



SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

SASKATOON STATION 4057180

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

Preliminary OCTOBER 2019

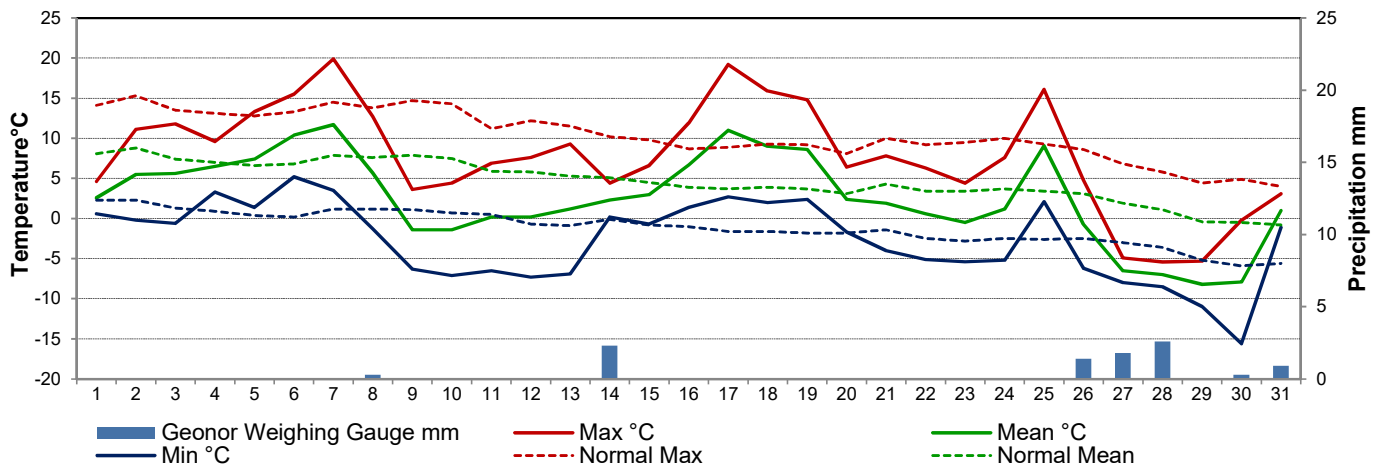
Day	Temperature						Degree-days			Precipitation			Relative Humidity		Station Pressure (sea level)	
	Max	Normal Max	Min	Normal Min	Mean	Normal Mean	Growing	Heating	Cooling	Geonor Weighing Gauge	Tipping Bucket	Snow-on-Ground 0900h	Max ½ hr Avg	Min ½ hr Avg	Max ½ hr Avg	Min ½ hr Avg
	°C	1981-2010	°C	1981-2010	°C	1981-2010	5°C base	18°C base	18°C base	mm	mm	cm	%	%	mbar	mbar
1	4.6	14.1	0.6	2.3	2.6	8.1	0.0	15.4	0.0	0.0	0.2	0	96	73	1023	1020
2	11.1	15.3	-0.2	2.3	5.5	8.8	0.5	12.5	0.0	0.0	0.2	0	87	44	1022	1020
3	11.8	13.5	-0.6	1.3	5.6	7.4	0.6	12.4	0.0	0.0		0	93	54	1020	1016
4	9.6	13.1	3.3	0.9	6.5	7.0	1.5	11.5	0.0	0.0		0	90	70	1016	1010
5	13.3	12.8	1.4	0.4	7.4	6.6	2.4	10.6	0.0	0.0		0	91	52	1010	1006
6	15.5	13.3	5.2	0.2	10.4	6.8	5.4	7.6	0.0	0.0		0	73	32	1012	1008
7	19.9	14.5	3.5	1.2	11.7	7.9	6.7	6.3	0.0	0.0		0	78	22	1010	992
8	12.7	13.8	-1.3	1.2	5.7	7.6	0.7	12.3	0.0	0.3	light snow	0	91	54	1017	992
9	3.6	14.7	-6.3	1.1	-1.4	7.9	0.0	19.4	0.0	0.0		0	86	37	1027	1017
10	4.4	14.3	-7.1	0.7	-1.4	7.5	0.0	19.4	0.0	0.0		0	81	28	1029	1025
11	6.9	11.2	-6.5	0.5	0.2	5.9	0.0	17.8	0.0	0.0		0	79	32	1025	1019
12	7.6	12.2	-7.3	-0.7	0.2	5.8	0.0	17.8	0.0	0.0		0	87	34	1019	1013
13	9.3	11.5	-6.9	-0.9	1.2	5.3	0.0	16.8	0.0	0.0		0	87	29	1013	1008
14	4.4	10.2	0.2	-0.1	2.3	5.1	0.0	15.7	0.0	2.3	snow/rain	0	95	47	1018	1006
15	6.6	9.8	-0.7	-0.8	3.0	4.5	0.0	15.0	0.0	0.0		0	91	47	1023	1015
16	11.9	8.7	1.4	-1.0	6.7	3.9	1.7	11.3	0.0	0.0		0	82	45	1015	1004
17	19.2	8.9	2.7	-1.6	11.0	3.7	6.0	7.0	0.0	0.0		0	83	31	1008	993
18	15.9	9.3	2.0	-1.6	9.0	3.9	4.0	9.0	0.0	0.0		0	91	36	997	993
19	14.8	9.2	2.4	-1.8	8.6	3.7	3.6	9.4	0.0	0.0		0	83	28	1002	997
20	6.4	8.1	-1.7	-1.8	2.4	3.1	0.0	15.6	0.0	0.0		0	86	58	1011	1002
21	7.8	10.0	-4.0	-1.4	1.9	4.3	0.0	16.1	0.0	0.0		0	92	50	1016	1012
22	6.3	9.2	-5.1	-2.5	0.6	3.4	0.0	17.4	0.0	0.0		0	96	47	1016	1009
23	4.4	9.5	-5.4	-2.8	-0.5	3.4	0.0	18.5	0.0	0.0		0	86	53	1025	1015
24	7.6	10.0	-5.2	-2.5	1.2	3.7	0.0	16.8	0.0	0.0		0	96	47	1024	1010
25	16.1	9.3	2.1	-2.6	9.1	3.4	4.1	8.9	0.0	0.0		0	81	37	1010	991
26	4.8	8.6	-6.2	-2.5	-0.7	3.1	0.0	18.7	0.0	1.4	freezing rain / snow	2	94	71	1022	998
27	-4.9	6.8	-8.0	-3.0	-6.5	1.9	0.0	24.5	0.0	1.8	freezing rain / snow	1	92	67	1022	1010
28	-5.4	5.8	-8.5	-3.6	-7.0	1.1	0.0	25.0	0.0	2.6	snow	9	93	74	1022	1009
29	-5.3	4.4	-11.0	-5.2	-8.2	-0.4	0.0	26.2	0.0	0.0		8	86	63	1023	1022
30	-0.2	4.9	-15.6	-5.9	-7.9	-0.5	0.0	25.9	0.0	0.3	freezing drizzle	7	85	47	1023	1010
31	3.1	4.0	-1.1	-5.6	1.0	-0.8	0.0	17.0	0.0	0.9	rain/snow	6	94	71	1017	1009
Total							37.2	477.8	0.0	9.6			Extreme / Date	Extreme / Date	Extreme / Date	Extreme / Date
Avg	7.9	10.4	-2.7	-1.2	2.6	4.6	1981-2010 Normal			19.2	Normal					
Extreme Date	19.9		-15.6				62.2	415.1	0.1	275.5	Cumulative		96	22	1029	991
	7		30							329.2	Cumulative No		1	7	10	25

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

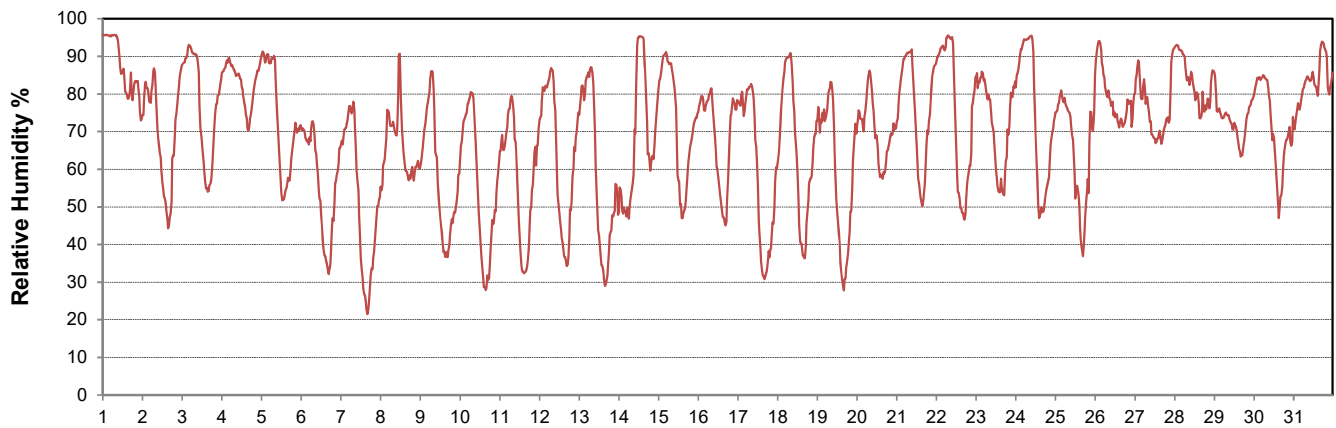
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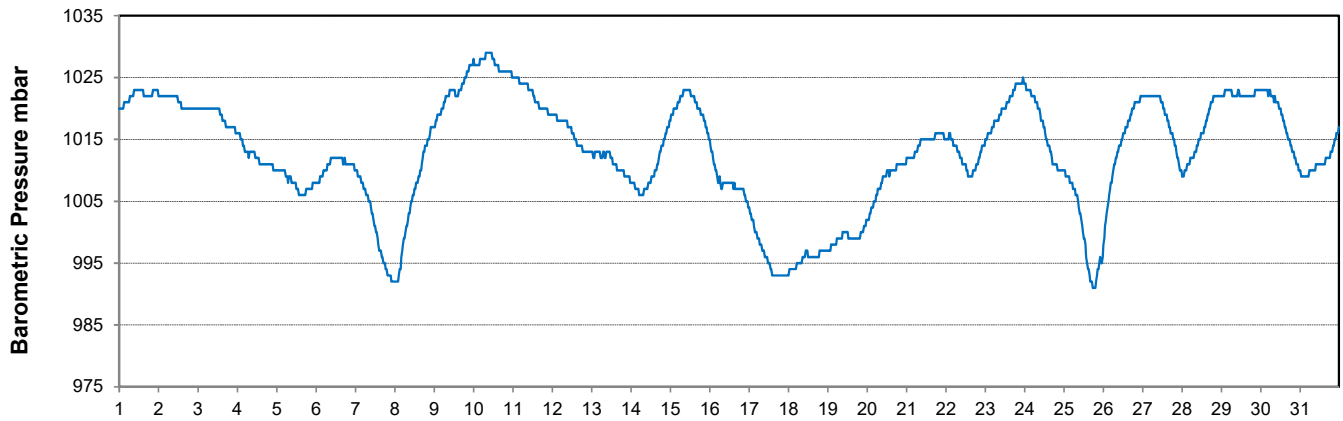
Temperature and Precipitation for October 2019



Relative Humidity for October 2019



Barometric Pressure Corrected to Sea Level for October 2019





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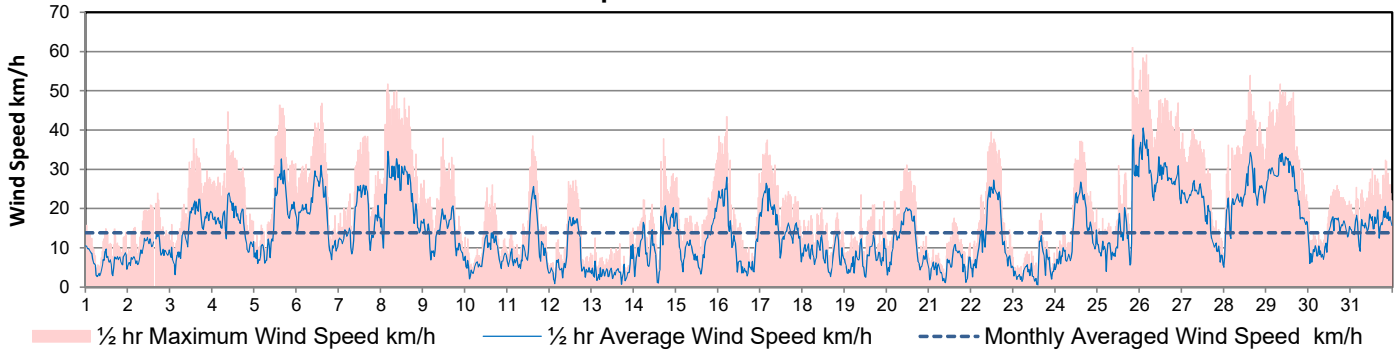
Day	Wind Gust			Soil Temperatures at 0900hrs								Radiation				
	Max	Direction	Time	Surface	5 cm	10 cm	20 cm	50 cm	100 cm	150 cm	300 cm	Bright Sunshine	Possible	% Possible	Global	Diffuse
	km/h			°C	°C	°C	°C	°C	°C	°C	°C	hours	hours		MJ/m ²	MJ/m ²
1	15.7	NNE	0:02	2.0	3.5	4.5	5.5	10.0	12.0	12.0	11.0	0.0	11.6	0.0	4.0	3.2
2	23.9	SSW	17:29	2.0	4.0	5.0	6.0	9.5	12.0	11.5	11.0	10.8	11.6	93.5	13.5	1.9
3	37.8	SSE	13:57	2.5	4.5	5.0	6.5	9.5	11.5	11.5	11.0	4.8	11.5	41.8	8.8	4.1
4	44.6	S	9:23	4.5	5.5	6.0	7.0	9.5	11.5	11.5	10.5	2.2	11.4	19.3	6.0	3.8
5	46.3	WNW	14:31	3.5	4.0	5.0	6.5	9.5	11.0	11.0	10.5	5.3	11.4	46.7	8.8	3.0
6	46.8	NW	14:39	6.5	6.5	7.0	7.5	9.0	11.0	11.0	10.5	8.1	11.3	71.8	11.3	2.9
7	38.4	SSW	15:16	5.0	5.0	6.0	7.5	9.5	11.0	11.0	10.5	9.7	11.2	86.5	12.0	2.9
8	51.7	N	4:16	2.0	6.5	7.5	8.0	9.5	10.5	11.0	10.5	0.0	11.2	0.0	3.0	2.4
9	37.9	NNW	11:37	-3.5	2.0	3.5	5.5	9.0	10.5	10.5	10.5	5.8	11.1	52.3	9.4	3.6
10	26.0	W	15:47	-5.0	1.0	2.0	4.0	8.5	10.5	10.5	10.5	7.9	11.0	71.7	9.6	2.7
11	38.5	NW	14:57	-4.5	0.5	1.5	3.0	7.5	10.5	10.5	10.5	10.5	11.0	95.9	11.7	1.7
12	27.2	NNW	23:42	-3.5	0.0	1.0	2.5	7.0	10.0	10.5	10.5	10.5	10.9	96.4	12.7	1.4
13	15.0	ESE	15:12	-4.0	0.0	1.0	2.0	6.5	9.5	10.5	10.5	8.0	10.8	73.9	9.9	3.1
14	37.8	NNE	17:21	2.0	0.5	1.0	2.0	6.0	9.5	10.0	10.5	0.0	10.8	0.0	1.5	1.2
15	32.3	SE	23:34	1.0	1.0	1.5	2.5	6.0	9.0	10.0	10.5	5.2	10.7	48.6	8.1	3.7
16	43.4	SE	5:11	2.5	2.5	3.0	3.5	6.0	9.0	10.0	10.5	9.7	10.6	91.3	10.3	1.1
17	37.4	SE	4:00	3.0	3.0	3.5	4.5	6.5	9.0	9.5	10.5	6.5	10.6	61.6	7.5	3.7
18	20.0	WNW	11:05	3.5	4.0	5.0	5.5	7.0	9.0	9.5	10.0	9.7	10.5	92.5	9.8	1.9
19	23.5	WNW	9:34	2.5	4.0	4.5	5.5	7.5	8.5	9.5	10.0	8.3	10.4	79.6	9.3	1.5
20	31.1	WNW	11:42	-0.5	2.5	3.5	5.0	7.5	8.5	9.5	10.0	3.3	10.4	31.9	4.5	2.7
21	17.6	NNE	14:57	-3.0	1.5	2.5	4.5	7.0	8.5	9.5	10.0	9.4	10.3	91.3	9.8	1.5
22	39.5	SE	11:46	-3.5	1.0	2.0	3.5	6.5	8.5	9.0	10.0	5.5	10.2	53.8	7.8	2.7
23	18.8	NE	16:16	-2.0	0.5	1.5	3.0	6.0	8.5	9.0	10.0	0.0	10.2	0.0	2.8	2.2
24	37.1	SSW	14:30	-3.0	0.5	1.0	2.5	6.0	8.5	9.0	10.0	3.3	10.1	32.6	5.6	3.4
25	61.0	WNW	20:22	4.0	1.5	2.0	2.5	5.5	8.5	9.0	10.0	4.2	10.0	41.8	5.6	2.9
26	59.1	NW	4:13	-1.5	3.0	3.5	4.5	6.0	8.0	9.0	9.5	1.1	10.0	11.0	3.4	2.6
27	40.2	WNW	6:33	-8.0	0.5	1.5	2.5	6.0	8.0	9.0	9.5	0.1	9.9	1.0	4.1	3.2
28	53.9	N	15:05	-8.0	0.0	1.0	2.0	5.5	8.0	8.5	9.5	0.0	9.9	0.0	4.9	3.9
29	51.7	NW	8:21	-9.5	0.0	1.0	1.5	5.0	8.0	8.5	9.5	1.6	9.8	16.3	5.2	4.0
30	25.8	SSW	16:34	-15.0	0.0	0.5	1.5	4.5	7.5	8.5	9.5	5.1	9.7	52.4	7.1	3.7
31	32.3	NNW	20:28	1.5	0.0	0.5	1.5	4.5	7.5	8.5	9.5	0.0	9.7	0.0	2.9	2.4
Total												156.6	329.5	47.5	230.9	85.0
Mean				-0.9	2.2	3.0	4.2	7.2	9.5	10.0	10.2	1981-2010 Normal for Radiation				
Extreme	61.0	WNW	20:22	1971- 2000 Normal for Soil Temperatures								156.1	329.2	47.4	239.0	97.2
Date	25			4.3	4.7	6.2	8.3	9.2	9.6	9.4	No. of Bright Sunshine days = 25					

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

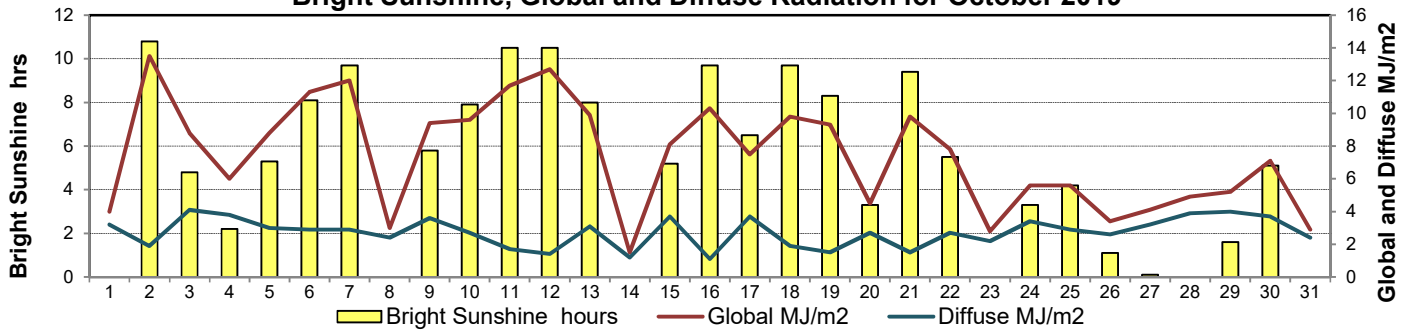
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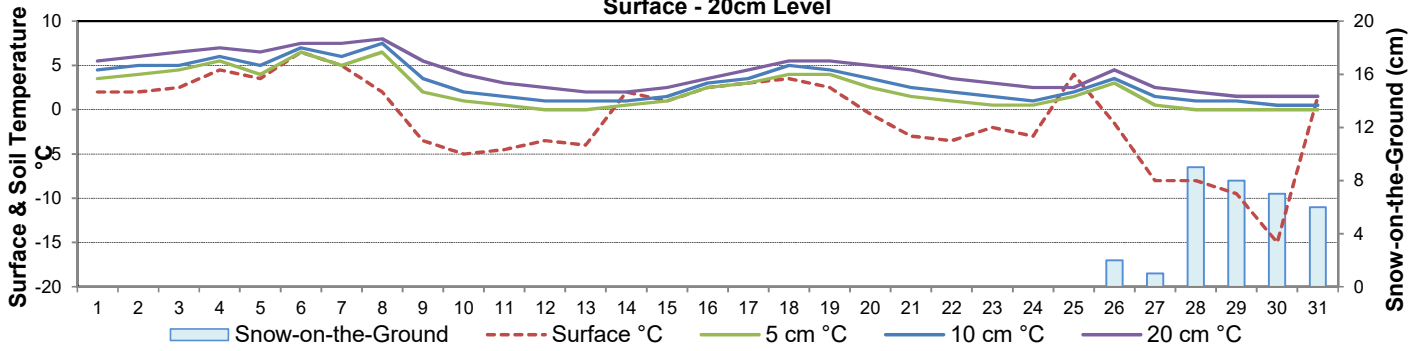
Wind Speed for October 2019



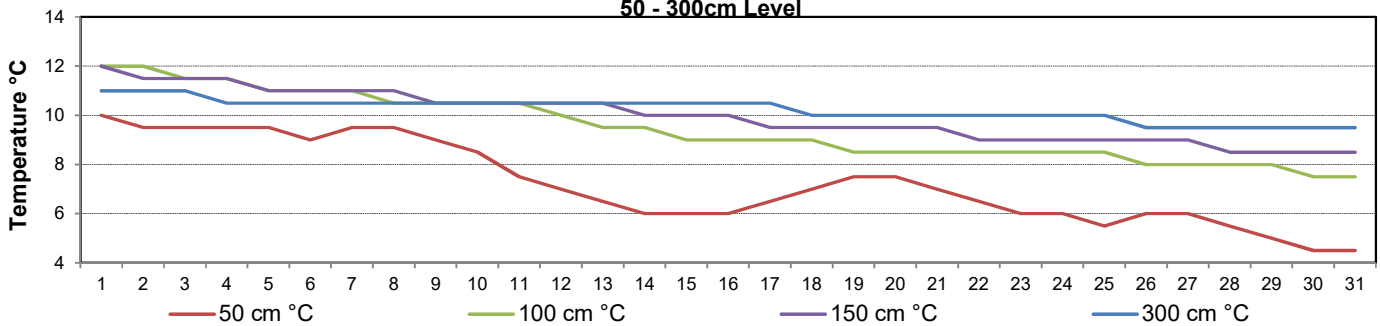
Bright Sunshine, Global and Diffuse Radiation for October 2019



**Soil Temperatures for October 2019
Surface - 20cm Level**



**Soil Temperatures for October 2019
50 - 300cm Level**





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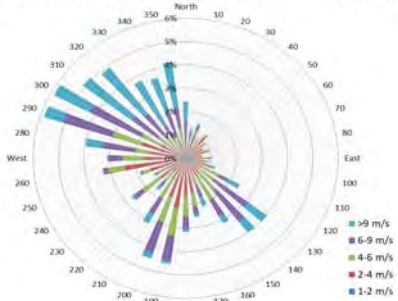
Extreme Records for October

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	06,08/1980,84	72.4	1969	SF	69.8	1969	138 ^{NW}	16/1967	97	1976	231.3	2010	31	1963, RR
-25.6	26/1919	SE US	-21.5	29/1991	0.0	1965*	NRC*	0.0	2000					61.1	2016	19	2016

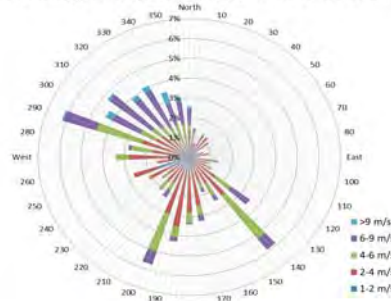
**1975 forward * more than one year/site

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
Frost Free Growing Season was from 17 May to 2 Oct (135 days)						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	Manual Snow Depths (average of 3 meter sticks located inside climate station compound) Oct 30 = 3 cm	
						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 October 2019



10 minute Average Wind Speed and Direction Saskatoon October 2019



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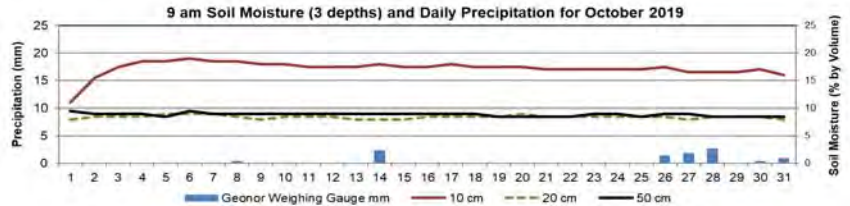
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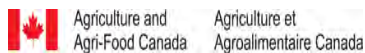
Preliminary October 2019

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	6.0	8.4	13.1	11.0	8.0	9.5
2	7.0	10.2	21.2	15.5	8.5	9.0
3	10.0	16.7	29.3	17.5	8.5	9.0
4	11.0	14.6	32.1	18.5	8.5	9.0
5	12.0	23.3	37.3	18.5	9.0	8.5
6	14.0	22.4	35.6	19.0	9.0	9.5
7	12.0	19.6	31.6	18.5	9.0	9.0
8	18.0	25.5	41.4	18.5	8.5	9.0
9	10.0	15.6	29.3	18.0	8.0	9.0
10	6.0	11.3	21.2	18.0	8.5	9.0
11	8.0	18.9	29.8	17.5	8.5	9.0
12	6.0	13.9	22.4	17.5	8.5	9.0
13	3.0	7.0	10.3	17.5	8.0	9.0
14	9.0	15.0	28.7	18.0	8.0	9.0
15	9.0	14.6	27.5	17.5	8.0	9.0
16	9.0	18.6	31.6	17.5	8.5	9.0
17	11.0	19.3	32.1	18.0	8.5	9.0
18	7.0	11.0	16.6	17.5	8.5	9.0
19	6.0	10.6	18.3	17.5	8.5	8.5
20	9.0	15.0	25.8	17.5	9.0	8.5
21	4.0	9.4	17.2	17.0	8.5	8.5
22	10.0	19.2	32.1	17.0	8.5	8.5
23	4.0	10.4	15.4	17.0	8.5	9.0
24	10.0	19.6	32.7	17.0	8.5	9.0
25	10.0	28.2	45.4	17.0	8.5	8.5
26	22.0	29.3	47.7	17.5	8.5	9.0
27	14.0	19.8	33.3	16.5	8.0	9.0
28	18.0	26.4	40.8	16.5	8.5	8.5
29	21.0	26.5	41.4	16.5	8.5	8.5
30	9.0	13.8	22.4	17.0	8.5	8.5
31	12.0	27.0	27.0	16.0	8.0	8.5
Total						
Mean				17	9	8.9
Extreme	22.0	29.3	47.7	19	9	9.5
Date	26	26	26	6	5	1

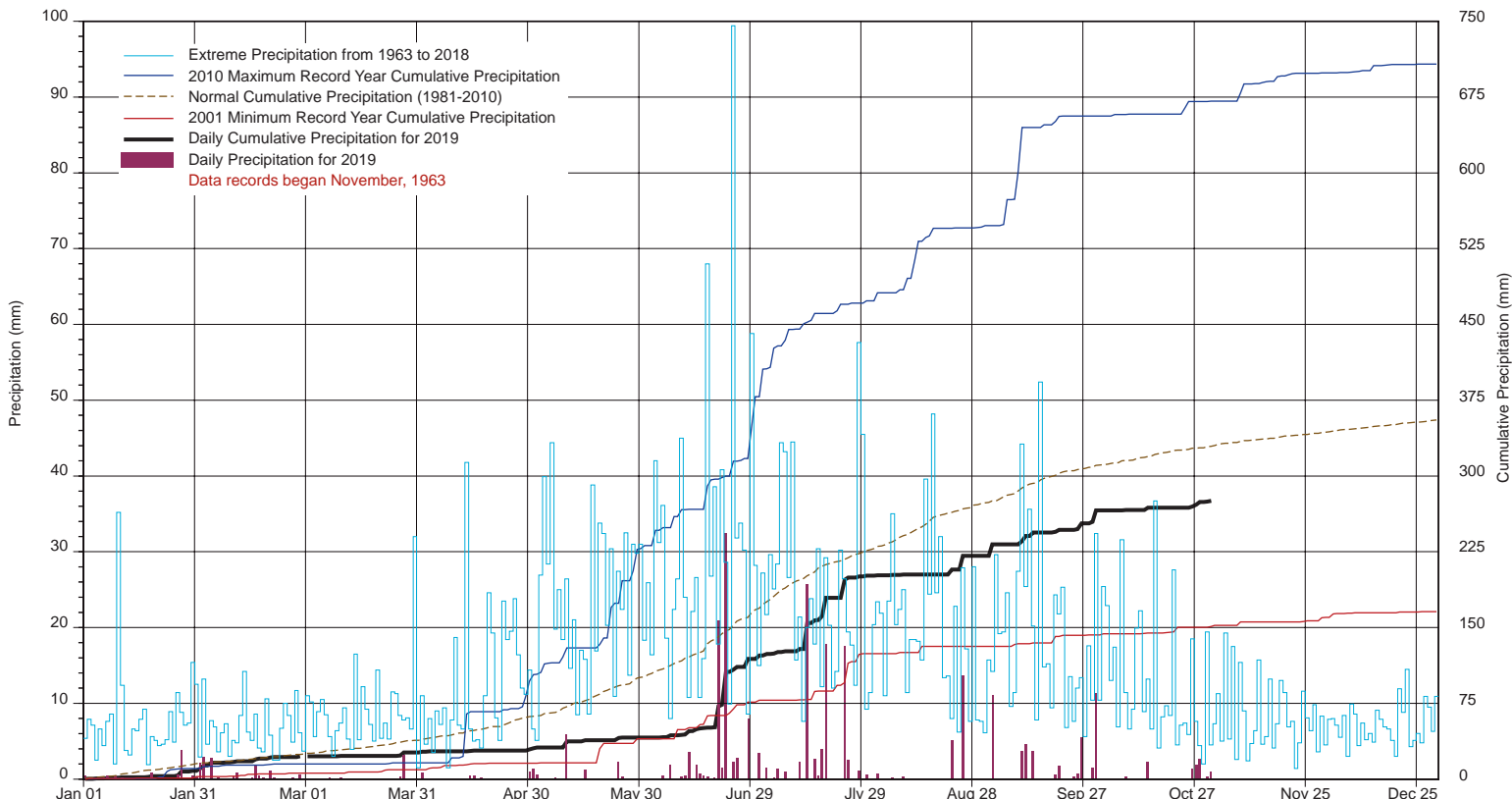


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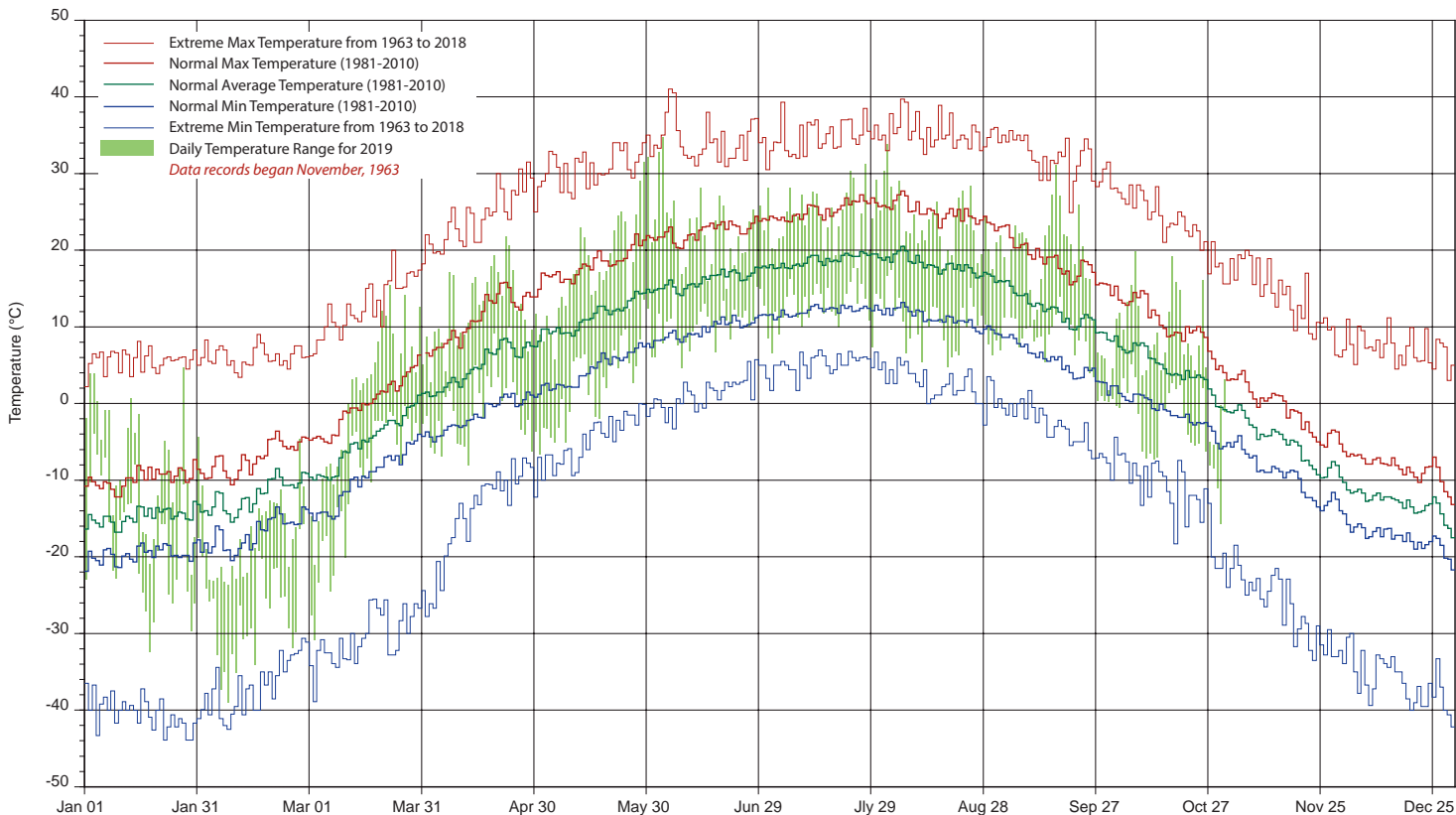
SRC proudly recognizes the following CRS supporters:



SASKATCHEWAN RESEARCH COUNCIL SASKATOON CLIMATE REFERENCE STATION 2019 PRECIPITATION AND NORMALS



2019 TEMPERATURES AND NORMALS



SRC proudly recongnizes the following CRS supporters:

