



SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

SASKATOON STATION 4057180

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

Preliminary **JULY 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	32.3	23.2	15.9	11.9	24.1	17.6	19.1	0.0	6.1	0.0	0.0		90	33	1011	1004
2	22.4	24.1	13.1	11.6	17.8	17.9	12.8	0.2	0.0	0.0	0.0		90	25	1010	1006
3	18.5	24.5	10.9	11.7	14.7	18.1	9.7	3.3	0.0	1.4	1.3	showers	88	52	1014	1008
4	19.1	24.3	8.8	12.1	14.0	18.2	9.0	4.0	0.0	0.2	0.3	showers	86	35	1020	1014
5	24.4	24.3	5.9	12.4	15.2	18.4	10.2	2.8	0.0	0.0	0.0		88	26	1020	1014
6	24.7	24.2	11.0	11.7	17.9	18.0	12.9	0.1	0.0	0.0	0.0		72	32	1015	1012
7	24.0	24.5	9.3	12.2	16.7	18.4	11.7	1.3	0.0	0.0	0.0		88	31	1018	1015
8	28.4	24.4	11.1	12.2	19.8	18.3	14.8	0.0	1.8	0.0	0.0		71	24	1017	1008
9	29.8	25.3	15.5	12.6	22.7	19.0	17.7	0.0	4.7	0.0	0.0		72	29	1010	1006
10	22.9	25.9	8.1	13.3	15.5	19.6	10.5	2.5	0.0	0.0	0.0		82	23	1016	1011
11	21.0	24.4	10.6	13.2	15.8	18.8	10.8	2.2	0.0	0.0	0.0		74	40	1016	1012
12	25.5	25.7	9.7	12.4	17.6	19.1	12.6	0.4	0.0	0.0	0.0		84	28	1012	1008
13	25.8	26.0	13.5	13.2	19.7	19.6	14.7	0.0	1.7	0.0	0.0		83	29	1009	1007
14	19.5	25.5	13.1	13.1	16.3	19.3	11.3	1.7	0.0	0.0	0.0		70	45	1015	1009
15	23.3	24.7	10.8	12.8	17.1	18.8	12.1	0.9	0.0	0.0	0.0		84	39	1015	1013
16	22.8	25.0	7.9	12.5	15.4	18.8	10.4	2.6	0.0	0.0	0.0		91	37	1018	1015
17	26.0	26.0	10.3	13.1	18.2	19.6	13.2	0.0	0.2	4.3	4.3	t-storm	81	30	1018	1007
18	19.0	25.1	14.4	13.6	16.7	19.4	11.7	1.3	0.0	10.0	9.7	showers	90	60	1010	1003
19	24.9	24.9	14.9	12.7	19.9	18.8	14.9	0.0	1.9	0.2	0.3	showers	89	42	1021	1011
20	25.4	25.4	13.0	12.5	19.2	18.9	14.2	0.0	1.2	6.4	6.1	showers	88	45	1022	1019
21	28.0	25.2	13.3	13.2	20.7	19.2	15.7	0.0	2.7	0.0	0.0		89	35	1019	1014
22	30.1	26.3	14.3	12.6	22.2	19.5	17.2	0.0	4.2	0.3	0.3	showers	88	30	1015	1011
23	29.6	26.4	12.4	13.7	21.0	20.1	16.0	0.0	3.0	0.0	0.0		90	32	1014	1012
24	32.7	25.8	17.5	12.6	25.1	19.2	20.1	0.0	7.1	0.0	0.0		78	33	1014	1007
25	33.5	25.0	19.6	12.5	26.6	18.8	21.6	0.0	8.6	0.0	0.0		84	23	1009	1004
26	26.2	26.2	13.0	12.2	19.6	19.2	14.6	0.0	1.6	0.1	0.0	showers	80	26	1010	1008
27	18.4	26.2	11.6	12.7	15.0	19.5	10.0	3.0	0.0	0.4	0.5	showers	87	56	1021	1010
28	22.1	26.0	9.2	12.5	15.7	19.3	10.7	2.3	0.0	0.0	0.0		93	31	1024	1021
29	24.4	27.1	8.8	12.7	16.6	19.9	11.6	1.4	0.0	0.0	0.0		77	30	1024	1021
30	30.0	26.6	7.8	13.1	18.9	19.9	13.9	0.0	0.9	0.0	0.0		80	22	1021	1015
31	33.7	25.5	17.8	12.7	25.8	19.1	20.8	0.0	7.8	0.0	0.0		78	23	1015	1010
Total							426.5	30.0	53.5	23.3	22.6		Extreme / Date	Extreme / Date	Extreme / Date	Extreme / Date
Avg	25.4	25.3	12.0	12.6	18.8	19.0	1991-2020 Normal			60.1	Jly 1991-2020 Normal					
Extreme	33.7		5.9				433.2	25.9	56.1	145.0	Year to date 2023 Cumulative		93	22	1024	1003
Date	31		5							228.4	Year to date Cumulative Normal		28	30	28	18

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

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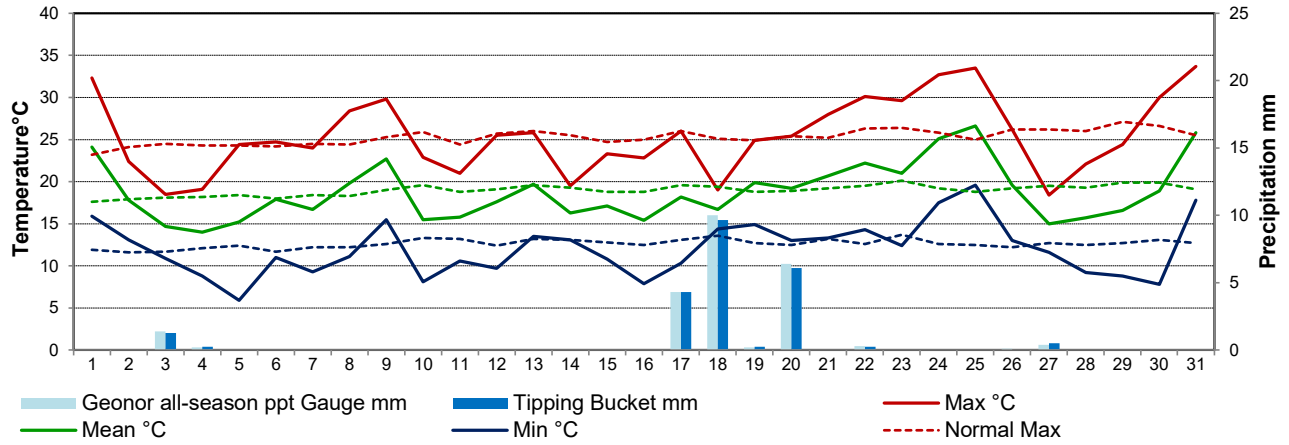


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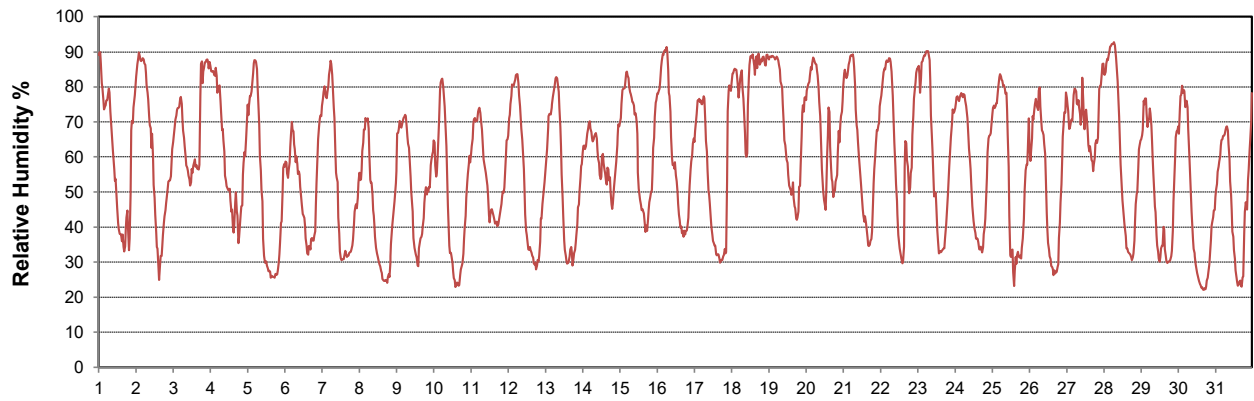
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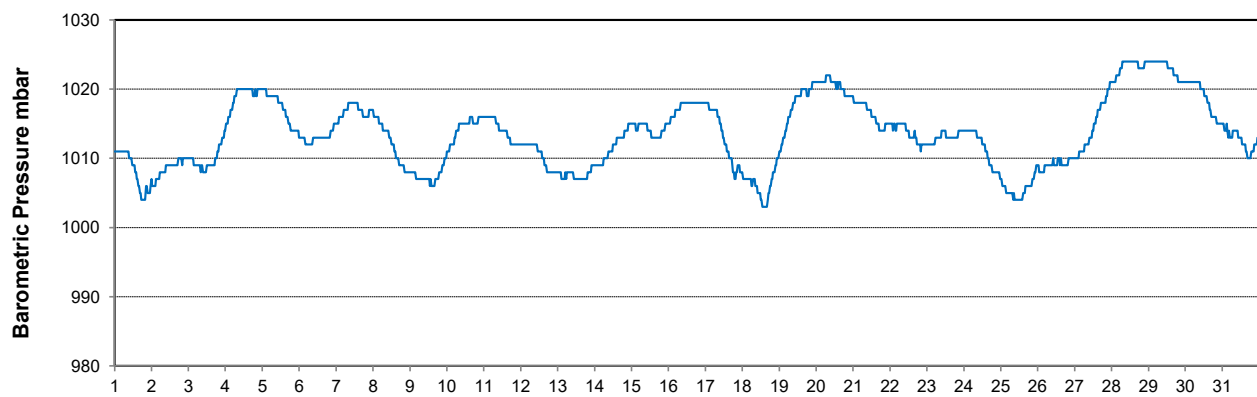
Temperature and Precipitation for July 2023



Relative Humidity for July 2023



Barometric Pressure Corrected to Sea Level for July 2023





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SASKATOON STATION 4057180

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

Preliminary **JULY 2023**

Day	Wind Gust			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	60.5	N	20:55	12.4	23.5	21.5	21.5	21.5	18.5	14.0	12.0	9.0	9.9	16.7	59.4	22.4	7.0
2	56.9	W	17:44	23.5	18.5	21.0	21.5	21.5	18.5	14.0	12.0	9.0	12.3	16.7	73.8	26.4	7.3
3	60.8	WNW	17:28	27.4	16.5	19.0	20.0	20.5	18.5	14.5	12.0	9.0	3.4	16.6	20.4	11.4	8.5
4	39.7	NNW	10:40	16.2	12.5	16.0	17.0	18.0	18.0	14.5	12.5	9.0	9.3	16.6	56.0	20.4	9.9
5	30.7	SSW	16:34	6.2	16.0	14.5	15.5	17.0	17.0	14.5	12.5	9.0	15.6	16.6	94.0	29.6	4.8
6	34.5	NNE	18:48	11.3	18.0	17.5	18.0	18.5	17.0	14.5	12.5	9.0	14.1	16.6	85.1	24.2	8.4
7	25.8	NNW	12:30	9.0	17.5	18.0	18.5	19.0	17.5	14.5	12.5	9.0	14.0	16.5	84.6	24.0	9.5
8	32.7	WNW	16:12	11.2	19.0	18.5	19.0	19.5	17.5	14.5	12.5	9.5	15.6	16.5	94.5	27.5	5.2
9	38.4	NW	14:00	14.8	21.0	19.5	20.0	20.5	18.0	14.5	12.5	9.5	12.7	16.5	77.1	22.3	10.7
10	29.7	ENE	17:55	11.9	16.0	19.0	20.0	20.5	18.0	14.5	12.5	9.5	12.4	16.5	75.4	25.6	8.1
11	28.4	SE	15:30	14.2	15.0	19.0	19.5	20.0	18.0	14.5	12.5	9.5	4.3	16.4	26.2	12.9	10.6
12	30.7	WNW	16:28	9.4	18.0	17.5	18.0	19.0	18.0	14.5	12.5	9.5	13.3	16.4	81.1	24.1	10.1
13	41.2	NW	15:45	15.7	17.0	19.0	19.5	20.0	17.5	14.5	12.5	9.5	7.4	16.4	45.2	16.0	10.0
14	39.4	NNW	17:59	18.3	15.5	18.0	19.0	19.5	17.5	14.5	12.5	9.5	2.2	16.3	13.5	10.7	8.8
15	34.6	N	20:09	14.4	13.5	17.0	17.5	18.0	17.5	14.5	13.0	9.5	4.8	16.3	29.5	12.0	8.5
16	25.8	NE	15:19	8.4	15.5	15.5	16.5	17.5	17.0	14.5	13.0	10.0	12.4	16.2	76.4	20.4	10.9
17	47.5	S	21:17	19.8	17.0	17.0	17.5	18.0	17.0	14.5	13.0	10.0	9.9	16.2	61.1	21.0	9.9
18	43.2	NNW	17:05	20.4	18.0	18.0	18.5	19.0	17.0	14.5	13.0	10.0	1.6	16.2	9.9	7.5	5.4
19	39.2	NNW	0:02	13.3	17.0	17.0	17.0	17.5	17.0	14.5	13.0	10.0	9.2	16.1	57.1	18.1	9.0
20	31.5	WNW	13:41	7.1	18.5	16.5	17.0	18.0	17.0	14.5	13.0	10.0	9.1	16.1	56.6	17.9	9.4
21	33.1	NW	12:43	9.9	19.5	17.5	18.0	18.5	17.0	14.5	13.0	10.0	12.2	16.0	76.1	23.9	10.2
22	26.2	WSW	16:05	5.0	20.5	18.5	19.0	19.0	17.0	14.5	13.0	10.0	9.6	16.0	60.0	18.5	9.5
23	30.3	ENE	19:20	10.0	21.0	18.5	19.0	19.0	17.5	14.5	13.0	10.0	12.7	16.0	79.6	23.3	9.6
24	41.1	ESE	16:26	18.7	22.5	20.0	20.5	20.5	18.0	14.5	13.0	10.0	13.6	15.9	85.5	25.5	6.6
25	45.4	WNW	14:40	17.6	21.0	22.0	22.5	22.0	18.5	14.5	13.0	10.0	11.7	15.9	73.8	22.6	7.1
26	43.4	NW	0:17	12.7	18.5	21.0	22.0	22.0	19.0	14.5	13.0	10.0	11.6	15.8	73.4	23.4	5.8
27	35.2	NNE	14:21	13.9	16.0	20.0	20.5	21.0	19.0	15.0	13.0	10.5	5.8	15.8	36.8	13.5	9.9
28	23.9	NNE	12:50	8.8	12.0	18.0	18.5	19.5	18.5	15.0	13.0	10.5	11.0	15.7	70.1	22.6	8.3
29	26.3	WSW	10:43	6.3	18.5	17.0	18.0	19.5	18.0	15.0	13.0	10.5	11.8	15.7	75.4	16.9	6.4
30	33.8	SE	10:42	11.4	19.0	16.5	17.5	18.5	18.0	15.0	13.5	10.5	14.7	15.6	94.2	24.3	4.5
31	44.0	NNW	18:47	12.4	21.0	20.5	20.5	21.0	18.0	15.0	13.5	10.5	11.2	15.6	72.0	22.0	5.4
Total													319.4	502.1	63.6	630.9	255.3
Mean				13.3	17.8	18.3	18.9	19.5	17.8	14.5	12.8	9.7	1991-2020 Normal				
Extreme	60.8	WNW	17:28		1971- 2000 Normal for Soil Temperatures								305.5	501.60	60.9	662.0	203.3
Date	3				17.5	18.0	18.9	16.7	13.1	10.9	7.5	No. of Bright Sunshine days = 31					

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

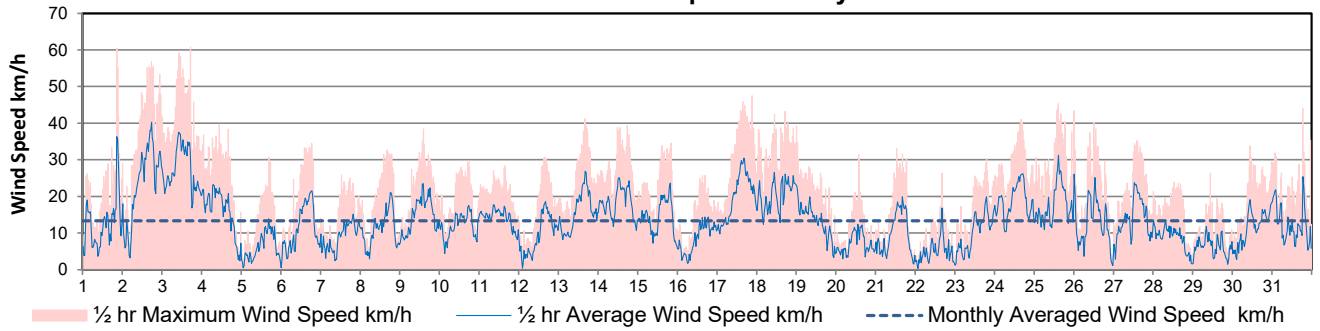
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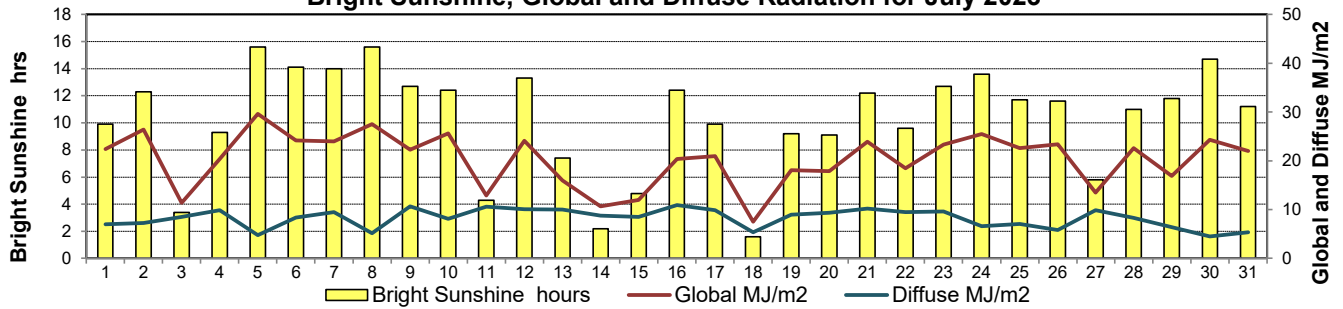
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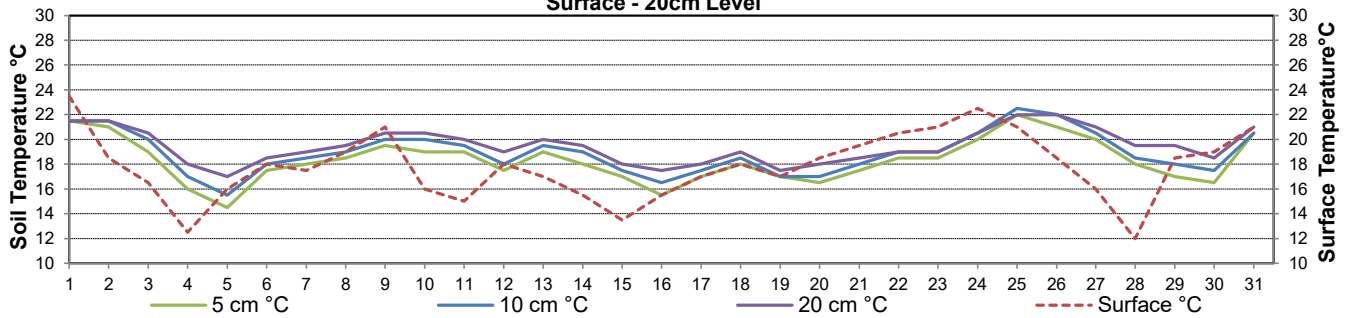
10 meter Tower Wind Speed for July 2023



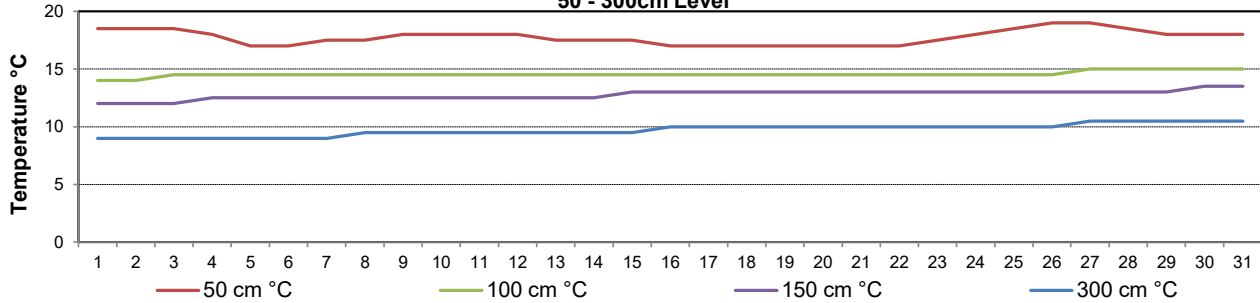
Bright Sunshine, Global and Diffuse Radiation for July 2023



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



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





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Preliminary **JULY 2023**

Extreme Records for July

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
40.0	(1919,41)1946	(SE SA) US	40.1	02/2021	162.9	1928	SE	125.9	1971	113 ^E	05/1955	160	1985	386.2	1974	31	1967*
-0.6	25/1918	SE	1.7	02.09/1967,78	0.0	1988	SC	5.0	2021					185.5	1998	27	2004

**1975 forward * more than one year

Notable Events for CRS Saskatoon - July						Saskatoon Area Stations			Glossary	
Element	Type	Day	New Record	Old Record	Day / Year	SM	NWMP	c. 1892-1901	T	Trace of precipitation
Temperature	Highest Minimum Daily	25	19.6	18.5	1983	SE	Eby	1901-1941	Normal	30 year average beginning with the decade
	Highest Mean Daily	31	17.8	17.6	2012	US	Univ. of Sask.	1915-1964	SOG	Depth of snow-on-the-ground in cm
		25	26.6	24.3	2002	S	Saskatoon	1941-1942	na	not available
	Growing Degree-days	Highest Daily	31	25.8	24.8	2011	SA	Saskatoon A	1942 -	Degree-days
25			21.6	19.3	2002	NRC	Nat. Res. Council	1952-1966	Tm	Mean Temperature
Cooling Degree-days	Highest Daily	31	20.8	19.8	2011	SRC	Sask. Res. Council	1963-	Growing	(Tm-5°C); if Tm ≤ 5°C then GDD = 0
		25	8.6	6.3	2002	SWT	S'toon Water Treatment Plant	1974 -	Heating	(18°C-Tm); if Tm ≤ 18°C then HDD = 0
Extreme Cooling Degree-days	Highest Daily	31	7.8	6.8	2011	SC	S'toon Central Ave	1974-1989	Cooling	(Tm-18°C); if Tm ≥ 18°C then CDD = 0
		25	2.6	0.3	2002	S1	Saskatoon 1	1976-1978	Extreme Cooling	(Tm-24°C); if Tm ≥ 24°C then CDD = 0
31	1.8	0.8	2011	S2	Saskatoon 2	1977-1990				
K	S'toon Kernen Farm	1993-2004								
KCS	S'toon Kernen Farm CS	1996-								
RCS	Environment Canada	2008-	A very smoky month							
SF	Sutherland Forest	1943-1970								

A very smoky month

18th driest July since 1964

7th consecutive month with below normal precipitation

SRC proudly recognizes the following CRS supporters:



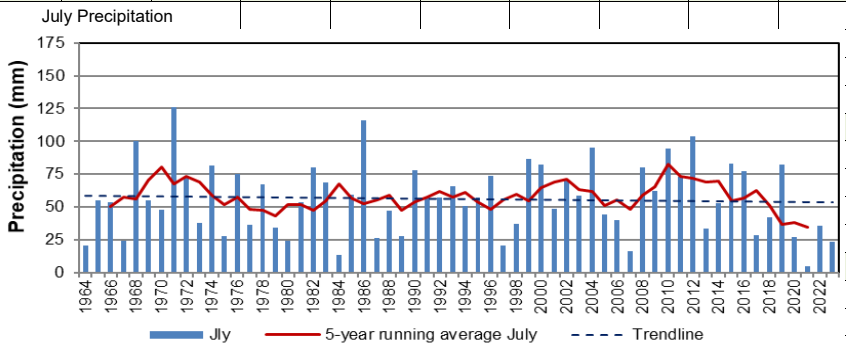
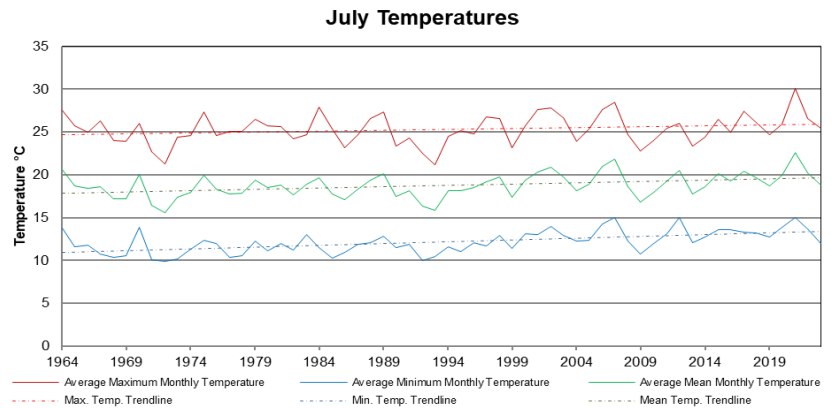


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52°09' N 106°36' W 497 m asl Estab. 1963

Preliminary July 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	9.0	25.5	46.0	5.5	13.5	16.0
2	16.0	28.4	44.8	4.0	13.0	16.5
3	19.0	26.4	41.9	3.0	12.5	15.5
4	12.0	16.6	31.6	2.5	12.5	15.5
5	5.0	11.1	24.1	2.0	12.0	14.5
6	8.0	14.6	24.7	2.0	12.0	14.5
7	6.0	10.9	33.3	2.0	12.0	14.0
8	8.0	14.9	25.2	1.5	12.0	13.5
9	10.0	16.7	28.7	1.5	11.5	13.5
10	9.0	13.0	24.1	1.5	11.0	13.5
11	11.0	13.2	22.9	1.0	11.0	13.0
12	6.0	13.4	26.4	0.5	11.0	12.5
13	11.0	18.4	31.6	0.5	10.5	12.5
14	13.0	16.9	30.4	1.0	11.0	12.0
15	10.0	15.7	25.8	0.5	10.0	12.0
16	6.0	11.8	21.2	1.0	10.5	11.5
17	14.0	22.0	37.9	0.5	10.5	11.5
18	14.0	19.2	34.4	1.5	10.0	11.5
19	9.0	15.1	27.0	12.5	10.5	11.0
20	5.0	9.5	22.4	11.5	10.5	11.0
21	6.0	13.6	22.9	17.0	10.0	11.5
22	3.0	11.2	17.2	13.5	10.5	11.0
23	7.0	14.0	23.5	12.5	10.5	11.5
24	14.0	19.0	32.7	12.5	10.0	11.0
25	12.0	21.3	35.6	11.0	10.5	11.5
26	9.0	17.6	30.4	10.0	10.0	11.0
27	9.0	16.3	28.1	9.5	10.5	11.0
28	7.0	10.2	20.0	9.0	10.0	11.5
29	5.0	9.2	19.5	7.0	9.5	11.5
30	8.0	13.8	27.0	6.5	9.5	11.0
31	9.0	30.0	30.0	5.5	10.0	11.0
Total						
Mean				6	11	12.5
Extreme	19.0	30.0	46.0	17	13.5	16.5
Date	3	31	1	21	1	2

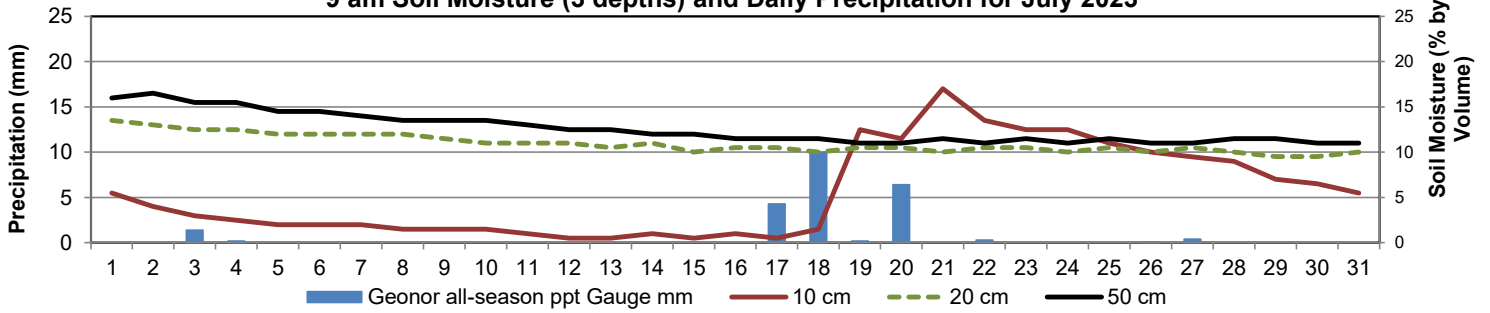


Note: Red numbers indicate manual calculation; Red cell indicate data not available

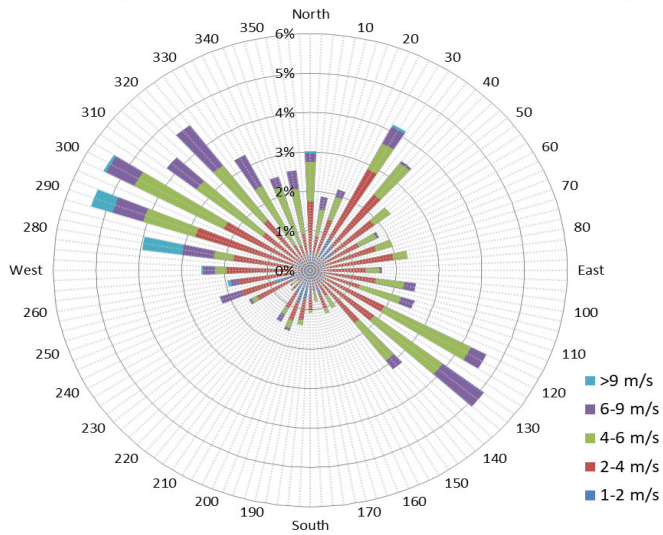
SRC proudly recognizes the following CRS supporters:



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



10 minute Average Wind Speed and Direction Saskatoon July 2023



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

