



SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

SASKATOON STATION 4057180

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

Preliminary AUGUST 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	Notes	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	mm		%	%	mbar	mbar
1	30.7	25.7	13.1	11.5	21.9	18.6	16.9	0.0	3.9	2.9	2.8	t-storm	92	20	1016	1013
2	30.2	25.9	13.0	12.2	21.6	19.1	16.6	0.0	3.6	0.3	0.5	t-storm	91	21	1018	1016
3	37.7	25.5	16.1	12.0	26.9	18.8	21.9	0.0	8.9	0.0	0.0		80	14	1017	1008
4	28.1	25.9	14.5	12.7	21.3	19.3	16.3	0.0	3.3	0.1	0.0		87	26	1020	1014
5	26.8	27.2	11.2	12.7	19.0	20.0	14.0	0.0	1.0	0.0	0.0		84	27	1022	1020
6	28.3	26.8	10.8	13.3	19.6	20.1	14.6	0.0	1.6	0.0	0.0		81	26	1022	1018
7	27.5	26.3	11.5	12.8	19.5	19.6	14.5	0.0	1.5	0.5	0.5	t-storm	90	29	1018	1013
8	23.5	24.8	7.5	12.7	15.5	18.8	10.5	2.5	0.0	0.0	0.0		87	30	1015	1013
9	22.6	25.2	11.5	12.2	17.1	18.7	12.1	0.9	0.0	0.0	0.0		78	36	1013	1007
10	23.9	26.3	12.9	12.7	18.4	19.5	13.4	0.0	0.4	13.0	13.0	light rain	90	47	1007	1001
11	20.0	24.4	13.8	12.5	16.9	18.5	11.9	1.1	0.0	0.4	0.5	light rain	87	53	1011	1003
12	24.9	24.6	11.5	11.5	18.2	18.1	13.2	0.0	0.2	0.0	0.0		86	34	1017	1012
13	26.8	25.3	11.0	11.2	18.9	18.3	13.9	0.0	0.9	0.0	0.0		92	27	1020	1017
14	34.4	25.6	14.3	12.3	24.4	19.0	19.4	0.0	6.4	0.0	0.0		71	20	1017	1012
15	30.0	24.9	13.7	11.8	21.9	18.3	16.9	0.0	3.9	0.0	0.0		83	26	1017	1005
16	23.0	23.6	13.8	11.2	18.4	17.5	13.4	0.0	0.4	7.4	7.4	light rain	90	35	1013	1005
17	31.1	24.5	10.9	11.3	21.0	17.9	16.0	0.0	3.0	0.0	0.0		83	23	1014	997
18	25.0	25.1	14.2	11.3	19.6	18.2	14.6	0.0	1.6	0.0	0.0		80	41	1005	995
19	20.7	25.9	10.7	11.7	15.7	18.8	10.7	2.3	0.0	0.0	0.0		82	36	1023	1005
20	23.1	24.5	5.9	10.8	14.5	17.6	9.5	3.5	0.0	0.0	0.0		85	24	1025	1020
21	19.8	25.7	13.1	10.7	16.5	18.2	11.5	1.5	0.0	1.6	1.5	light rain	89	58	1022	1018
22	16.0	25.2	13.6	12.0	14.8	18.6	9.8	3.2	0.0	12.3	11.4	light rain	93	88	1018	1013
23	22.0	24.3	14.3	11.1	18.2	17.7	13.2	0.0	0.2	0.0	0.0	mist	94	59	1013	1010
24	22.2	24.4	11.9	11.1	17.1	17.8	12.1	0.9	0.0	0.7	0.8	light rain	89	42	1019	1009
25	23.2	24.7	12.8	10.5	18.0	17.6	13.0	0.0	0.0	0.0	0.0		90	43	1025	1019
26	29.2	23.9	11.3	10.2	20.3	17.1	15.3	0.0	2.3	0.0	0.0		85	30	1022	1013
27	27.6	24.5	12.8	10.2	20.2	17.4	15.2	0.0	2.2	0.0	0.0		83	34	1018	1014
28	31.5	24.8	11.9	10.7	21.7	17.8	16.7	0.0	3.7	0.0	0.0		87	24	1018	1016
29	32.6	24.4	12.8	10.5	22.7	17.5	17.7	0.0	4.7	0.0	0.0		88	23	1019	1013
30	28.7	23.6	17.1	10.6	22.9	17.1	17.9	0.0	4.9	0.0	0.0		71	36	1012	1002
31	19.8	23.1	14.2	10.1	17.0	16.6	12.0	1.0	0.0	11.5	11.4	t-storm / rain	92	70	1003	1000
Total							444.7	16.9	58.6	50.7	49.8		Extreme / Date	Extreme / Date	Extreme / Date	Extreme / Date
Avg	26.2	25.1	12.5	11.6	19.3	18.3	1991-2020 Normal			46.4	Aug 1991-2020 Normal					
Extreme Date	37.7		5.9				413.0	41.6	51.6	195.7	Year to date 2023 Cumulative		94	14	1025	995
	3		20							274.8	Year to date Cumulative Normal		23	3	20	18

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

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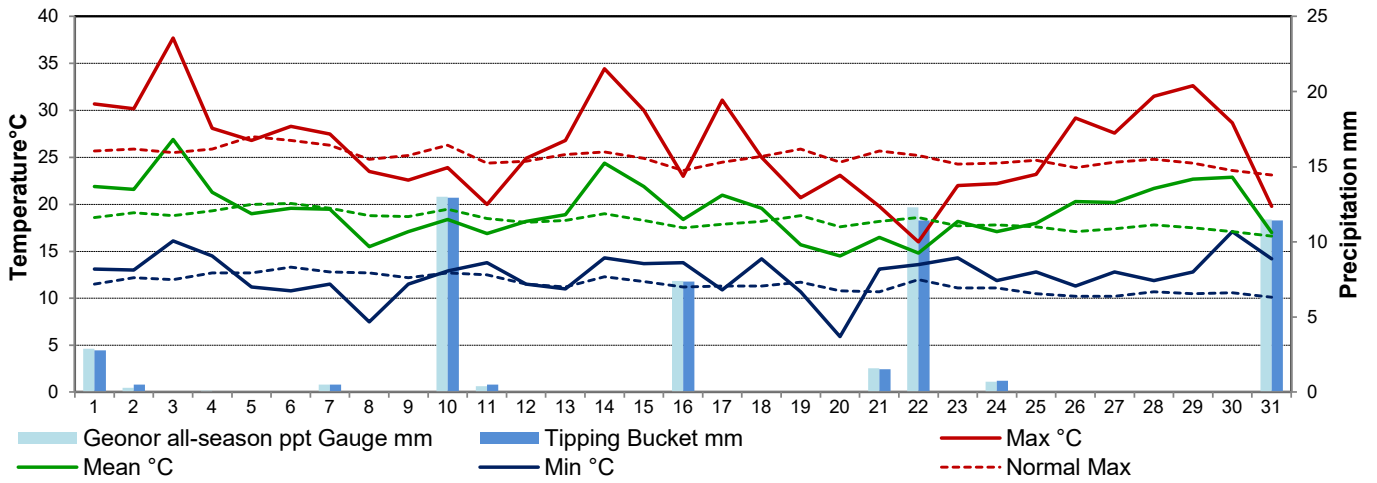


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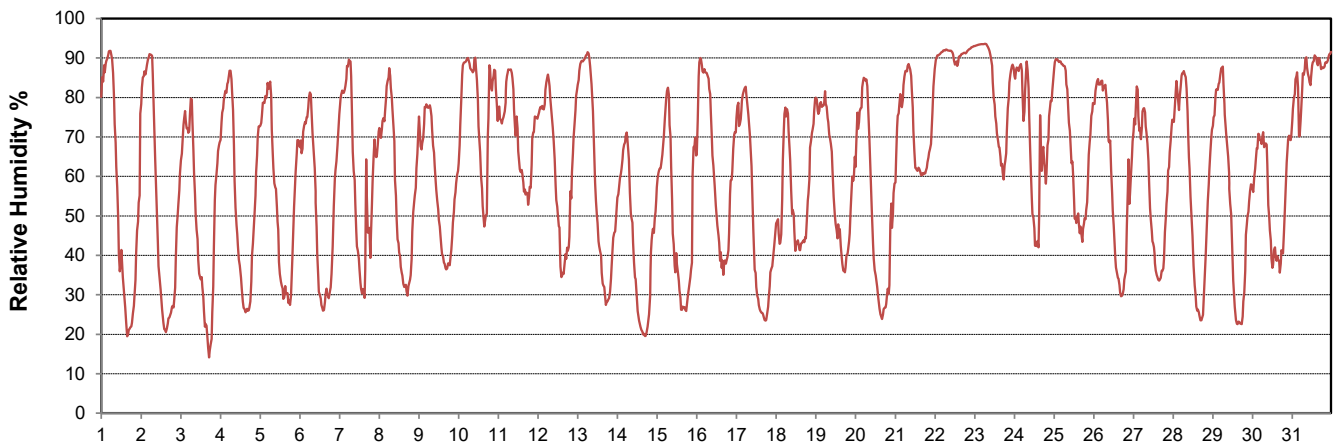


CAMPBELL SCIENTIFIC WHEN MEASUREMENTS MATTER

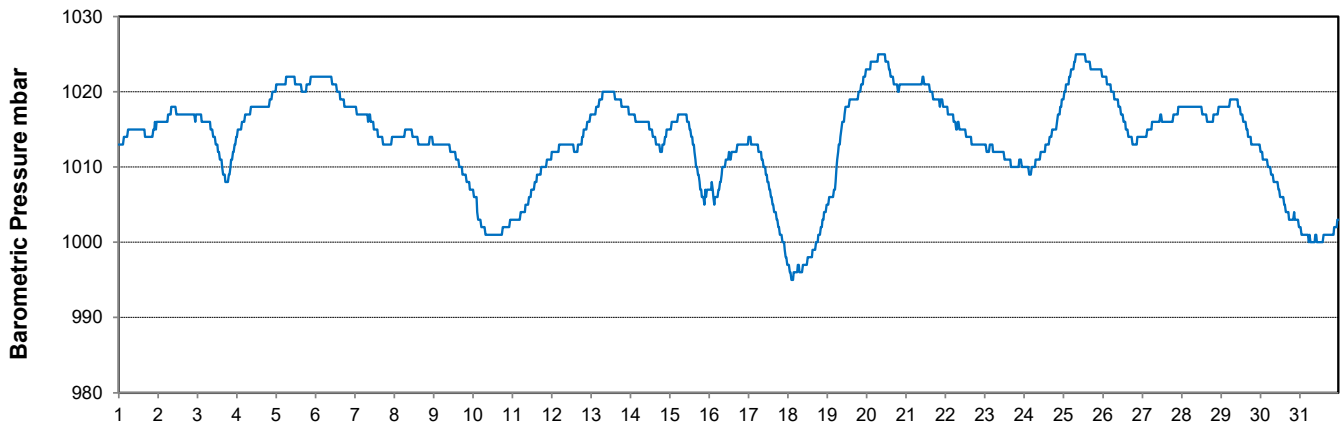
Temperature and Precipitation for August 2023



Relative Humidity for August 2023



Barometric Pressure Corrected to Sea Level for August 2023





SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

SASKATOON STATION 4057180

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

Preliminary AUGUST 2023

Day	Wind Gust (10 meters)			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	32.8	N	13:21	10.5	22.0	20.5	21.0	21.5	18.5	15.0	13.5	10.5	14.5	15.5	93.6	23.9	4.5
2	27.2	E	22:42	8.0	20.0	20.5	21.5	22.0	19.0	15.0	13.5	10.5	14.6	15.4	94.6	24.9	4.9
3	45.6	SE	13:20	20.7	21.5	20.0	21.0	21.5	19.0	15.0	13.5	10.5	12.3	15.4	80.0	21.1	7.0
4	43.8	WNW	17:09	15.1	19.5	20.5	21.5	22.0	19.0	15.5	13.5	10.5	13.5	15.3	88.1	23.1	6.6
5	38.1	NW	14:43	10.3	18.5	19.0	20.0	21.0	19.0	15.5	13.5	10.5	10.9	15.3	71.4	19.6	7.6
6	36.0	NNE	16:11	9.6	17.5	18.5	19.5	20.5	19.0	15.5	13.5	10.5	11.5	15.2	75.6	21.1	8.8
7	68.2	N	15:54	8.6	19.0	19.0	20.0	20.5	19.0	15.5	13.5	10.5	11.1	15.2	73.2	20.0	8.1
8	38.0	NNE	15:47	12.1	13.5	17.5	19.0	20.0	19.0	15.5	13.5	11.0	13.4	15.1	88.7	22.9	6.4
9	34.8	ESE	19:23	15.6	16.5	19.0	19.5	20.0	18.5	15.5	13.5	11.0	9.5	15.0	63.2	17.6	10.8
10	42.7	ESE	3:14	14.2	14.0	18.0	19.0	19.5	18.5	15.5	14.0	11.0	3.3	15.0	22.0	10.1	5.6
11	46.6	NW	12:53	17.9	15.0	16.5	17.5	18.5	18.0	15.5	14.0	11.0	2.6	14.9	17.4	11.0	8.7
12	40.1	NW	15:08	10.8	15.5	15.0	16.0	17.0	17.5	15.5	14.0	11.0	7.6	14.9	51.1	15.1	8.2
13	31.8	NW	14:16	10.1	16.0	15.0	16.0	17.0	17.0	15.5	14.0	11.0	13.7	14.8	92.6	21.5	5.7
14	40.6	W	15:32	14.5	22.0	17.0	17.5	18.0	17.0	15.0	14.0	11.0	11.9	14.7	80.7	21.5	4.0
15	49.8	NNW	21:28	10.4	19.5	19.5	20.0	20.0	17.5	15.0	14.0	11.0	10.0	14.7	68.1	18.8	7.9
16	53.7	NW	14:06	20.2	16.5	19.0	20.0	20.5	18.0	15.0	14.0	11.0	10.9	14.6	74.6	19.1	6.6
17	37.8	ESE	22:39	14.2	15.0	15.5	16.5	18.0	18.0	15.0	14.0	11.0	11.7	14.6	80.4	18.7	6.8
18	45.3	NNE	9:42	16.0	19.0	17.5	18.5	19.0	17.5	15.5	14.0	11.0	6.5	14.5	44.8	11.9	8.2
19	56.6	WNW	5:14	18.9	14.0	17.0	17.5	18.5	17.5	15.0	14.0	11.0	6.5	14.4	45.0	14.3	8.0
20	24.0	SW	16:00	5.6	11.5	13.5	15.0	17.0	17.5	15.0	14.0	11.0	10.0	14.4	69.6	19.3	5.7
21	30.5	SE	14:19	14.6	14.0	17.0	17.5	18.0	17.0	15.0	14.0	11.5	1.7	14.3	11.9	9.6	7.8
22	26.6	E	10:28	10.6	14.5	16.0	17.0	17.5	17.0	15.0	14.0	11.5	0.0	14.3	0.0	3.6	3.2
23	15.6	WNW	5:01	6.0	15.0	16.5	17.0	17.0	16.5	15.0	14.0	11.5	3.6	14.2	25.4	8.2	6.2
24	45.3	WNW	15:25	13.3	15.5	15.0	16.0	16.5	16.5	15.0	13.5	11.5	7.5	14.1	53.1	13.9	5.1
25	20.3	N	2:01	8.4	16.0	15.5	16.0	16.5	16.5	15.0	13.5	11.5	9.0	14.1	64.0	16.1	7.0
26	25.0	SSE	6:49	9.2	15.5	14.5	15.5	17.0	16.5	15.0	13.5	11.5	11.8	14.0	84.3	19.1	4.7
27	25.5	N	14:15	9.0	17.5	16.0	16.5	18.0	16.5	14.5	13.5	11.5	12.1	13.9	86.9	16.7	7.3
28	34.2	NW	13:34	8.8	16.0	15.5	16.5	18.0	16.5	14.5	13.5	11.5	11.3	13.9	81.5	16.5	6.8
29	29.3	ESE	23:17	11.4	19.5	16.5	17.5	18.5	17.0	14.5	13.5	11.5	11.8	13.8	85.5	16.9	6.2
30	42.3	SE	9:41	17.0	18.5	18.5	19.0	19.5	17.0	15.0	13.5	11.5	4.5	13.7	32.8	11.5	6.4
31	30.9	WSW	14:11	11.4	14.5	18.0	19.0	19.0	17.5	15.0	13.5	11.5	0.0	13.7	0.0	2.9	2.7
Total													279.3	452.8	61.7	510.5	203.5
Mean				12.4	16.9	17.3	18.2	19.0	17.7	15.1	13.7	11.1	1991-2020 Normal				
Extreme	68.2	N	15:54		1971- 2000 Normal for Soil Temperatures								276.9	452.3	61.2	542.2	172.5
Date	7				16.5	16.9	18.1	16.8	14.1	12.3	9.1	No. of Bright Sunshine days = 29					

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

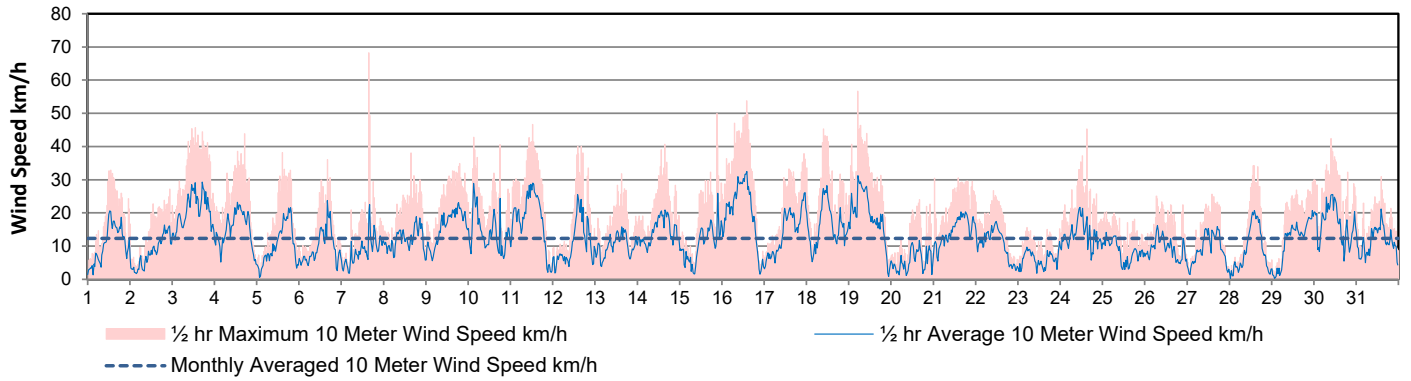
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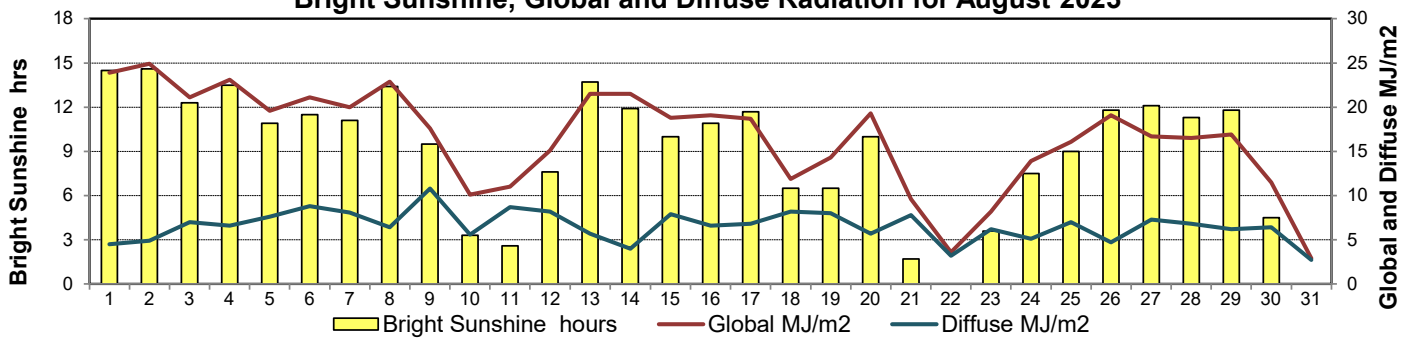
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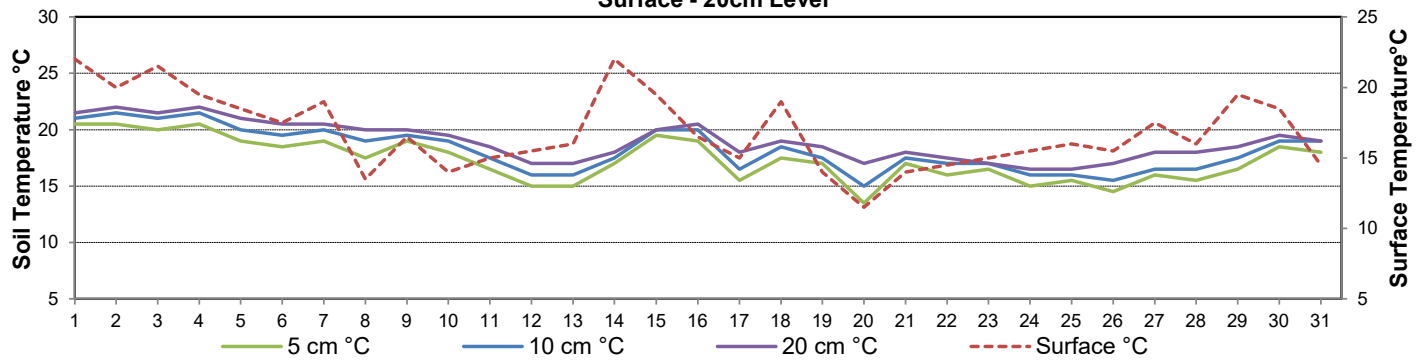
Wind Speed for August 2023



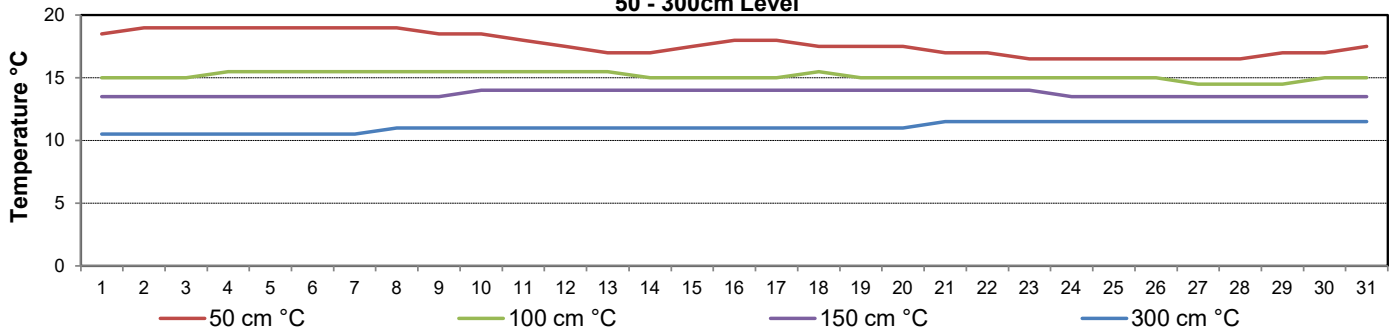
Bright Sunshine, Global and Diffuse Radiation for August 2023



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



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





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SASKATOON STATION 4057180

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

Preliminary **AUGUST 2023**

Extreme Records for August

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
39.7	06/1998	SRC	39.7	06/1998	229.8	1953	SF	105.2	2007	151 ^W	14/1967	129	1985	360.8	1969	31	1966*
-2.8	23/1901 28/1976	SM SRC	-2.8	28/1976	0.0	1986	SC	7.0	2001					200.8	1987	27	1992*

**1975 forward * more than one year

Notable Events for CRS Saskatoon - August						Saskatoon Area Stations			Glossary		
Element	Type	Day	New Record	Old Record	Year	SM	NWMP	c. 1892-1901	T	Trace of precipitation	
August - 18th highest maximum temperature - 9th highest minimum temperature - 11th highest average temperature	Precipitation	Greatest Daily Amount	10	13.0	11.4	2010	SE	Eby	1901-1941	Normal	30 year average beginning with the decade
			22	12.3	8.0	1993	US	Univ. of Sask.	1915-1964	SOG	Depth of snow-on-the-ground in cm
			31	11.5	6.4	2021	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	A very smoky month - five consecutive days with 30C or above maximum temperatures (July 30 to Aug 3 inclusive)				
				K	S'toon Kernen Farm	1993-2004					
				KCS	S'toon Kernen Farm CS	1996-					
				RCS	Environment Canada	2008-					
				SF	Sutherland Forestry	1943-1970					

Summer 2023

- 4th highest maximum average temperature (26.2C)
- 4th highest minimum average temperature (12.6C)
- 2nd highest mean average temperature (19.4C)

- While August had above normal precipitation, Summer 2023 was the 17th driest at this CRS (130.4mm for JJA)

- even through all the smoke, it was the 13th sunniest summer (% of actual to possible bright sunshine)

Agricultural year (September 2022 to August 2023 inclusive) was 70.3 % of normal for precipitation

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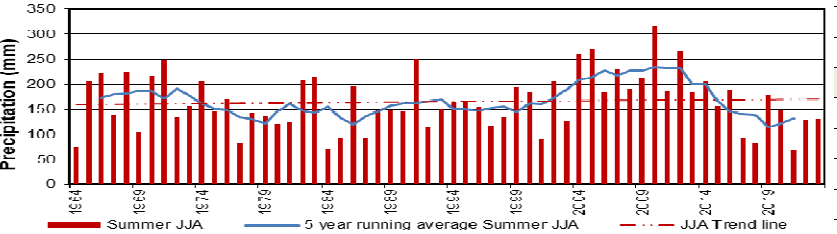
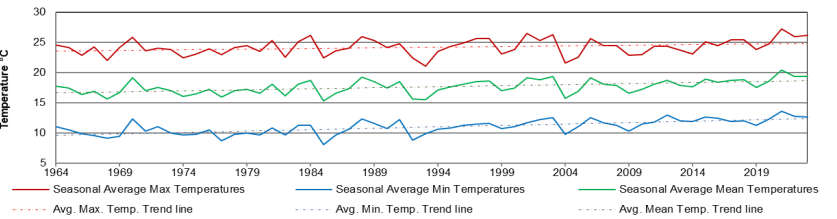
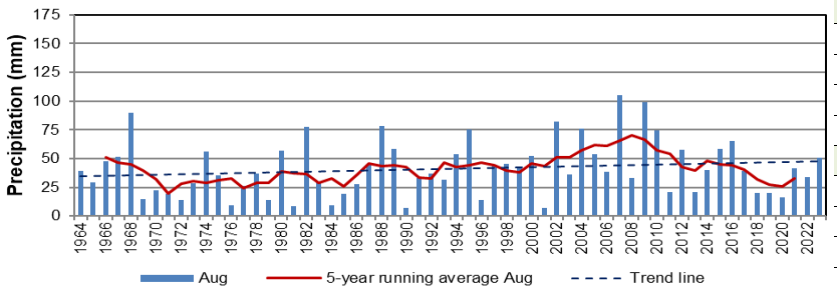
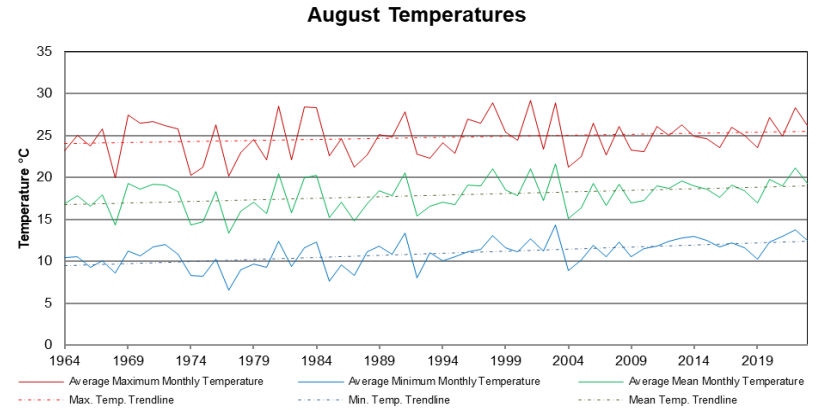
52°09' N 106°36' W 497 m asl Estab. 1963

Preliminary

August

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	7.0	15.0	25.2	4.0	10.0	11.0
2	5.0	11.4	19.5	3.0	10.0	11.0
3	14.0	20.6	35.0	4.5	10.0	11.0
4	10.0	16.6	32.7	4.0	10.0	11.0
5	7.0	14.1	28.1	3.0	9.5	10.5
6	7.0	15.9	25.8	2.0	9.5	10.5
7	6.0	15.1	48.8	1.5	9.0	10.5
8	8.0	13.1	28.7	1.0	9.0	10.0
9	12.0	17.8	28.1	1.5	9.0	10.5
10	10.0	22.1	34.4	2.5	8.5	10.0
11	12.0	20.0	32.7	16.5	9.0	10.5
12	8.0	17.8	32.1	13.5	8.5	10.0
13	7.0	12.0	23.5	12.0	8.5	10.0
14	10.0	15.9	30.4	11.5	9.0	10.5
15	7.0	17.2	33.9	11.0	8.5	10.5
16	14.0	21.6	41.9	14.0	9.0	10.5
17	10.0	19.0	31.0	12.0	8.5	10.5
18	11.0	19.1	31.0	12.0	8.5	10.0
19	13.0	21.0	39.6	11.0	9.0	10.5
20	4.0	9.7	20.0	10.0	8.5	10.5
21	11.0	15.5	27.5	10.0	8.5	10.5
22	7.0	13.3	21.8	18.5	8.5	10.0
23	3.0	7.6	13.7	18.0	8.5	10.5
24	9.0	15.5	33.9	15.0	8.5	10.0
25	6.0	9.4	16.0	14.5	8.5	10.0
26	6.0	10.9	21.2	13.0	8.5	10.0
27	6.0	11.7	18.9	12.0	9.0	10.0
28	6.0	15.2	28.1	11.0	8.5	10.5
29	8.0	14.8	24.1	10.5	9.0	10.0
30	12.0	19.2	32.7	10.5	8.5	10.0
31	8.0	23.0	23.0	9.0	8.5	10.5
Total						
Mean				9	9	10.4
Extreme	14.0	23.0	48.8	18.5	10	11
Date	3	31	7	22	1	1



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

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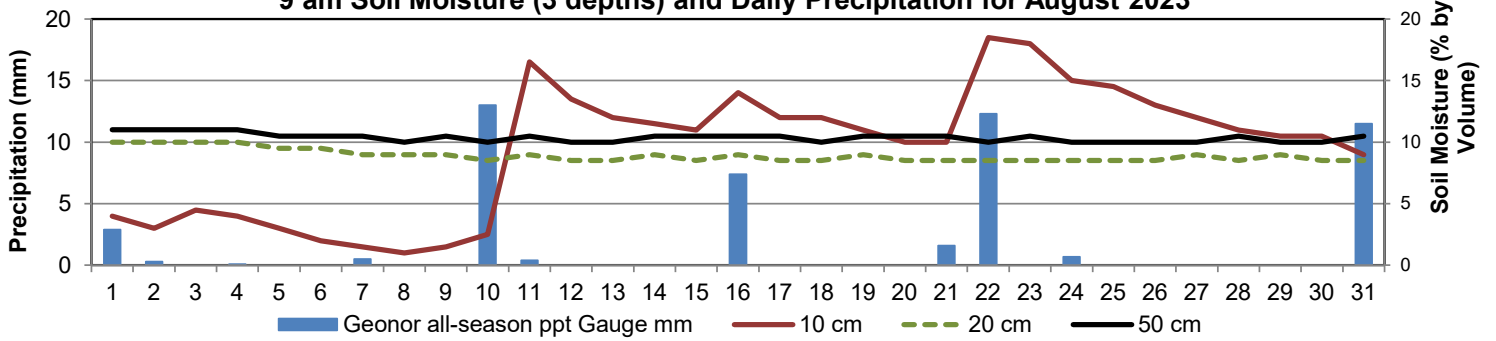


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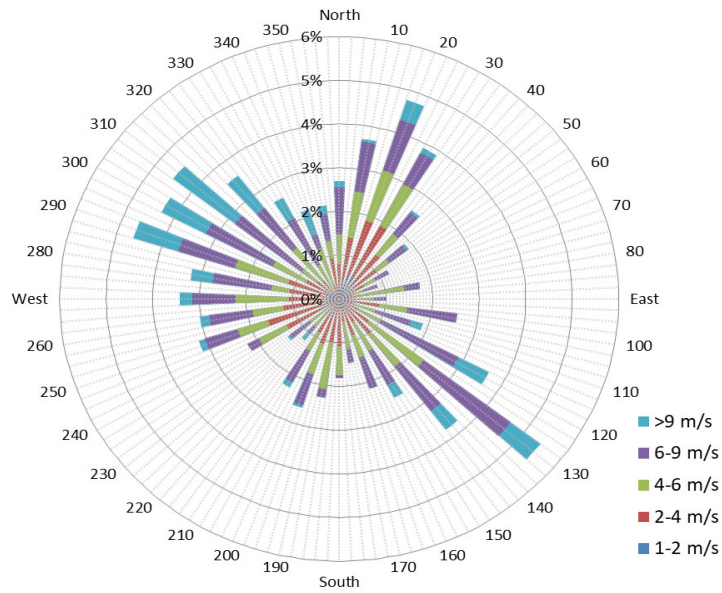
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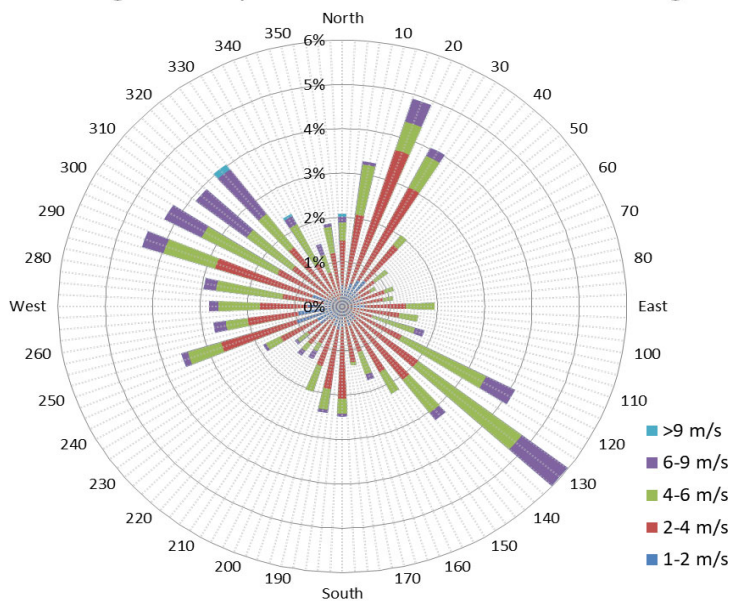
9 am Soil Moisture (3 depths) and Daily Precipitation for August 2023



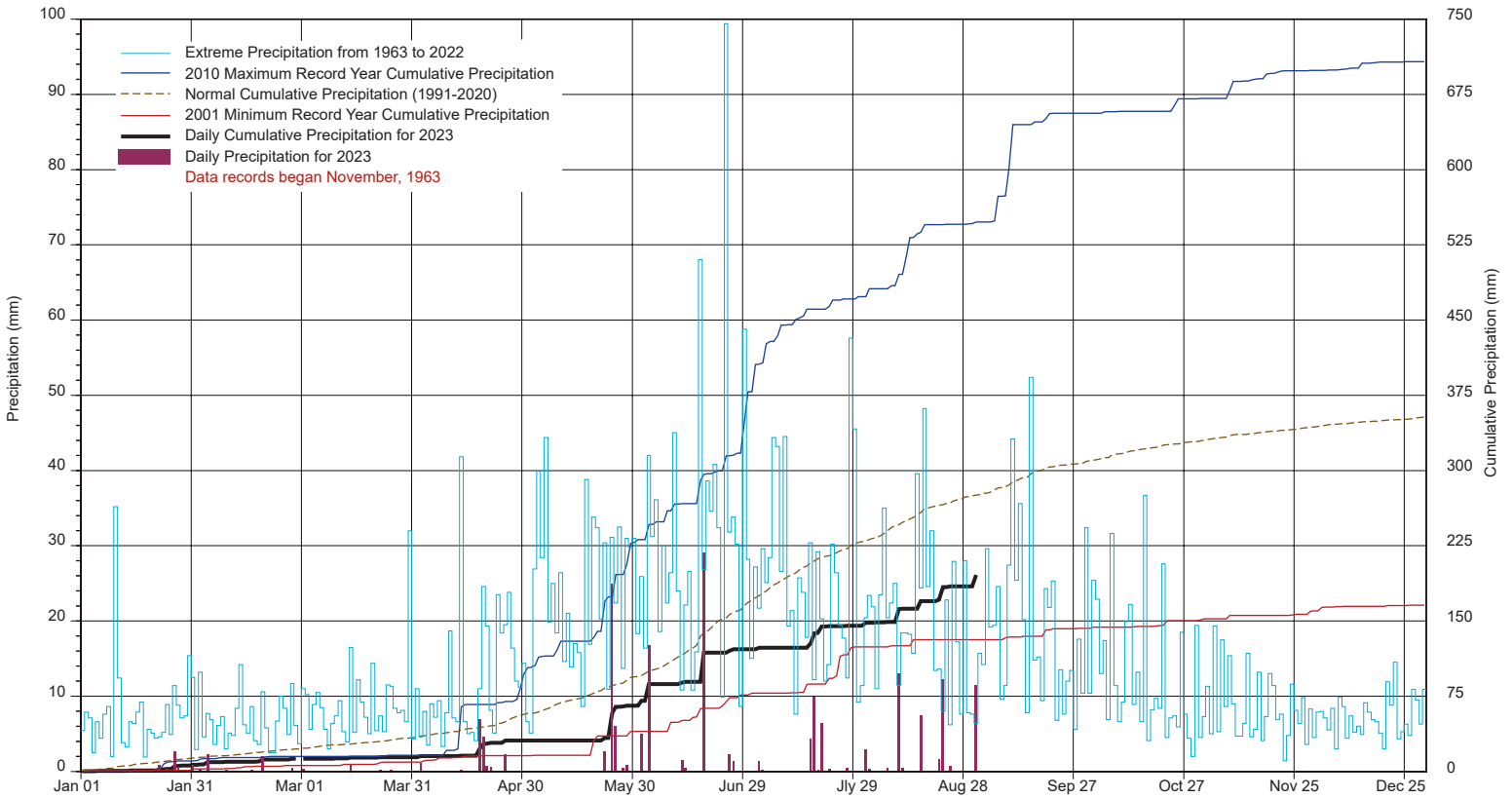
1/2 hr Maximum Wind Speed and Direction Saskatoon August 2023



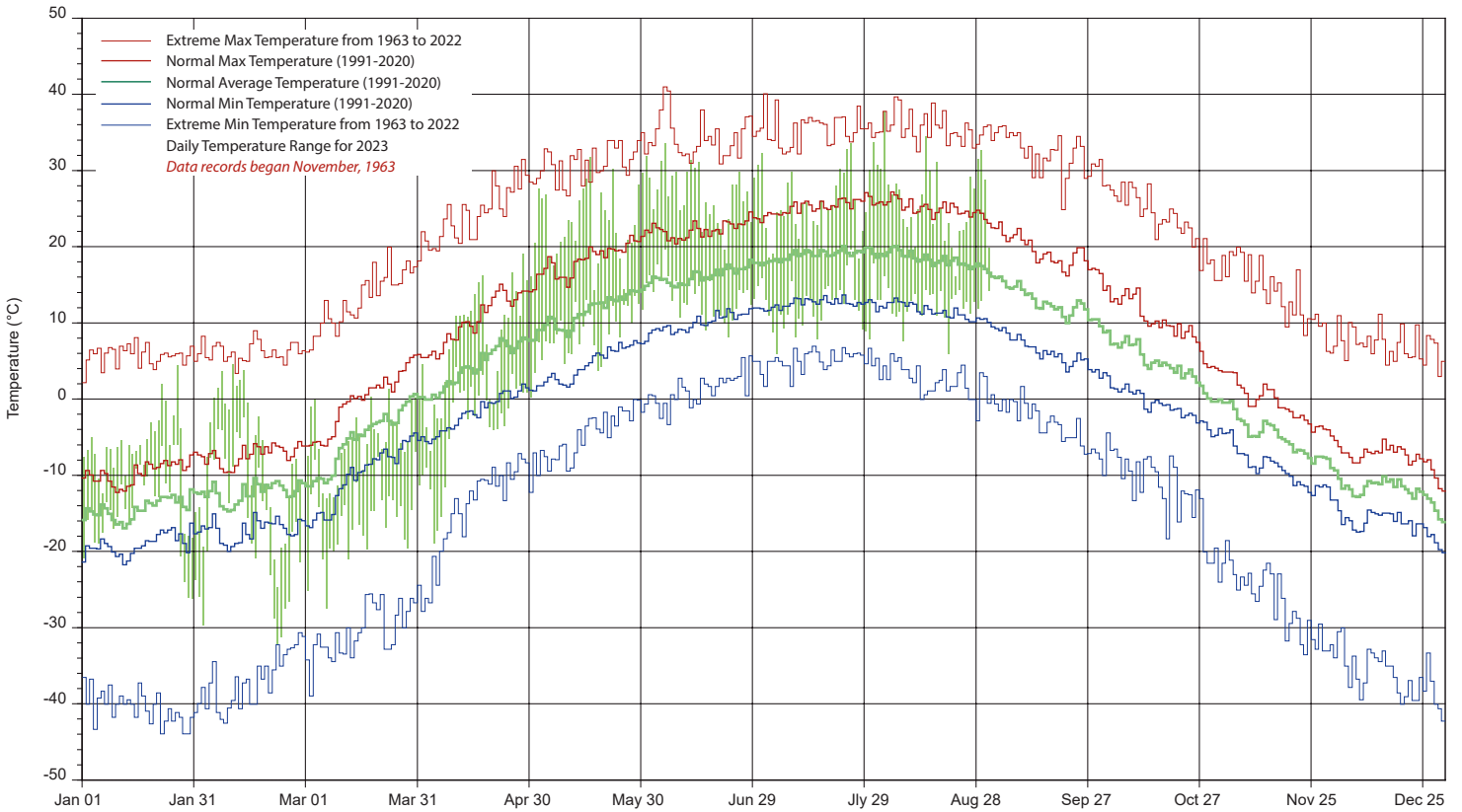
10 minute Average Wind Speed and Direction Saskatoon August 2023



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2023 TEMPERATURES AND NORMALS



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