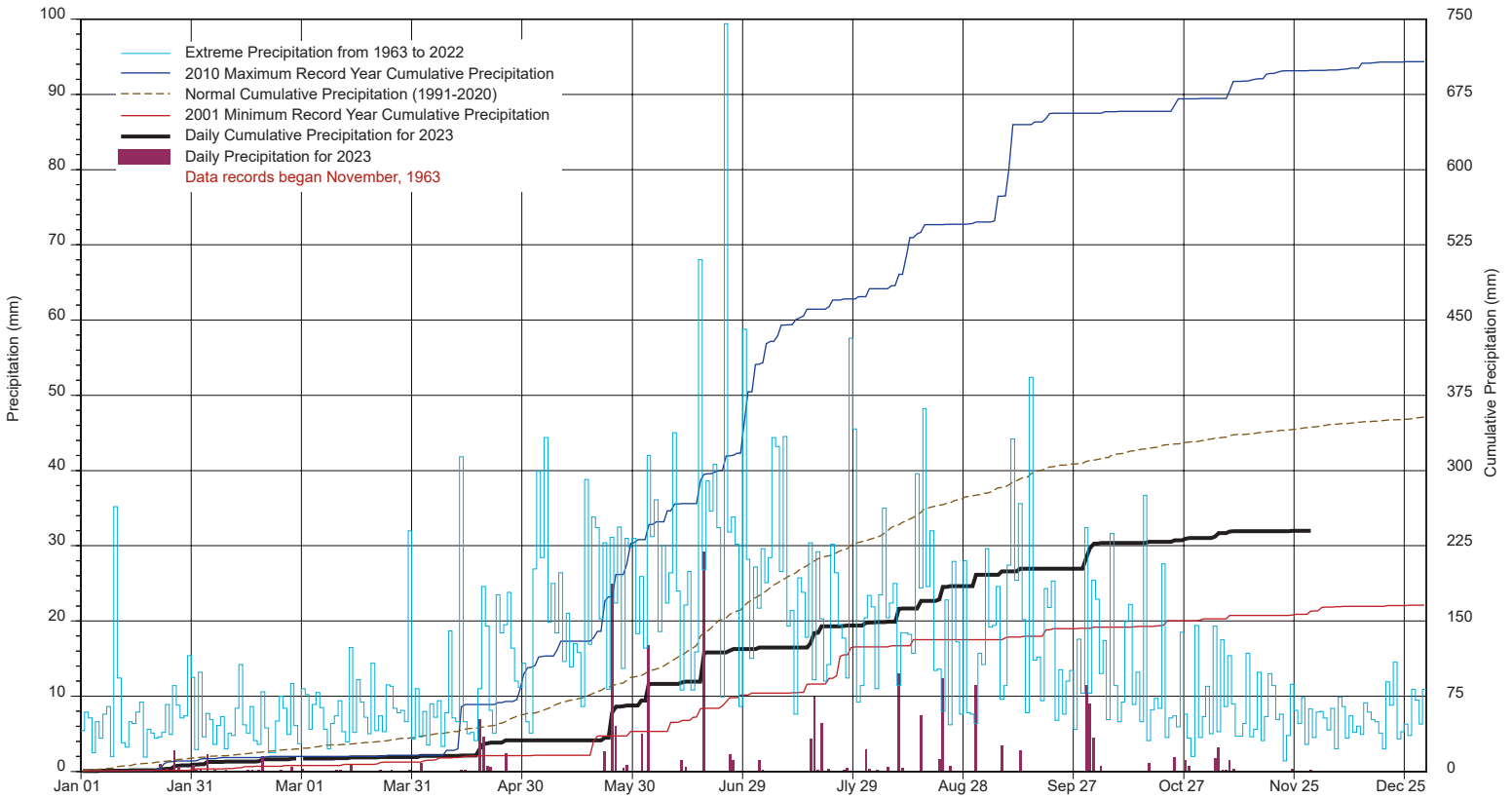
### 10 minute Average Wind Speed and Direction Saskatoon November 2023



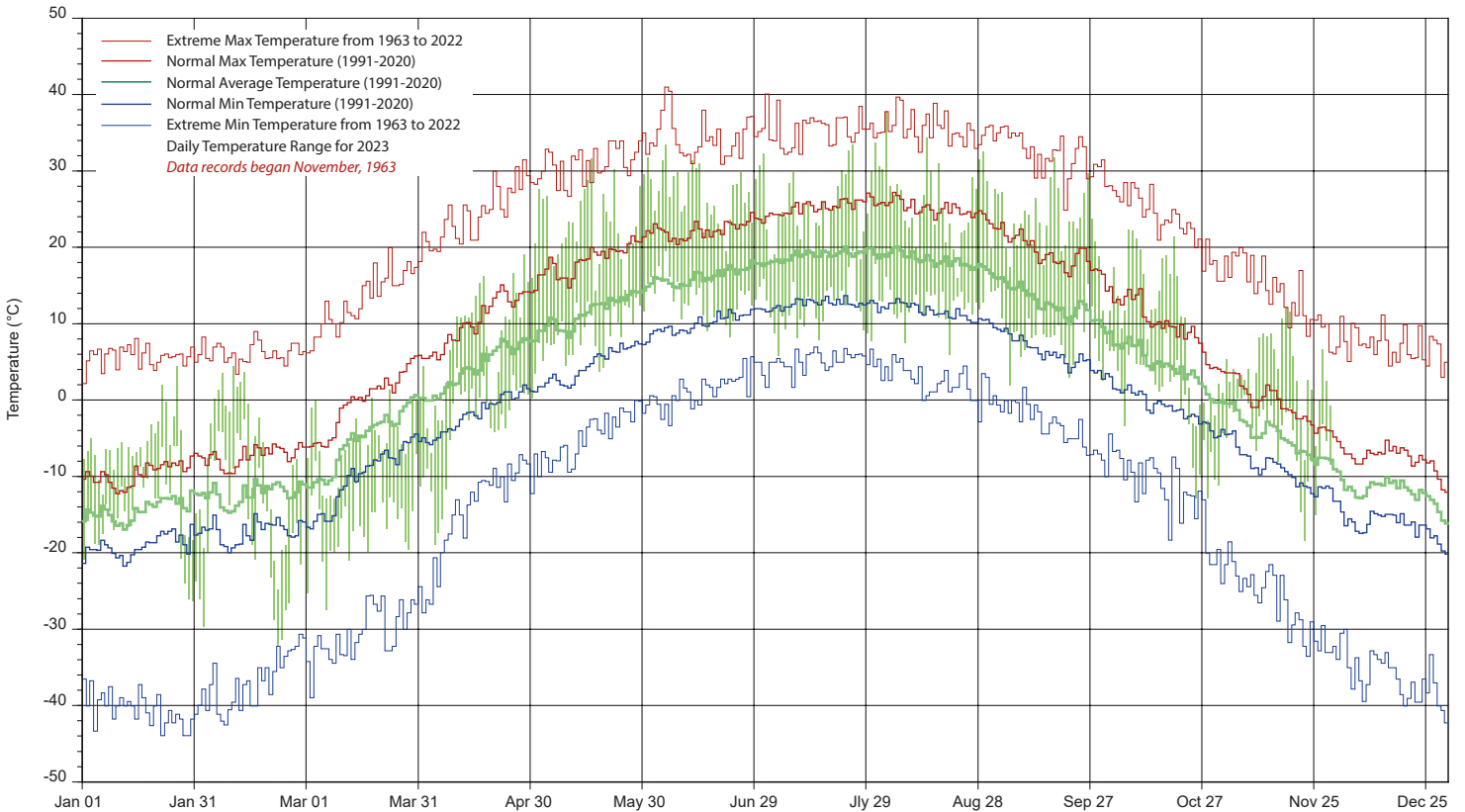
### 1/2 hr Maximum Wind Speed and Direction Saskatoon November 2023



# SASKATCHEWAN RESEARCH COUNCIL SASKATOON CLIMATE REFERENCE STATION 2023 PRECIPITATION AND NORMALS



## 2023 TEMPERATURES AND NORMALS



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