



SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

SASKATOON STATION 4057180

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

Preliminary OCTOBER 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	Tipping Bucket	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	9.0	14.3	7.3	3.5	8.2	8.8	3.2	9.8	0.0	8.9	light rain	0	92	88	1021	1016
2	11.7	14.9	6.4	3.1	9.1	9.0	4.1	8.9	0.0	4.5	light rain	0	93	82	1016	1008
3	17.5	12.8	6.5	1.5	12.0	7.2	7.0	6.0	0.0	0.0		0	94	49	1009	1007
4	13.6	13.2	3.9	1.4	8.8	7.3	3.8	9.2	0.0	0.7	light rain	0	84	61	1012	1004
5	9.4	12.5	1.0	1.0	5.2	6.8	0.2	12.8	0.0	0.0		-	77	47	1029	1013
6	11.7	13.6	-3.4	1.4	4.2	7.5	0.0	13.8	0.0	0.0		0	83	27	1030	1015
7	22.3	14.5	5.9	2.0	14.1	8.3	9.1	3.9	0.0	0.0		0	76	28	1017	1013
8	22.2	13.2	7.0	1.0	14.6	7.1	9.6	3.4	0.0	0.0		0	75	33	1018	1014
9	21.2	13.8	4.8	0.7	13.0	7.2	8.0	5.0	0.0	0.0		0	81	34	1014	1007
10	19.8	14.6	4.7	1.2	12.3	7.9	7.3	5.7	0.0	0.0		0	83	37	1007	1003
11	16.5	10.9	4.6	0.8	10.6	5.9	5.6	7.4	0.0	0.0		0	78	21	1013	1003
12	8.0	10.3	5.9	-1.3	7.0	4.5	2.0	11.0	0.0	0.0	drizzle	0	89	69	1027	1013
13	11.9	9.6	4.1	-1.7	8.0	4.0	3.0	10.0	0.0	0.0		0	73	50	1028	1026
14	12.0	9.9	2.1	-0.4	7.1	4.8	2.1	10.9	0.0	0.0		0	83	41	1027	1025
15	14.2	10.3	1.1	-0.1	7.7	5.1	2.7	10.3	0.0	0.0		0	83	46	1026	1018
16	18.5	9.4	1.8	-0.5	10.2	4.4	5.2	7.8	0.0	0.0		0	90	38	1019	1010
17	19.0	10.4	8.8	-0.8	13.9	4.8	8.9	4.1	0.0	1.1	drizzle	0	89	38	1019	999
18	16.5	9.7	2.5	-0.7	9.5	4.5	4.5	8.5	0.0	0.0	fog	0	95	47	1013	1006
19	21.5	9.6	3.1	-1.4	12.3	4.1	7.3	5.7	0.0	0.0		0	90	26	1009	1003
20	16.3	8.3	5.3	-1.3	10.8	3.5	5.8	7.2	0.0	0.0		0	76	33	1015	1002
21	11.0	9.9	-1.1	-1.2	5.0	4.4	0.0	13.0	0.0	0.0		0	86	36	1019	1013
22	10.8	8.0	0.8	-2.4	5.8	2.8	0.8	12.2	0.0	0.0		0	80	44	1013	1010
23	1.6	8.9	-3.1	-2.1	-0.8	3.4	0.0	18.8	0.0	0.0		0	86	41	1018	1013
24	-3.0	9.7	-8.8	-1.8	-5.9	3.9	0.0	23.9	0.0	1.8	light snow	2	90	42	1022	1018
25	-3.4	8.2	-12.8	-2.1	-8.1	3.0	0.0	26.1	0.0	0.0	very light snow	1	79	52	1024	1021
26	-0.5	7.5	-9.7	-3.1	-5.1	2.2	0.0	23.1	0.0	0.0		1	75	46	1024	1023
27	-0.4	6.3	-5.2	-2.8	-2.8	1.8	0.0	20.8	0.0	1.4	light snow	0	93	63	1024	1020
28	-2.6	4.7	-12.8	-3.0	-7.7	0.8	0.0	25.7	0.0	0.7	light snow	2	92	75	1025	1020
29	0.3	4.2	-6.8	-4.0	-3.3	0.1	0.0	21.3	0.0	0.0		3	82	61	1026	1019
30	-2.0	4.3	-10.4	-4.9	-6.2	-0.3	0.0	24.2	0.0	0.0		2	85	35	1028	1017
31	2.2	4.1	-11.1	-4.7	-4.5	-0.3	0.0	22.5	0.0	0.0		2	88	63	1026	1015
Total							100.2	393.0	0.0	19.1			Extreme / Date	Extreme / Date	Extreme / Date	Extreme / Date
Avg	10.5	10.1	0.1	-0.7	5.3	4.7	1991-2020 Normal			20.4	1991-2020 Normal					
Extreme Date	22.3		-12.8				61.7	413.6	0.2	232.3	Year to date 2023 Cumulative		95	21	1030	999
	7		25							328.6	Year to date Cumulative Normal		18	11	6	17

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

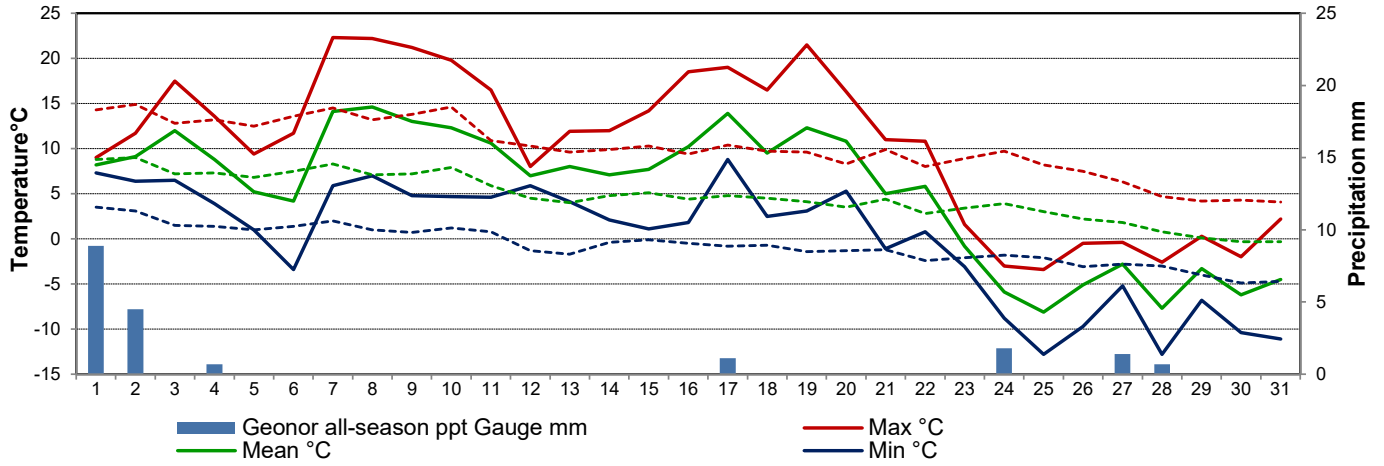
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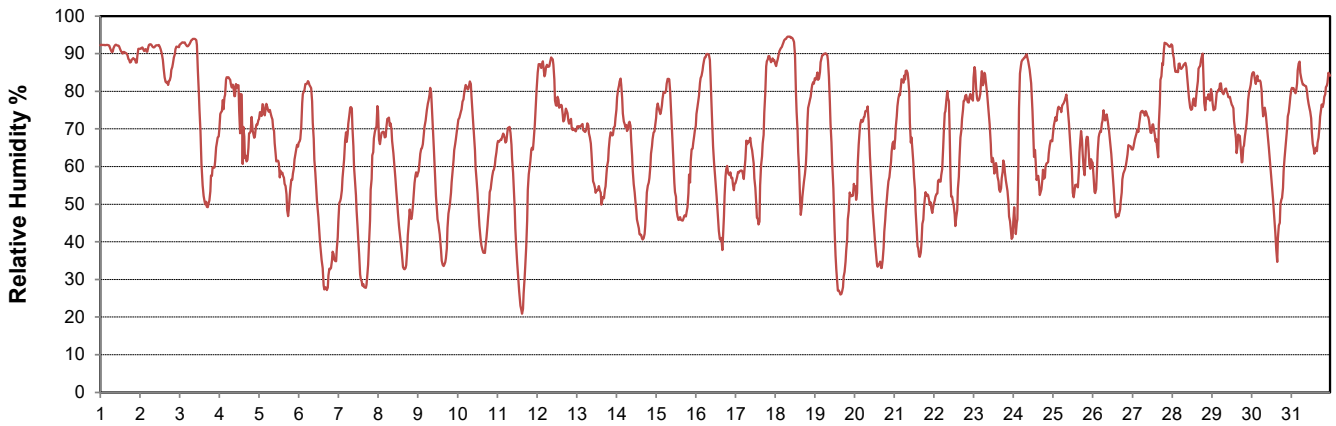
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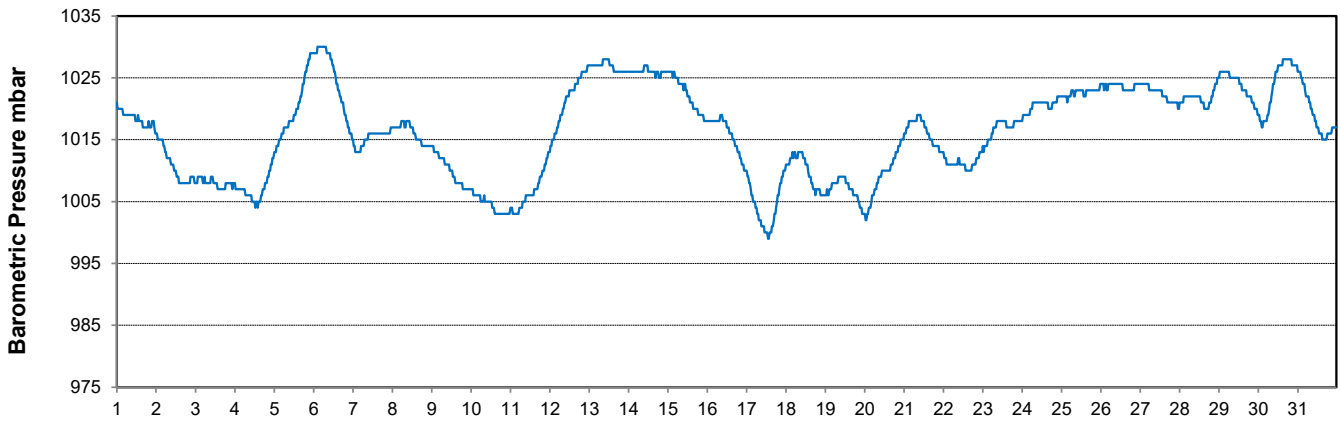
Temperature and Precipitation for October 2023



Relative Humidity for October 2023



Barometric Pressure Corrected to Sea Level for October 2023





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

Preliminary **OCTOBER 2023**

Day	Wind Gust (10 meters)			Wind Speed (10 meters) Daily Average km/h	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 ²	MJ/m ²
1	32.5	NE	9:59	16.4	8.5	10.5	11.5	12.0	13.5	13.5	13.0	11.5	0.0	11.6	0.0	1.7	1.6
2	23.8	ENE	1:42	8.9	6.5	9.5	10.0	11.5	13.0	13.5	13.0	11.5	0.0	11.6	0.0	3.7	3.6
3	40.1	NW	15:07	10.9	6.5	9.5	10.0	11.0	12.5	13.0	13.0	11.5	7.3	11.5	63.6	10.5	4.4
4	57.4	NW	15:51	18.4	6.5	8.5	9.5	10.5	12.5	13.0	12.5	11.5	1.6	11.4	14.0	5.2	3.8
5	57.4	NW	16:24	27.3	5.5	8.0	9.0	10.0	12.0	13.0	12.5	11.5	1.4	11.4	12.3	3.4	3.0
6	34.4	WSW	15:31	14.3	-1.5	4.0	5.5	7.5	11.5	12.5	12.5	11.5	10.7	11.3	94.9	13.1	3.0
7	27.8	SSW	0:03	9.6	8.0	5.5	6.5	7.5	10.5	12.5	12.5	11.5	10.8	11.2	96.3	12.1	1.6
8	38.7	SE	22:42	20.8	9.5	7.5	8.0	9.0	10.5	12.5	12.5	11.5	10.8	11.2	96.9	12.2	1.4
9	45.0	SSE	14:56	24.5	6.0	7.5	8.5	9.5	11.0	12.0	12.0	11.5	10.7	11.1	96.6	12.1	1.4
10	46.6	SE	21:04	24.8	5.5	8.0	9.0	9.5	11.0	12.0	12.0	11.5	10.6	11.0	96.2	11.8	1.6
11	48.6	SE	12:25	25.3	5.5	7.5	8.5	9.5	11.0	12.0	12.0	11.5	10.4	11.0	95.0	11.9	1.6
12	38.5	SE	11:51	12.6	6.0	8.0	8.5	9.5	11.0	12.0	12.0	11.5	0.0	10.9	0.0	2.8	2.8
13	25.3	ESE	0:37	12.2	7.0	7.5	8.0	9.0	10.5	11.5	12.0	11.5	3.8	10.8	35.1	6.4	5.1
14	39.2	SE	14:41	17.1	6.5	7.0	7.5	7.0	10.5	11.5	12.0	11.5	6.1	10.8	56.7	8.2	3.1
15	37.7	S	13:52	15.7	2.0	5.0	6.5	8.0	10.0	11.5	11.5	11.5	5.2	10.7	48.6	7.1	4.7
16	18.8	SE	23:12	6.9	2.5	5.0	6.5	7.5	10.0	11.5	11.5	11.5	8.6	10.6	81.0	9.0	3.2
17	41.1	NNE	17:34	19.3	10.0	8.0	8.5	8.5	10.0	11.5	11.5	11.5	3.8	10.6	36.0	6.5	4.3
18	32.0	S	16:09	9.1	4.0	7.5	8.5	9.0	10.0	11.0	11.5	11.5	5.7	10.5	54.3	7.0	4.2
19	33.3	WNW	14:36	9.5	5.5	6.0	7.0	8.5	10.0	11.0	11.5	11.5	9.8	10.4	94.0	9.7	1.5
20	51.4	WNW	14:20	20.2	7.5	7.5	8.0	8.5	10.0	11.0	11.5	11.0	9.6	10.4	92.7	9.2	1.9
21	22.0	SE	23:02	6.2	-1.0	4.5	6.0	8.0	10.0	11.0	11.5	11.0	7.8	10.3	75.7	7.1	4.5
22	37.3	NNE	15:21	14.5	0.5	5.0	6.5	7.5	9.5	11.0	11.0	11.0	8.1	10.2	79.2	8.8	2.3
23	32.9	N	3:48	16.0	-1.5	4.5	5.5	7.0	9.0	11.0	11.0	11.0	1.4	10.2	13.8	3.7	3.4
24	37.5	NE	0:28	14.2	-6.5	2.5	3.5	5.0	8.5	10.5	11.0	11.0	3.8	10.1	37.6	5.8	4.2
25	25.0	NW	12:08	10.8	-12.0	0.5	1.5	3.5	8.0	10.5	11.0	11.0	3.8	10.0	37.8	5.2	3.1
26	29.5	NNW	18:03	11.7	-9.0	0.0	1.0	2.0	7.0	10.5	11.0	11.0	6.6	10.0	66.1	7.0	3.4
27	30.1	W	18:59	13.5	-5.5	0.0	1.0	2.0	6.5	10.0	11.0	11.0	0.6	9.9	6.1	3.0	2.7
28	37.8	NNW	20:00	11.8	-11.5	0.0	1.0	2.0	6.0	9.5	10.5	11.0	3.5	9.9	35.5	6.1	4.4
29	36.3	WNW	13:33	15.6	-4.0	0.0	1.0	0.5	5.5	9.5	10.5	11.0	0.0	9.8	0.0	3.7	3.6
30	46.4	NNW	7:08	15.0	-7.0	0.0	0.5	0.5	5.5	9.0	10.5	11.0	9.1	9.7	93.5	8.3	1.7
31	27.0	S	5:32	11.6	-7.5	-0.5	0.0	0.5	5.0	9.0	10.0	11.0	1.2	9.7	12.4	4.0	3.7
Total													172.8	329.4	52.5	226.3	94.8
Mean				15.0	1.7	5.3	6.2	7.1	9.7	11.4	11.7	11.3	1991-2020 Normal				
Extreme	57.4	NW	15:51		1971- 2000 Normal for Soil Temperatures								158.7	329.0	48.2	226.5	92.8
Date	4				4.3	4.7	6.2	8.3	9.2	9.6	9.4	No. of Bright Sunshine days = 27					

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

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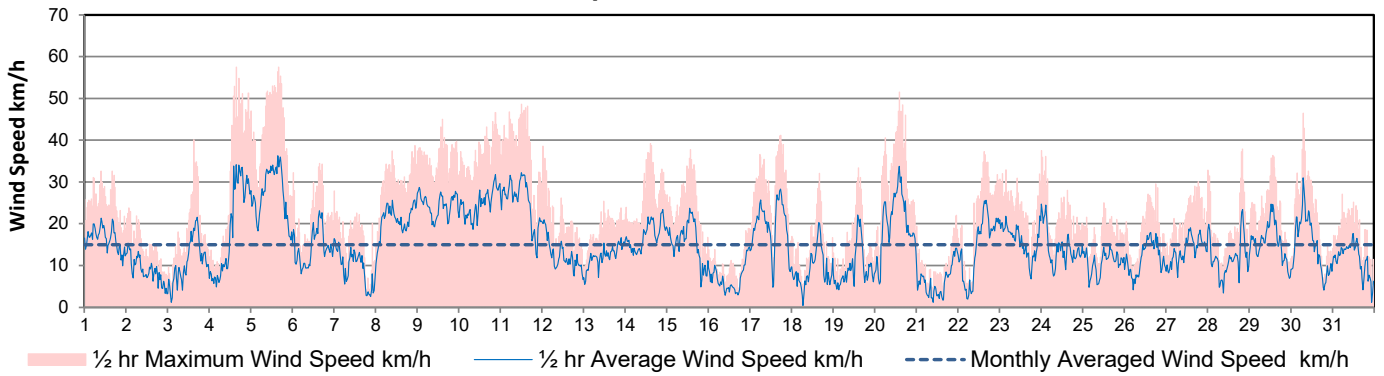


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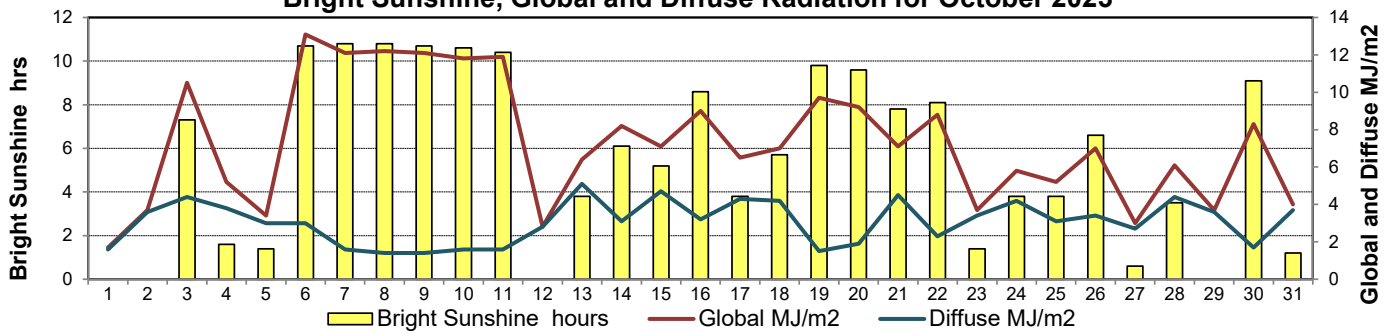
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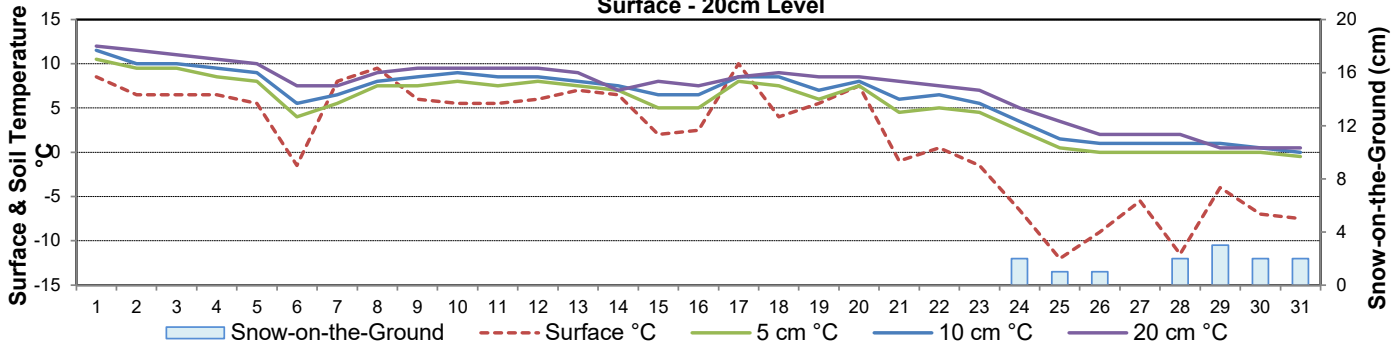
Wind Speed for October 2023



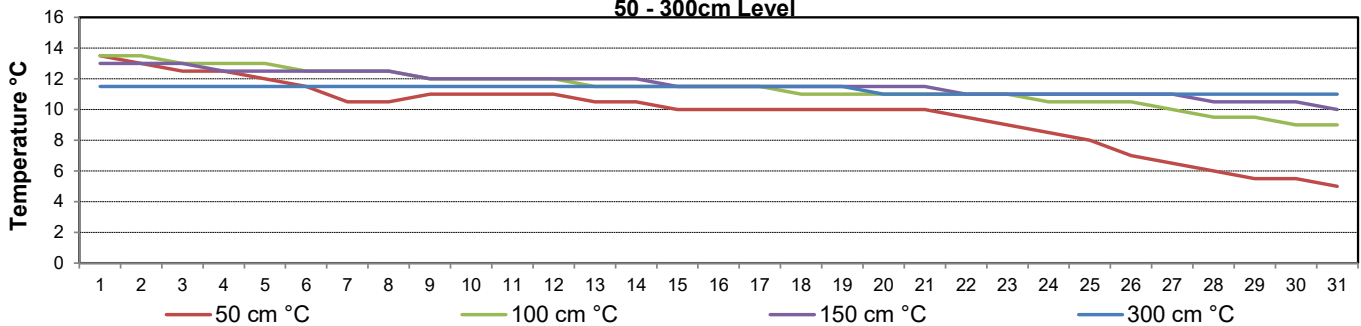
Bright Sunshine, Global and Diffuse Radiation for October 2023



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



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





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Preliminary OCTOBER 2023

Extreme Records for October

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
32.2	05/1943	SA US SF	28.5 06/1980,08/1984	72.4	1969	SF	69.8 1969	138 ^{NW}	16/1967	97	1976	231.3	2010	31	1965, 88
-25.6	26/1919	SE US	-21.5 29/1991	0.0	1965*	NRC*	0.0 2000					61.1	2016	19	2016

**1975 forward * more than one year/site

Notable Events for CRS Saskatoon - October						Saskatoon Area Stations			Glossary	
Element	Type	Day	New Record	Old Record	Year	SM	NWMP	c. 1892-1901	T	Trace of precipitation
Temperature	Highest Minimum Daily	17	8.8	5.5	1994	SE	Eby	1901-1941	Normal	30 year average beginning with the decade
	Lowest Mean Daily	25	-8.1	-6.6	2001	US	Univ. of Sask.	1915-1964	SOG	Depth of snow-on-the-ground in cm
Heating Degree-days	Highest Daily	25	26.1	24.6	2001	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	14 Oct 2023 partial solar eclipse	
					K	S'toon Kernen Farm	1993-2004			
					KCS	S'toon Kernen Farm CS	1996-			
					RCS	Environment Canada	2008-			
						SF	Sutherland Forestry	1943-1970		

Frost free growing season

Last spring frost 24-Apr

First fall frost 6-Oct

Length of frost free growing season 164 days previous maximum 160 days in 2012

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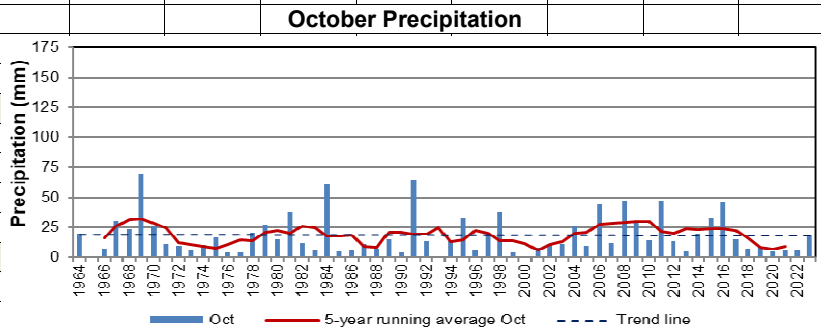
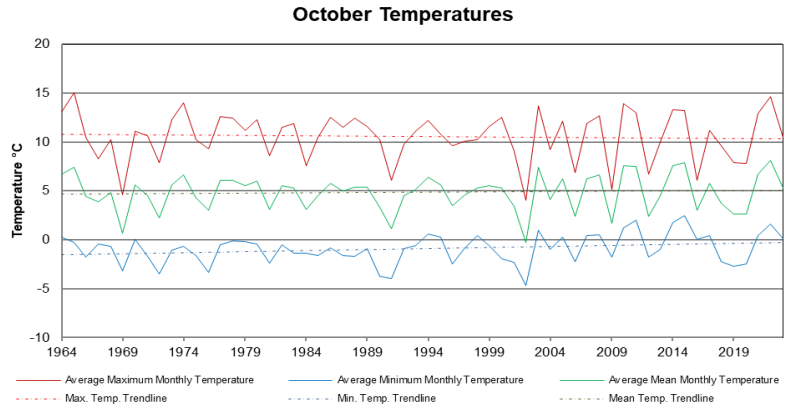
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Preliminary **October** **2023**

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	12.0	15.3	25.2	20.0	7.5	10.0
2	6.0	11.3	20.0	24.5	7.5	9.0
3	7.0	15.3	28.7	21.0	7.0	9.5
4	13.0	23.7	43.1	18.0	7.5	9.5
5	19.0	25.5	43.7	17.5	7.0	9.0
6	11.0	18.2	28.1	15.5	7.0	9.0
7	7.0	11.7	21.2	15.0	7.0	9.0
8	15.0	18.7	30.4	14.5	7.0	9.0
9	17.0	20.2	33.9	13.0	7.5	9.0
10	18.0	23.5	36.8	12.0	7.5	9.0
11	19.0	24.3	39.6	11.5	7.0	9.0
12	10.0	15.8	29.3	11.5	7.5	9.0
13	9.0	12.2	25.2	11.5	7.5	9.0
14	12.0	16.8	32.1	11.0	7.0	9.0
15	10.0	13.8	30.4	10.5	7.0	9.5
16	3.0	10.3	15.4	10.0	7.0	9.5
17	14.0	19.1	32.7	10.0	7.5	9.0
18	5.0	14.3	24.1	10.5	7.5	9.5
19	6.0	16.3	25.8	10.0	7.0	8.5
20	14.0	23.3	36.2	10.0	7.5	8.5
21	4.0	10.7	18.3	9.5	7.0	9.0
22	10.0	17.4	27.0	9.5	7.0	9.0
23	11.0	14.4	25.2	9.5	7.0	9.0
24	10.0	17.2	29.8	9.0	7.5	9.0
25	8.0	11.0	20.6	5.0	7.0	8.5
26	9.0	13.4	21.2	5.0	6.5	8.5
27	10.0	14.7	23.5	6.0	7.0	9.0
28	8.0	16.3	28.7	7.5	7.0	8.0
29	11.0	17.7	27.0	8.5	7.0	8.5
30	10.0	21.2	33.3	6.5	7.0	8.5
31	7.0	21.0	21.0	5.5	6.5	8.5
Total						
Mean				12	7	9.0
Extreme	19.0	25.5	43.7	24.5	7.5	10
Date	5	5	5	2	1	1

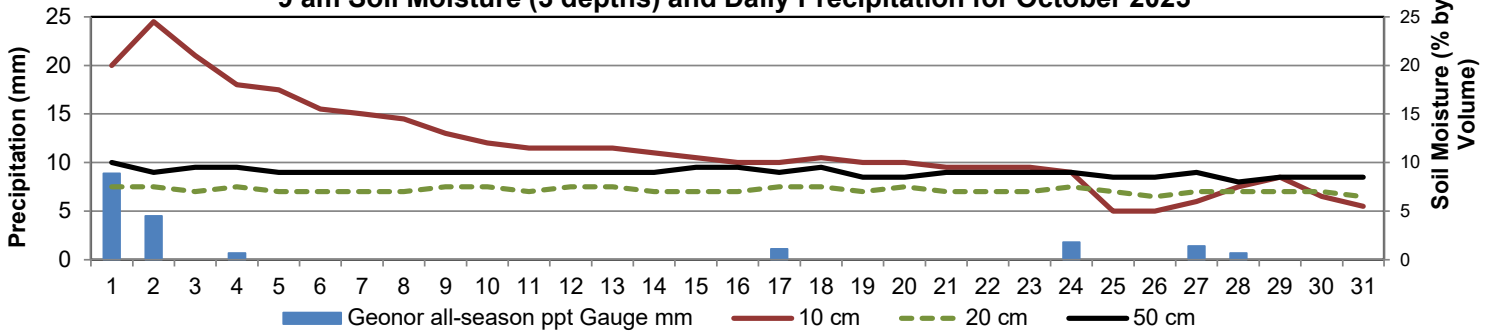


Note: Red numbers indicate manual calculation; Red cell indicate data not available

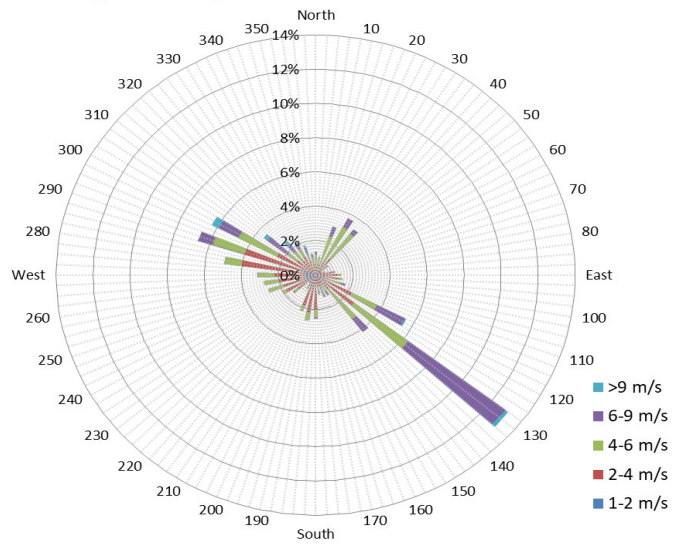
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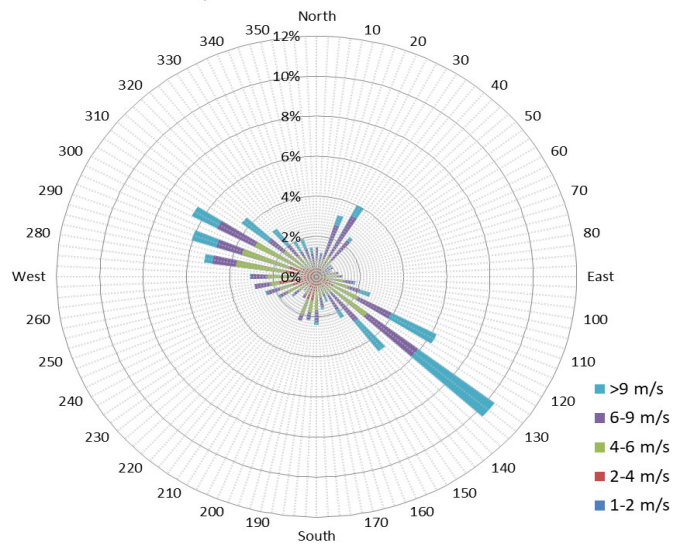
9 am Soil Moisture (3 depths) and Daily Precipitation for October 2023



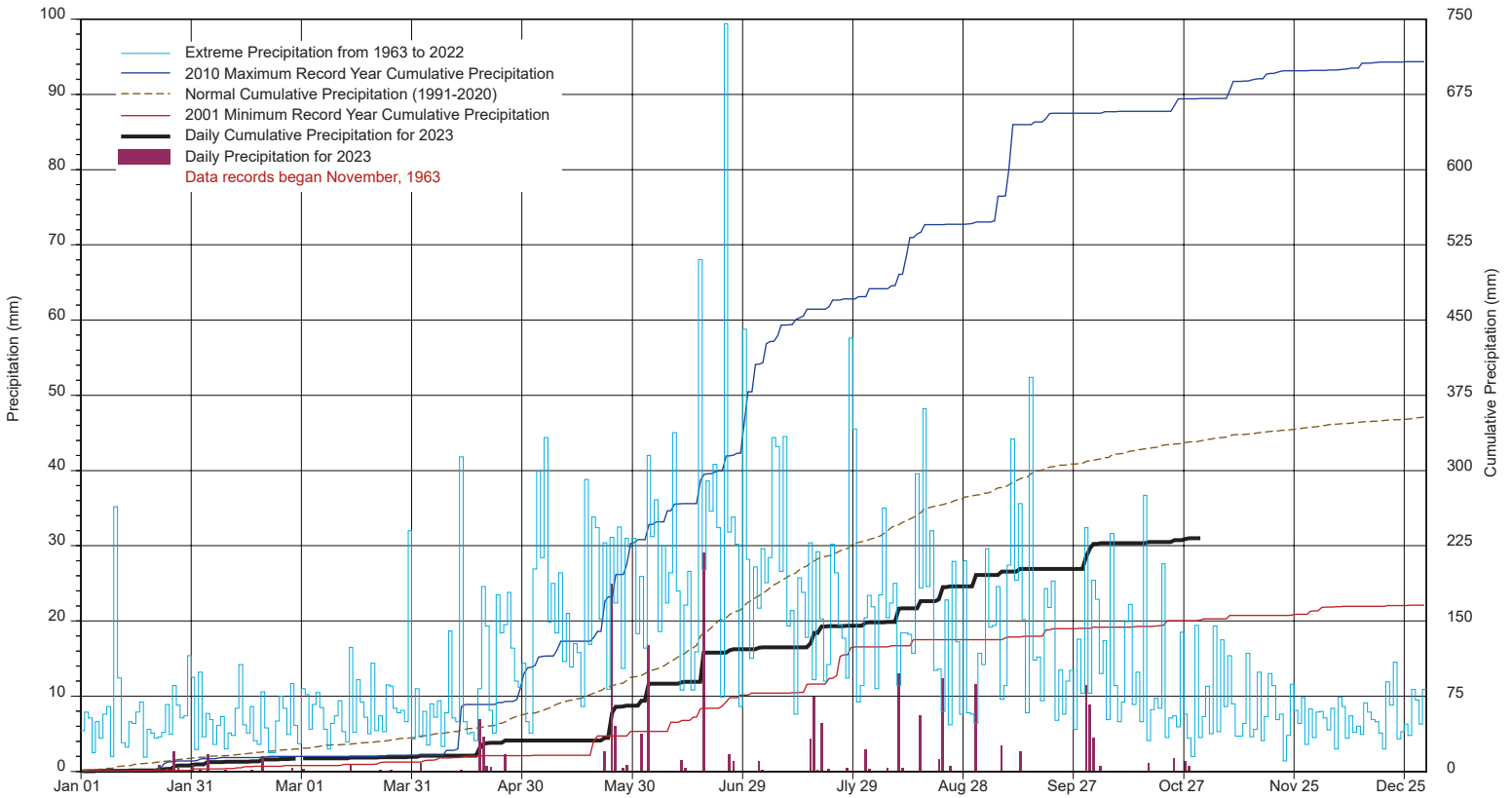
10 minute Average Wind Speed and Direction Saskatoon October 2023



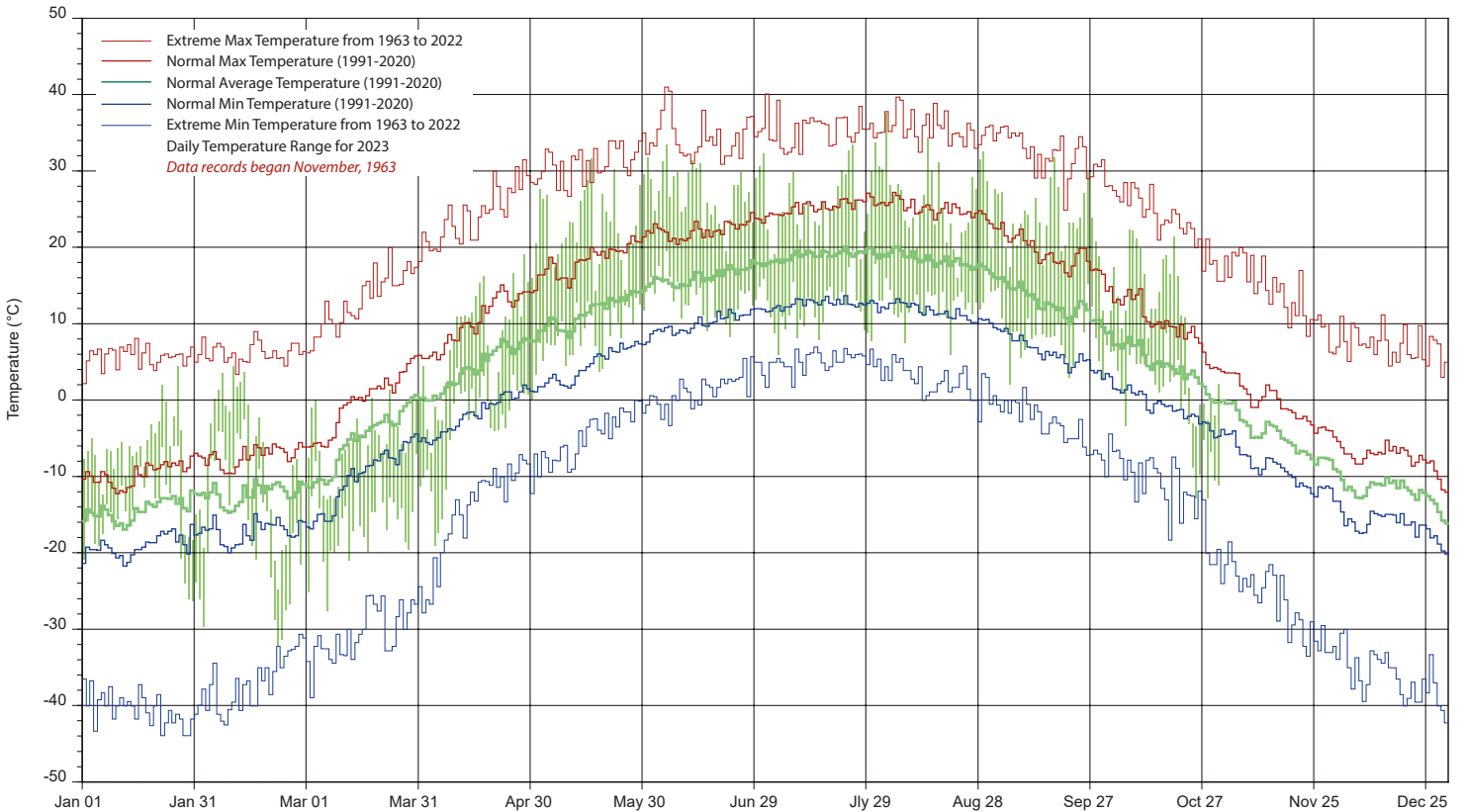
1/2 hr Maximum Wind Speed and Direction Saskatoon October 2023



SASKATCHEWAN RESEARCH COUNCIL SASKATOON CLIMATE REFERENCE STATION 2023 PRECIPITATION AND NORMALS



2023 TEMPERATURES AND NORMALS



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