



SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

SASKATOON STATION 4057180

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

Preliminary **AUGUST 2019**

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	Tipping Bucket	Notes	Max ½ hr Avg	Min ½ hr Avg	Max ½ hr Avg	Min ½ hr Avg
	°C	1981-2010	°C	1981-2010	°C	1981-2010	5°C base	18°C base	18°C base	mm	mm		%	%	mbar	mbar
1	30.4	25.8	12.5	11.6	21.5	18.7	16.5	0.0	3.5	0.0	0.0		91	43	1017	1012
2	33.8	25.6	16.6	12.4	25.2	19.1	20.2	0.0	7.2	0.7	1.0	t-storms	87	29	1014	1010
3	28.3	25.3	17.5	11.5	22.9	18.4	17.9	0.0	4.9	0.0	0.2		71	36	1014	1008
4	26.0	26.5	12.2	12.4	19.1	19.5	14.1	0.0	1.1	0.0	0.0		83	31	1017	1014
5	29.1	27.2	13.9	12.5	21.5	19.9	16.5	0.0	3.5	0.0	0.0		84	30	1016	1010
6	20.6	27.7	10.7	13.2	15.7	20.5	10.7	2.3	0.0	0.2	0.6	light rain	84	41	1016	1010
7	22.5	27.1	6.6	12.6	14.6	19.9	9.6	3.4	0.0	0.0	0.0		89	31	1017	1014
8	22.2	25.0	8.5	12.0	15.4	18.5	10.4	2.6	0.0	0.0	0.0		87	32	1016	1013
9	24.7	25.1	11.9	11.4	18.3	18.3	13.3	0.0	0.3	0.3	0.8	light rain	78	54	1016	1010
10	20.9	26.3	9.0	12.2	15.0	19.3	10.0	3.0	0.0	0.0	0.0		84	32	1020	1016
11	22.6	24.7	5.5	12.0	14.1	18.4	9.1	3.9	0.0	0.0	0.0		91	28	1020	1015
12	21.3	24.7	12.0	10.7	16.7	17.7	11.7	1.3	0.0	0.0	0.0		81	41	1020	1014
13	24.0	25.4	10.1	10.9	17.1	18.1	12.1	0.9	0.0	0.0	0.0		89	31	1022	1018
14	24.9	25.2	12.7	10.8	18.8	18.0	13.8	0.0	0.8	0.0	0.0		85	26	1018	1013
15	26.4	24.7	12.6	10.8	19.5	17.8	14.5	0.0	1.5	0.0	0.0		79	36	1013	1007
16	21.8	22.9	10.6	10.9	16.2	16.9	11.2	1.8	0.0	0.0	0.0		80	45	1007	1004
17	17.7	24.1	8.3	10.6	13.0	17.4	8.0	5.0	0.0	0.0	0.0		79	31	1007	1004
18	20.0	24.8	4.8	11.4	12.4	18.2	7.4	5.6	0.0	0.0	0.0		82	30	1009	1005
19	19.4	25.4	6.1	11.3	12.8	18.3	7.8	5.2	0.0	0.0	0.0		86	36	1017	1009
20	24.6	24.4	6.9	10.5	15.8	17.5	10.8	2.2	0.0	0.0	0.0		87	24	1022	1017
21	26.8	25.3	6.3	10.8	16.6	18.1	11.6	1.4	0.0	0.0	0.0		87	25	1022	1013
22	27.8	23.8	12.6	10.8	20.2	17.3	15.2	0.0	2.2	5.1	4.8	T-storms	90	39	1014	1008
23	23.4	25.4	10.0	10.6	16.7	18.1	11.7	1.3	0.0	0.0	0.0		93	44	1016	1009
24	28.5	24.4	15.2	10.9	21.9	17.7	16.9	0.0	3.9	0.0	0.0		93	36	1009	1002
25	22.6	24.2	12.6	9.9	17.6	17.0	12.6	0.4	0.0	13.6	11.2	t-storm	92	54	1009	1004
26	18.4	23.4	10.3	9.4	14.4	16.4	9.4	3.6	0.0	0.0	0.0		88	56	1013	1009
27	19.5	23.9	11.5	9.1	15.5	16.6	10.5	2.5	0.0	0.0	0.0		85	44	1016	1013
28	24.4	24.4	10.3	9.7	17.4	17.1	12.4	0.6	0.0	0.0	0.0		80	24	1013	1007
29	20.2	23.6	7.8	10.1	14.0	16.9	9.0	4.0	0.0	0.0	0.0		90	33	1020	1013
30	17.5	23.4	6.3	9.6	11.9	16.6	6.9	6.1	0.0	0.0	0.2		87	44	1021	1019
31	21.0	22.5	8.2	9.1	14.6	15.8	9.6	3.4	0.0	0.0	0.2		91	41	1020	1017
Total							371.4	60.5	28.9	19.9	19.0		Extreme / Date	Extreme / Date	Extreme / Date	Extreme / Date
Avg	23.6	24.9	10.3	11.0	17.0	18.0	1981-2010 Normal			46.5	Normal					
Extreme Date	33.8		4.8				402.8	50.0	49.8	221.1	Cumulative		93	24	1022	1002
	2		18							273.0	Cumulative No		23	20	13	24

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

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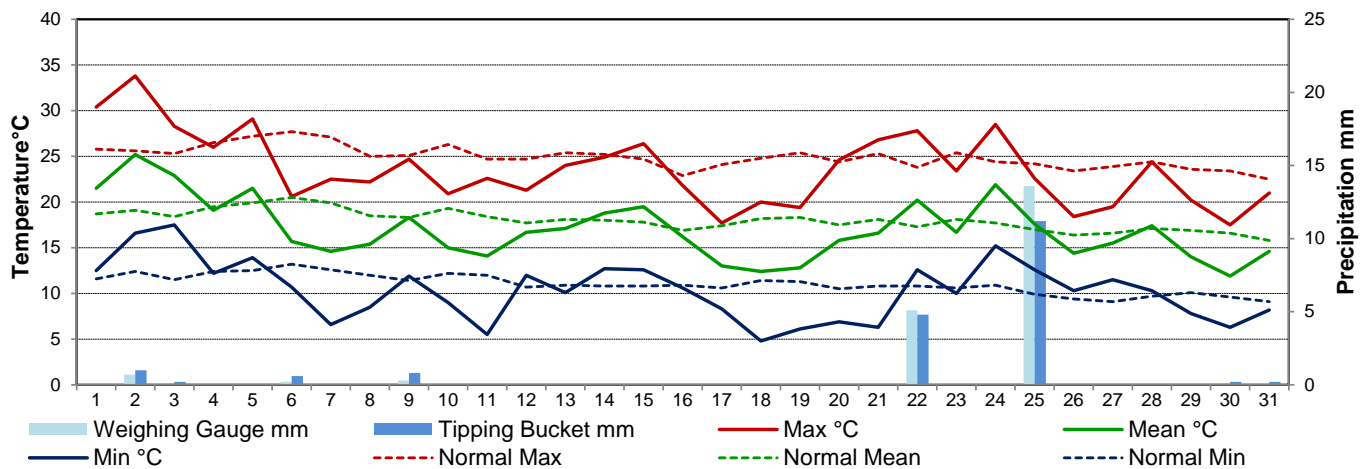


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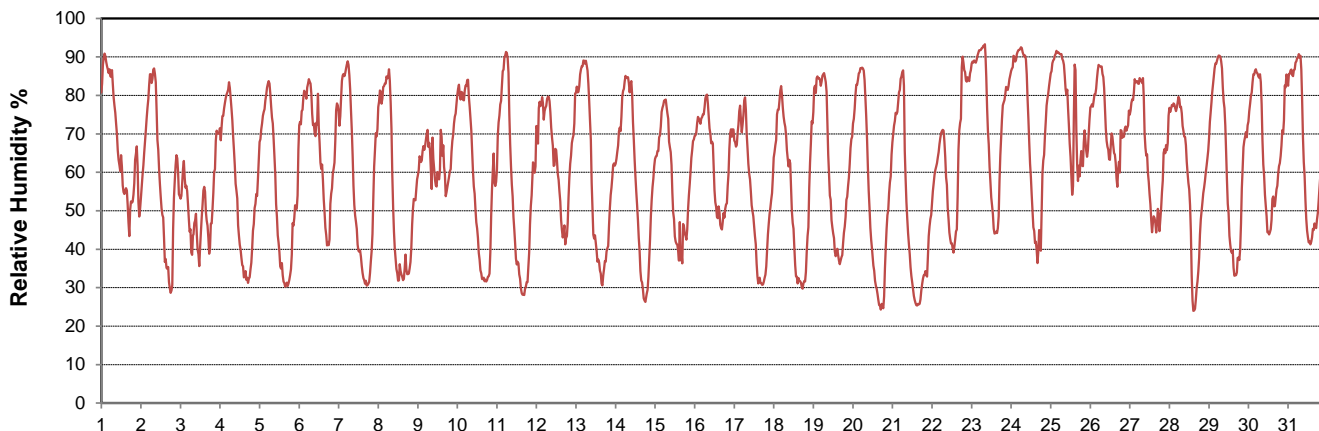


CAMPBELL SCIENTIFIC WHEN MEASUREMENTS MATTER

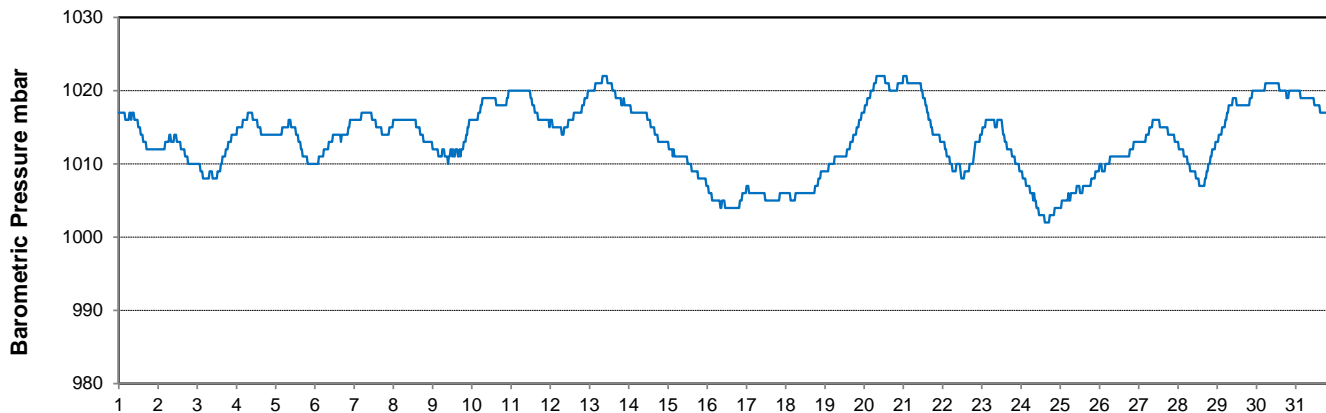
Temperature and Precipitation for August 2019



Relative Humidity for August 2019



Barometric Pressure Corrected to Sea Level for August 2019





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SASKATOON STATION 4057180

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

Preliminary **AUGUST 2019**

Day	Wind Gust			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	43.1	SE	13:31	19.5	19.0	19.5	19.5	18.5	14.5	12.5	9.5	12.2	15.5	78.8	22.6	5.1
2	45.1	SE	8:22	17.0	20.0	21.0	20.5	18.5	14.5	12.5	9.5	11.0	15.4	71.2	23.1	2.8
3	48.2	NW	15:49	23.0	21.0	21.5	21.5	19.0	15.0	12.5	9.5	11.4	15.4	74.1	22.7	5.7
4	41.3	WNW	18:08	17.0	19.0	20.0	20.5	19.5	15.0	12.5	9.5	13.2	15.3	86.1	23.5	4.9
5	39.3	N	23:16	19.0	19.0	19.5	20.0	19.0	15.0	12.5	9.5	12.3	15.3	80.6	24.1	4.4
6	36.4	N	17:15	18.5	20.0	20.5	20.5	19.0	15.0	12.5	9.5	3.8	15.2	25.0	12.4	7.7
7	41.2	WNW	13:44	13.0	15.5	17.0	18.5	18.5	15.0	12.5	9.5	12.5	15.2	82.5	23.1	5.0
8	21.5	SE	23:51	16.0	15.5	16.5	18.0	18.0	15.0	13.0	9.5	7.8	15.1	51.7	16.3	7.6
9	38.7	N	19:46	17.5	16.5	17.5	18.0	18.0	15.0	13.0	9.5	5.7	15.0	37.9	13.7	6.7
10	31.3	NNW	11:30	13.5	15.5	16.5	17.5	17.5	15.0	13.0	10.0	12.0	15.0	80.1	21.7	6.0
11	27.2	ESE	15:12	15.0	14.5	15.5	17.0	17.5	15.0	13.0	10.0	10.1	14.9	67.7	19.2	7.4
12	35.0	E	16:22	14.0	16.5	17.0	17.5	17.0	15.0	13.0	10.0	4.6	14.9	31.0	13.9	7.5
13	30.4	SW	10:50	15.0	15.0	16.0	17.0	17.0	15.0	13.0	10.0	9.9	14.8	66.9	20.8	5.8
14	32.6	WNW	14:12	15.5	17.0	18.0	18.0	17.0	15.0	13.0	10.0	12.3	14.7	83.4	20.4	6.7
15	35.9	NW	15:10	17.5	17.0	17.5	18.0	17.5	14.5	13.0	10.0	9.1	14.7	62.0	19.4	6.8
16	52.1	WNW	22:55	17.5	18.5	19.0	19.0	17.5	14.5	13.0	10.0	2.3	14.6	15.7	9.9	6.5
17	56.2	WNW	14:33	11.0	15.0	16.5	17.5	17.5	15.0	13.0	10.0	12.6	14.6	86.5	22.3	5.7
18	35.1	NNW	18:32	10.5	14.0	15.0	16.5	17.0	15.0	13.0	10.0	7.2	14.5	49.7	16.0	6.0
19	30.6	NNE	14:09	12.0	14.0	14.5	16.0	16.5	14.5	13.0	10.0	10.1	14.4	69.9	20.6	4.8
20	30.6	NNW	13:40	13.0	14.0	15.0	16.5	16.5	14.5	13.0	10.0	13.8	14.4	96.0	22.7	2.8
21	39.7	ESE	23:26	16.0	14.5	15.5	17.0	16.5	14.5	13.0	10.5	11.9	14.3	83.2	21.5	3.9
22	49.9	N	20:25	16.5	16.5	17.5	18.0	17.0	14.5	13.0	10.5	6.3	14.3	44.2	13.1	3.8
23	30.5	ESE	17:22	13.0	15.5	16.5	17.5	17.0	14.5	13.0	10.5	9.0	14.2	63.5	19.7	3.6
24	32.9	NW	16:54	16.0	17.5	18.0	18.0	17.0	14.5	13.0	10.5	7.4	14.1	52.4	16.6	5.3
25	49.5	NW	14:13	15.0	17.5	18.0	18.5	17.5	14.5	13.0	10.5	5.7	14.1	40.5	13.8	5.5
26	56.4	NW	18:05	13.5	14.5	15.5	17.0	17.5	14.5	13.0	10.5	6.1	14.0	43.6	14.7	6.8
27	44.9	NW	0:12	13.5	14.5	15.0	16.0	16.5	14.5	13.0	10.5	6.6	13.9	47.4	14.3	5.8
28	67.8	WNW	15:53	13.0	14.0	14.5	15.5	16.5	14.5	13.0	10.5	6.1	13.9	44.0	14.9	4.9
29	33.2	NW	15:06	11.5	13.0	14.0	15.5	16.0	14.5	13.0	10.5	10.4	13.8	75.4	18.0	4.3
30	17.9	S	16:29	12.5	12.5	13.5	15.0	16.0	14.5	13.0	10.5	1.7	13.7	12.4	7.5	5.3
31	21.2	NNE	15:48	14.0	13.0	13.5	14.5	15.5	14.0	12.5	10.5	6.6	13.7	48.3	14.8	6.3
Total												271.7	452.8	60.0	557.3	171.4
Mean				15.1	16.1	16.9	17.7	17.4	14.7	12.9	10.0	1981-2010 Normal for Radiation				
Extreme	67.8	WNW	15:53	1971- 2000 Normal for Soil Temperatures								271.3	452.5	60.0	542.1	182.4
Date	28				16.5	16.9	18.1	16.8	14.1	12.3	9.1	No. of Bright Sunshine days = 31				

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

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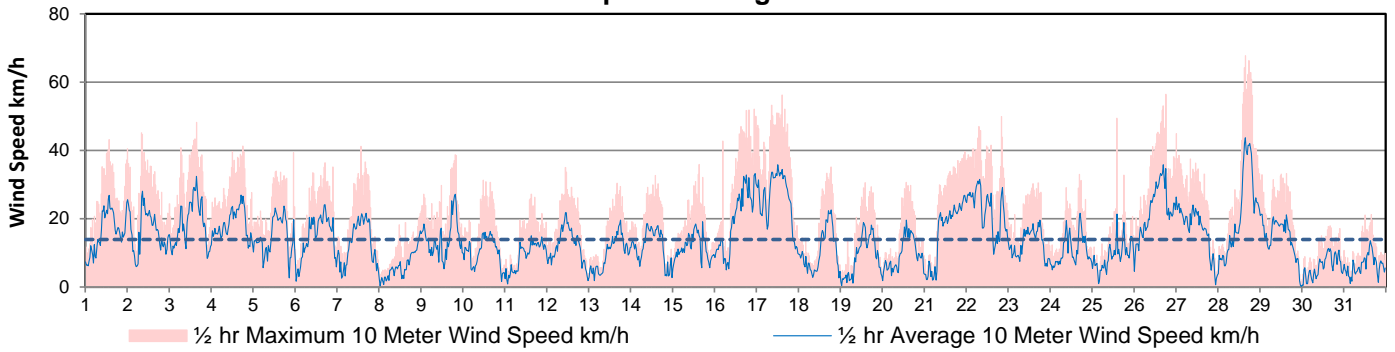


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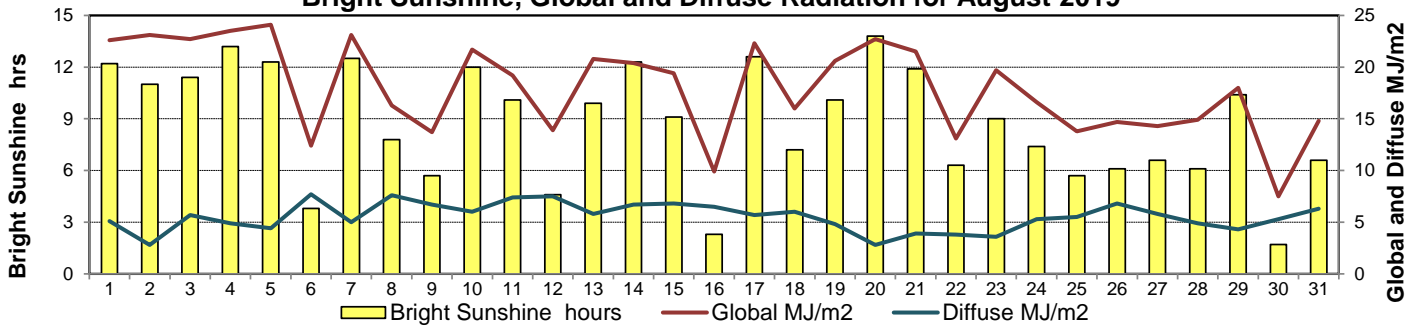
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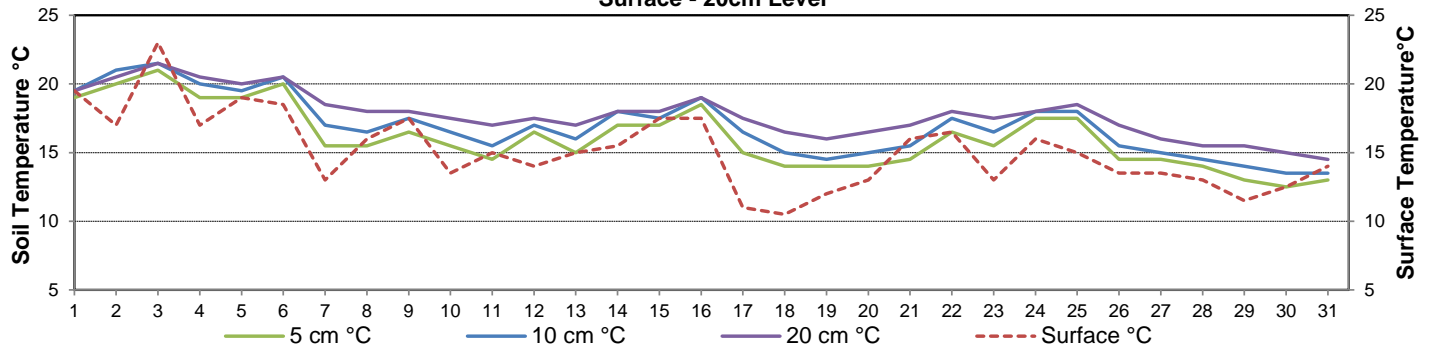
Wind Speed for August 2019



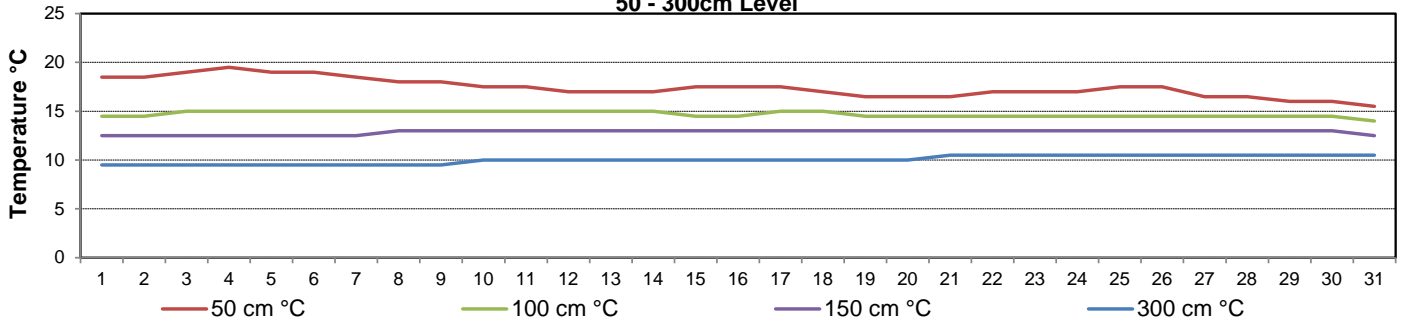
Bright Sunshine, Global and Diffuse Radiation for August 2019



Soil Temperatures for August 2019
Surface - 20cm Level



Soil Temperatures for August 2019
50 - 300cm Level





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

Preliminary **AUGUST** 2019

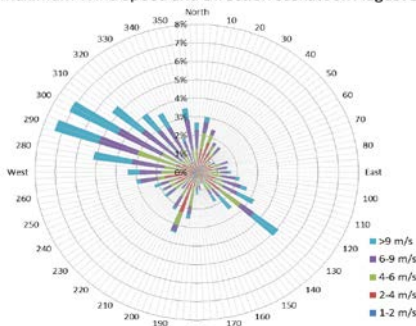
Extreme Records for August

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					360.8	1969	31	1966*
-2.8	23/1901 28/1976	SM SRC	-2.8	28/1976	0.0	1986	SC	7.0	2001	151 ^W	14/1967	129	1985	200.8	1987	27	1992*

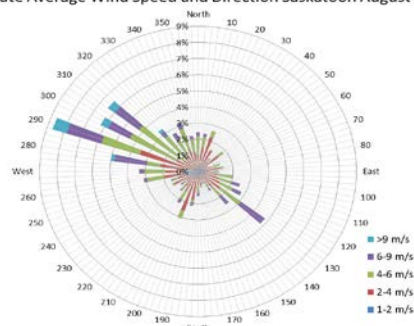
**1975 forward * more than one year

Notable Events for CRS Saskatoon - August						Saskatoon Area Stations		Glossary		
Element	Type	Day	New Record	Old Record	Year					
Temperature	Extreme Maximum Daily	2	33.8	33.0	1983	SM	NWMP	c. 1892-1901	T	Trace of precipitation
						SE	Eby	1901-1941	Normal	30 year average beginning with the decade
						US	Univ. of Sask.	1915-1964	SOG	Depth of snow-on-the-ground in cm
						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		
						K	S'toon Kernen Farm	1993-2004		
						KCS	S'toon Kernen Farm CS	1996-		
						RCS	Environment Canada	2008-		
						SF	Sutherland Forestry	1943-1970		

1/2 hr Maximum Wind Speed and Direction Saskatoon August 2019



10 minute Average Wind Speed and Direction Saskatoon August 2019



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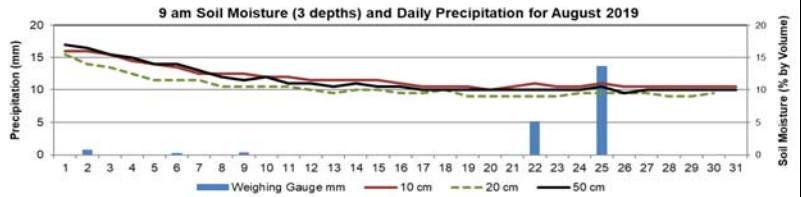
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SASKATOON STATION 4057180

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

Preliminary **August 2019**

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	11.0	18.3	33.9	16.0	15.5	17.0
2	11.0	19.2	33.3	16.0	14.0	16.5
3	13.0	23.9	36.8	15.5	13.5	15.5
4	14.0	19.9	33.3	14.5	12.5	15.0
5	11.0	18.1	27.5	14.0	11.5	14.0
6	11.0	18.6	28.1	13.5	11.5	14.0
7	10.0	16.7	29.8	12.5	11.5	13.0
8	5.0	11.5	17.7	12.5	10.5	12.0
9	10.0	19.8	31.0	12.5	10.5	11.5
10	8.0	13.4	25.8	12.0	10.5	12.0
11	7.0	12.3	26.4	12.0	10.5	11.0
12	9.0	16.7	27.5	11.5	10.0	11.0
13	7.0	15.7	26.4	11.5	9.5	10.5
14	9.0	14.4	26.4	11.5	10.0	11.0
15	9.0	14.9	31.0	11.5	10.0	10.5
16	14.0	23.5	39.1	11.0	9.5	10.5
17	19.0	25.2	45.4	10.5	9.5	10.0
18	8.0	17.0	27.5	10.5	10.0	10.0
19	7.0	15.0	29.8	10.5	9.0	10.0
20	8.0	15.3	27.0	10.0	9.0	10.0
21	12.0	19.5	32.1	10.5	9.0	10.0
22	16.0	22.9	40.2	11.0	9.0	10.0
23	10.0	15.2	25.2	10.5	9.0	10.0
24	8.0	16.6	25.8	10.5	9.5	10.0
25	7.0	15.5	40.2	11.0	9.5	10.5
26	16.0	25.8	43.1	10.5	9.5	9.5
27	13.0	19.5	38.5	10.5	9.5	10.0
28	16.0	31.4	54.0	10.5	9.0	10.0
29	11.0	16.1	28.7	10.5	9.0	10.0
30	4.0	8.1	14.9	10.5	9.5	10.0
31	5.0	30.0	30.0	10.5	9.0	10.0
Total						
Mean				12	10	11.5
Extreme	19.0	31.4	54.0	16	15.5	17
Date	17	28	28	1	1	1

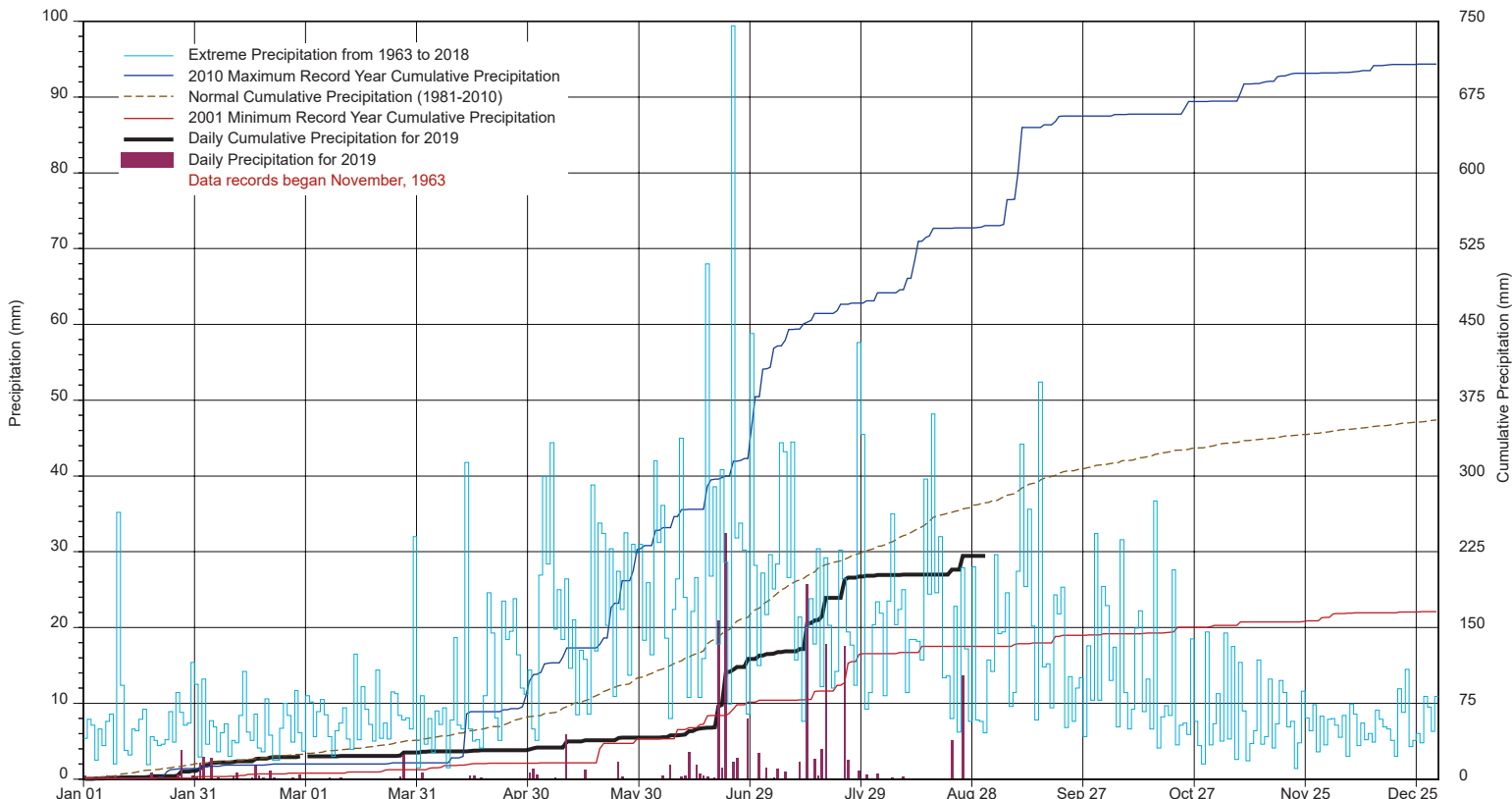


Note: Red numbers indicate manual calculation; Red cell indicate data not available

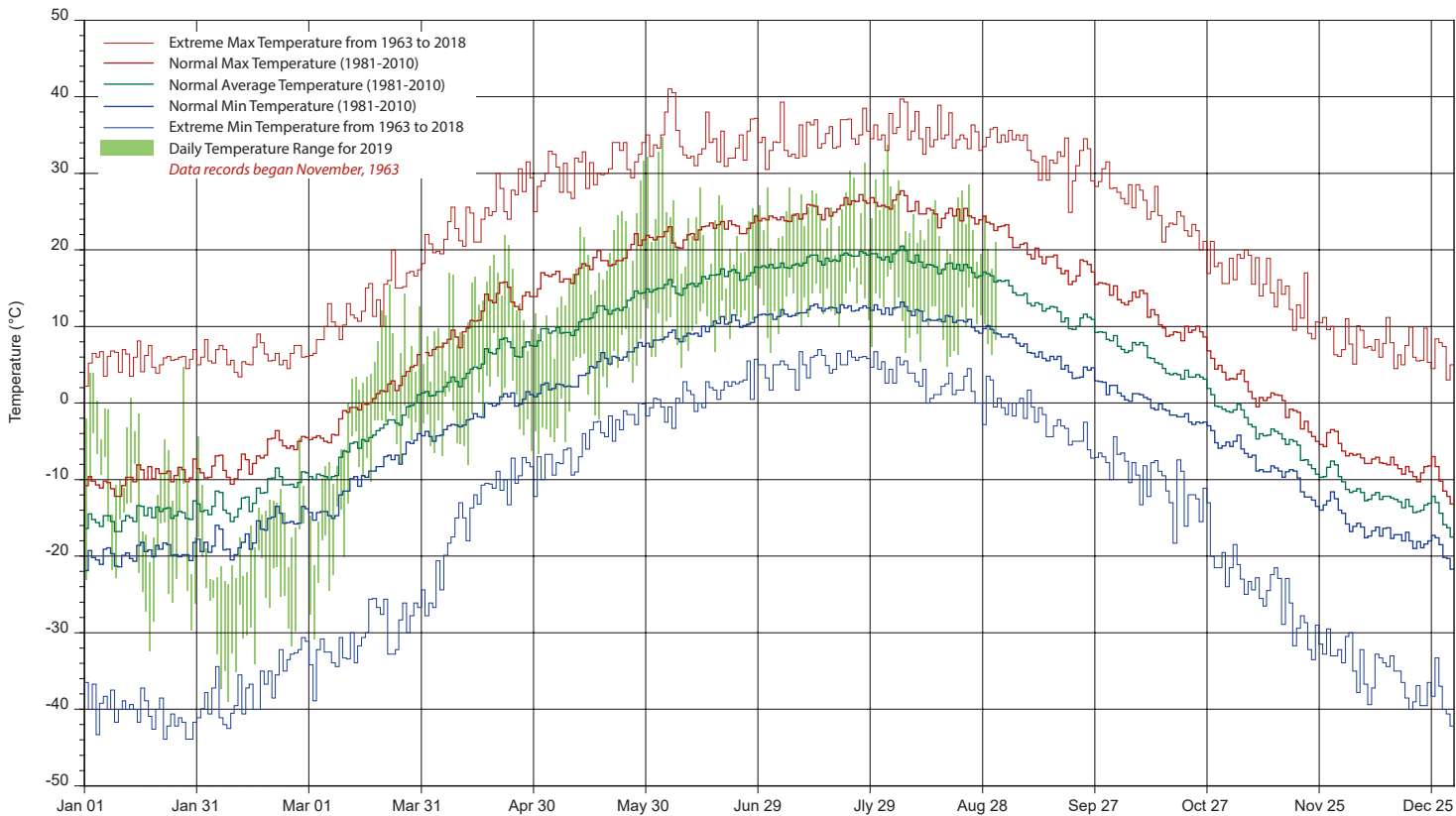
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2019 TEMPERATURES AND NORMALS



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