



# SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

## SASKATOON STATION 4057180

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

Preliminary **MARCH 2020**

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	Notes	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		cm	%	%	mbar	mbar
1	-3.4	-4.8	-11.4	-14.3	-7.4	-9.6	0.0	25.4	0.0	0.7	snow	9	95	72	1015	997
2	2.8	-4.5	-6.0	-15.3	-1.6	-10.0	0.0	19.6	0.0	0.7	light snow	9	91	65	1000	990
3	2.5	-4.3	-8.9	-14.3	-3.2	-9.3	0.0	21.2	0.0	0.2	light snow	7	93	71	1002	998
4	3.6	-4.6	-2.4	-14.2	0.6	-9.5	0.0	17.4	0.0	1.9	snow	7	97	58	1013	995
5	0.8	-5.0	-7.8	-14.2	-3.5	-9.6	0.0	21.5	0.0	0.4	light snow	11	94	71	1023	1012
6	8.5	-5.2	-4.1	-14.7	2.2	-10.0	0.0	15.8	0.0	0.0		8	86	48	1012	1006
7	-4.1	-4.1	-15.4	-15.1	-9.8	-9.6	0.0	27.8	0.0	1.0	snow	7	87	79	1014	1012
8	-11.3	-4.2	-17.2	-14.7	-14.3	-9.5	0.0	32.3	0.0	0.0		13	84	60	1018	1012
9	-1.1	-2.1	-18.0	-12.0	-9.6	-7.1	0.0	27.6	0.0	0.0		12	83	55	1018	1016
10	4.5	-1.0	-10.1	-11.5	-2.8	-6.3	0.0	20.8	0.0	0.0		11	91	40	1017	1000
11	2.6	-1.2	-4.3	-11.5	-0.9	-6.4	0.0	18.9	0.0	0.0		11	84	59	1009	999
12	-4.0	-0.6	-11.6	-9.9	-7.8	-5.3	0.0	25.8	0.0	0.0		11	78	63	1023	1009
13	-11.2	-0.6	-18.4	-9.6	-14.8	-5.1	0.0	32.8	0.0	0.0		10	73	60	1036	1023
14	-11.6	-0.9	-19.8	-10.9	-15.7	-5.9	0.0	33.7	0.0	0.3	light snow	10	81	60	1038	1035
15	-9.5	0.0	-14.5	-9.5	-12.0	-4.8	0.0	30.0	0.0	1.9	light snow	17	88	68	1035	1025
16	-1.8	-0.2	-18.8	-9.7	-10.3	-5.0	0.0	28.3	0.0	0.0		14	75	52	1025	1015
17	-6.2	0.0	-14.8	-8.9	-10.5	-4.5	0.0	28.5	0.0	0.0		10	88	52	1023	1014
18	-7.6	0.6	-19.8	-8.9	-13.7	-4.2	0.0	31.7	0.0	0.0		10	76	40	1024	1021
19	-8.6	1.2	-18.2	-8.3	-13.4	-3.6	0.0	31.4	0.0	0.0		9	85	61	1034	1024
20	-1.2	1.6	-17.8	-8.3	-9.5	-3.3	0.0	27.5	0.0	0.0		10	85	34	1034	1021
21	1.3	1.5	-10.4	-7.0	-4.6	-2.8	0.0	22.6	0.0	0.0		10	86	55	1020	1015
22	4.3	2.5	-10.0	-6.8	-2.9	-2.2	0.0	20.9	0.0	0.0		10	85	47	1016	1010
23	0.9	2.9	-10.2	-7.4	-4.7	-2.2	0.0	22.7	0.0	0.0		8	90	69	1010	1004
24	-1.6	1.6	-8.5	-6.8	-5.1	-2.6	0.0	23.1	0.0	1.9	light snow	9	94	48	1014	1004
25	-0.8	2.3	-12.8	-8.0	-6.8	-2.9	0.0	24.8	0.0	0.2	very light snow	8	90	54	1013	1007
26	4.4	3.5	-12.5	-6.7	-4.1	-1.6	0.0	22.1	0.0	0.0		8	86	56	1007	998
27	4.1	4.1	-4.0	-5.1	0.0	-0.5	0.0	18.0	0.0	0.0		7	79	52	1008	999
28	3.7	4.7	-5.8	-5.3	-1.1	-0.3	0.0	19.1	0.0	0.0		6	81	61	1012	1002
29	10.0	4.9	-6.8	-4.9	1.6	0.0	0.0	16.4	0.0	0.0		-	87	58	1011	1006
30	4.9	6.3	-5.6	-4.0	-0.4	1.1	0.0	18.4	0.0	0.1		-	89	71	1014	1007
31	-4.5	6.8	-13.6	-4.3	-9.1	1.3	0.0	27.1	0.0	3.2	freezing rain light snow	1	89	66	1019	1008
Total							0.0	753.2	0.0	12.5			Extreme / Date	Extreme / Date	Extreme / Date	Extreme / Date
Avg	-1.0	0.0	-11.6	-9.7	-6.3	-4.9	1981-2010 Normal			13.8	Normal					
Extreme Date	10.0		-19.8				3.0	708.8	0.0	25.7	Cumulative		97	34	1038	990
	29		14							38.6	Cumulative No		4	20	14	2

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

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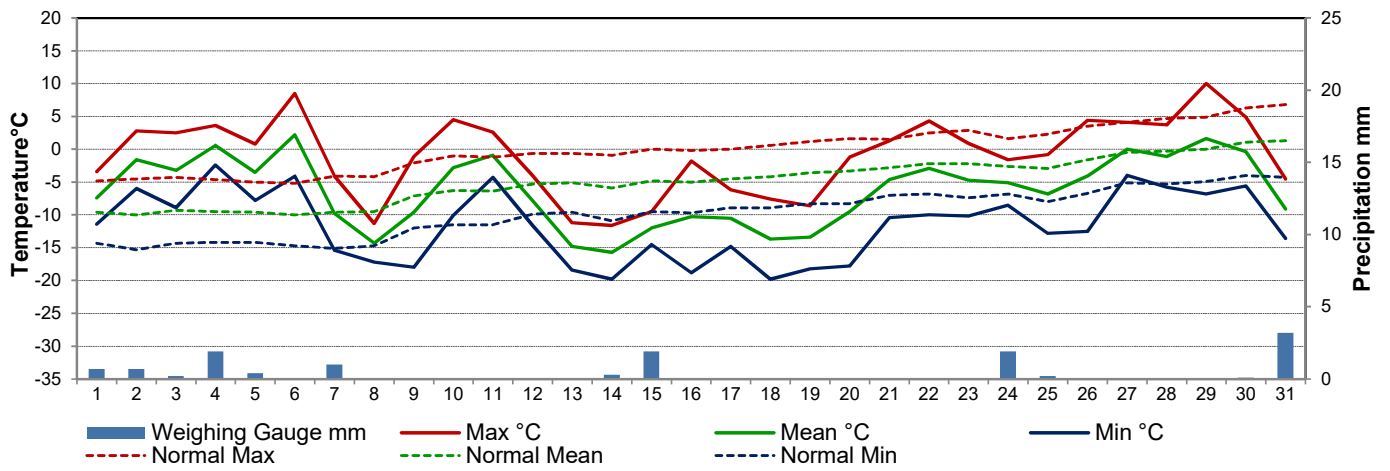


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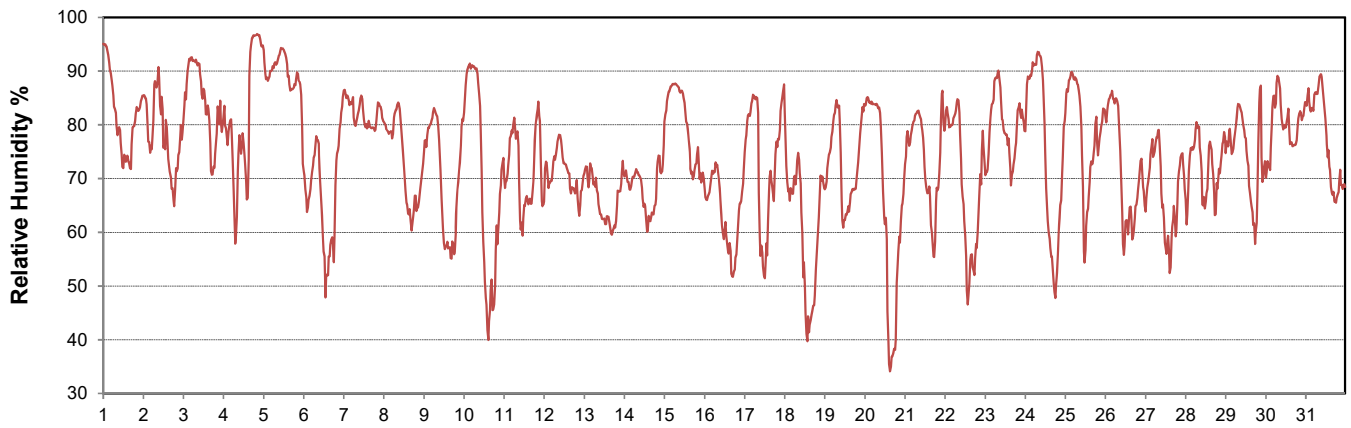
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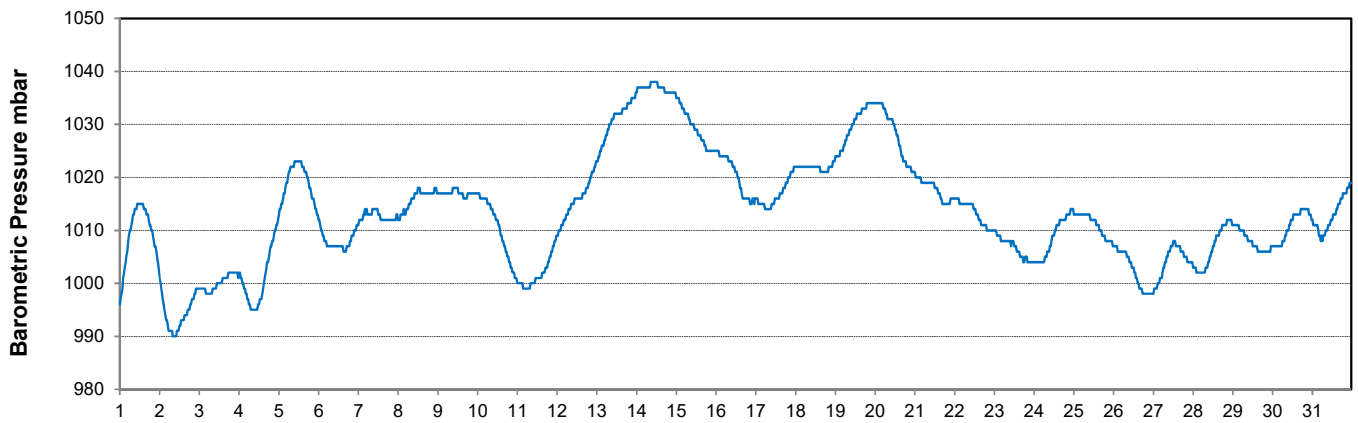
### Temperature and Precipitation for March 2020



### Relative Humidity for March 2020



### Barometric Pressure Corrected to Sea Level for March 2020





**SRC CLIMATE REFERENCE STATION DAILY DATA REPORT**

**SASKATOON STATION 4057180**

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

Preliminary **MARCH 2020**

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 <sup>2</sup>	MJ/m <sup>2</sup>
1	67.5	N	2:00	-10.0	-2.5	-2.5	-2.5	-2.0	0.0	1.0	3.5	6.2	10.9	56.7	10.6	8.6
2	46.9	WNW	15:53	-1.5	-2.5	-2.5	-2.5	-1.5	0.0	1.0	3.5	2.2	11.0	20.0	6.9	5.7
3	27.5	W	17:01	-8.5	-2.5	-2.5	-2.5	-1.5	0.0	1.0	3.5	1.6	11.1	14.4	6.4	5.3
4	38.4	ESE	10:22	-2.0	-2.5	-2.5	-2.5	-1.5	0.0	1.0	3.5	4.0	11.1	35.9	8.1	3.7
5	41.2	SE	19:39	-4.5	-2.0	-2.0	-2.0	-1.5	0.0	1.0	3.0	0.8	11.2	7.1	8.2	6.2
6	35.5	NNE	23:49	-2.5	-2.0	-2.0	-2.0	-1.5	0.0	1.0	3.0	10.6	11.3	94.0	10.9	2.8
7	53.4	NE	12:09	-7.5	-2.0	-2.0	-2.0	-1.0	0.0	1.0	3.0	0.0	11.4	0.0	3.8	3.1
8	36.9	NE	0:15	-17.0	-2.5	-2.0	-2.0	-1.0	0.0	1.0	3.0	7.2	11.4	63.1	11.9	4.1
9	35.5	WSW	17:05	-15.5	-3.5	-3.0	-2.5	-1.0	0.0	1.0	3.0	11.1	11.5	96.7	14.9	2.1
10	29.4	S	13:54	-9.5	-4.0	-3.5	-3.0	-1.0	0.5	1.0	3.0	8.6	11.6	74.5	14.7	3.8
11	41.8	WNW	18:12	-4.0	-3.5	-3.0	-3.0	-1.5	0.5	1.0	3.0	9.4	11.6	80.9	13.3	3.7
12	37.8	WNW	9:58	-10.0	-3.0	-2.5	-2.5	-1.5	0.5	1.0	3.0	8.4	11.7	71.9	14.2	2.4
13	42.4	N	14:55	-18.0	-3.0	-3.0	-2.5	-1.5	0.5	1.0	3.0	10.7	11.8	91.1	15.3	2.4
14	40.3	ENE	16:41	-18.0	-4.0	-3.5	-3.0	-1.5	0.5	1.0	3.0	2.6	11.8	22.0	10.5	7.1
15	33.8	WSW	22:19	-12.0	-4.5	-4.0	-3.5	-1.5	0.5	1.0	3.0	2.1	11.9	17.7	11.2	8.2
16	53.6	W	16:12	-17.5	-4.0	-3.5	-3.5	-1.5	0.5	1.0	3.0	11.1	12.0	92.8	15.8	5.1
17	43.8	NE	13:11	-9.5	-4.0	-3.5	-3.0	-1.5	0.5	1.0	3.0	6.0	12.0	49.9	13.3	5.8
18	16.9	NE	18:45	-18.0	-4.5	-4.0	-3.5	-1.5	0.0	1.0	3.0	8.7	12.1	72.0	15.0	4.5
19	20.5	N	14:31	-16.0	-5.0	-4.5	-4.0	-1.5	0.0	1.0	3.0	11.5	12.2	94.6	17.8	2.8
20	37.9	S	14:39	-16.0	-5.5	-5.0	-4.5	-2.0	0.0	1.0	3.0	8.9	12.2	72.8	16.1	4.0
21	26.9	SSE	16:21	-9.5	-5.0	-5.0	-4.5	-2.0	0.0	1.0	3.0	9.1	12.3	74.0	14.8	5.1
22	34.4	WSW	16:04	-9.0	-4.5	-4.5	-4.0	-2.0	0.0	1.0	3.0	11.9	12.4	96.3	18.8	2.4
23	44.8	NE	23:16	-9.0	-4.0	-4.0	-4.0	-2.0	0.0	1.0	3.0	7.8	12.4	62.8	16.7	5.0
24	47.9	NE	7:31	-5.5	-3.5	-3.5	-3.5	-2.0	0.0	1.0	3.0	6.1	12.5	48.8	13.6	7.5
25	22.7	WSW	18:41	-10.0	-3.5	-3.0	-3.0	-2.0	0.0	1.0	3.0	4.0	12.6	31.8	11.8	7.2
26	34.6	SW	15:51	-9.5	-3.5	-3.0	-3.0	-2.0	0.0	1.0	3.0	10.3	12.6	81.6	18.7	4.2
27	32.3	W	1:18	-3.0	-2.5	-2.5	-2.5	-1.5	0.0	1.0	3.0	11.9	12.7	93.7	18.8	2.2
28	32.0	NNE	14:15	1.0	-1.0	-1.0	-2.0	-1.5	0.0	1.0	3.0	12.2	12.8	95.5	18.3	4.0
29	41.0	ESE	10:29	-2.5	-0.5	-0.5	-1.0	-1.5	0.0	1.0	3.0	11.9	12.8	92.8	18.3	3.6
30	29.6	NE	23:32	-4.5	-0.5	-0.5	-1.0	-1.0	0.0	1.0	3.0	3.0	12.9	23.3	10.8	7.6
31	44.0	NW	14:10	-9.0	-0.5	-0.5	-0.5	-1.0	0.0	1.0	3.0	6.2	13.0	47.8	15.3	6.8
Total												226.1	370.61	61.0	414.8	147.0
Mean				-9.3	-3.1	-2.9	-2.8	-1.5	0.1	1.0	3.1	1981-2010 Normal for Radiation				
Extreme	67.5	N	2:00	1971- 2000 Normal for Soil Temperatures								182.0	369.4	49.3	371.9	162.6
Date	1				-3.1	-2.8	-2.4	-1.5	-0.4	0.6	2.7	No. of Bright Sunshine days = 30				

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

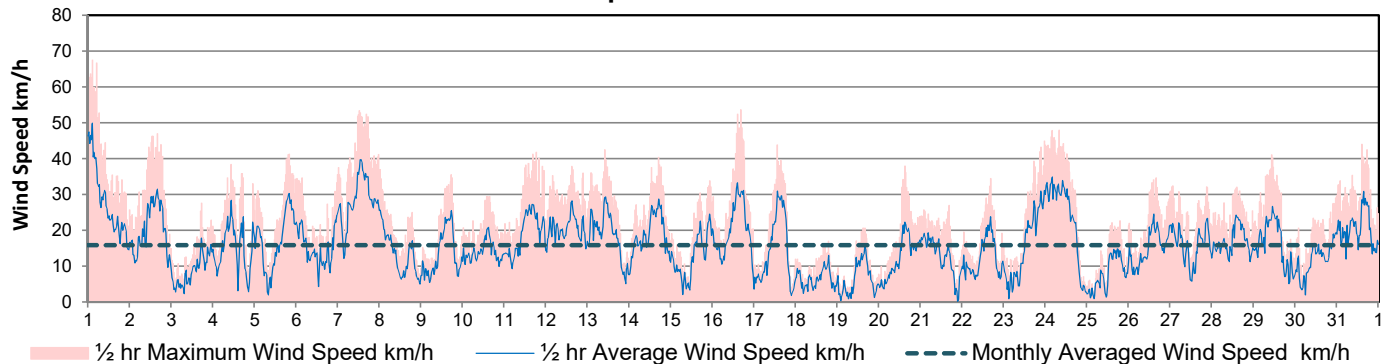
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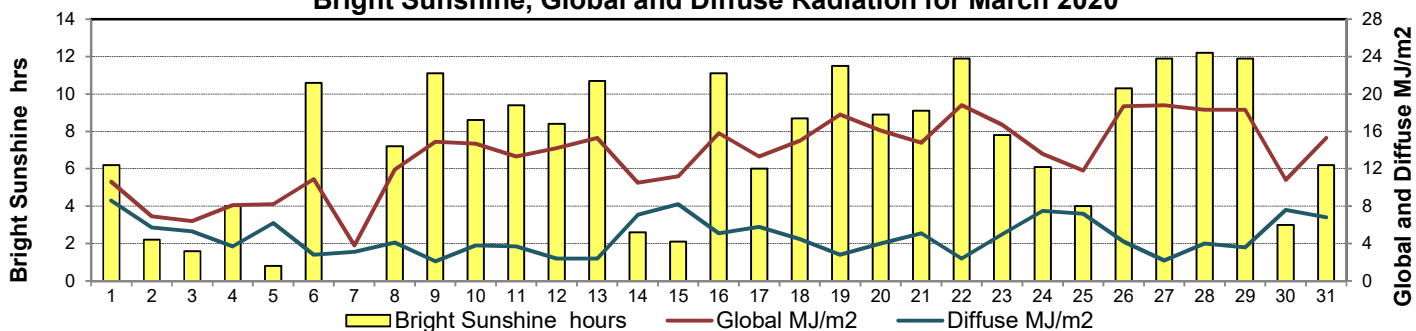
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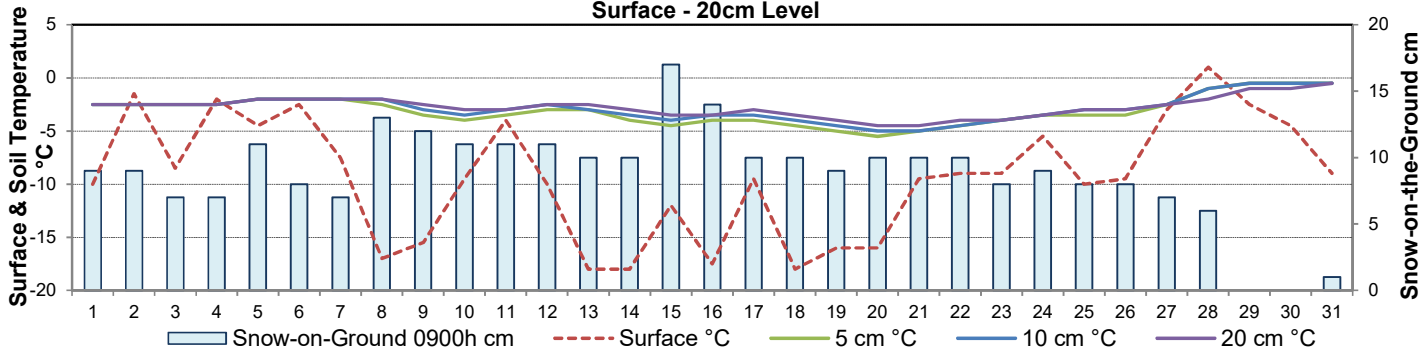
### Wind Speed for March 2020



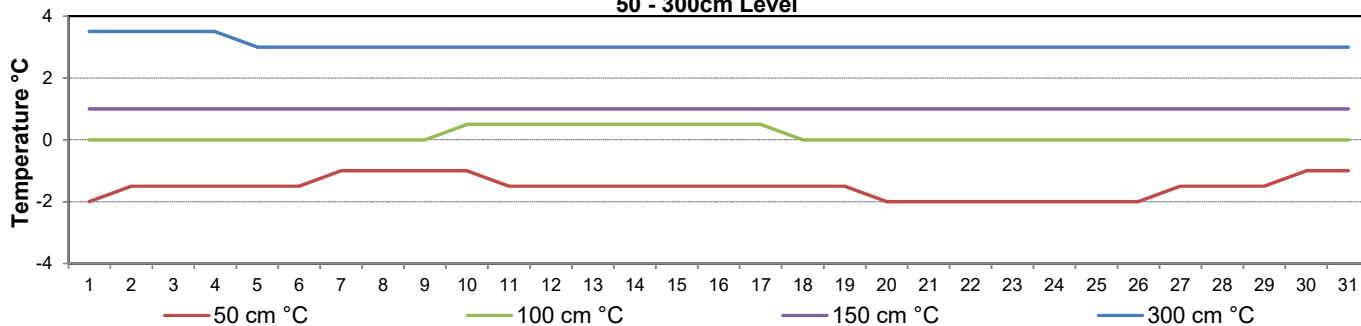
### Bright Sunshine, Global and Diffuse Radiation for March 2020



### Soil Temperatures for March 2020 Surface - 20cm Level



### Soil Temperatures for March 2020 50 - 300cm Level





SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

SASKATOON STATION 4057180

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

Preliminary March 2020

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	23.0	39.7	54.6	9.0	7.5	8.0												
2	16.0	25.7	39.1	9.0	7.5	8.0												
3	7.0	14.6	22.4	9.0	7.5	8.0												
4	12.0	24.3	34.4	9.0	7.5	8.0												
5	13.0	23.3	35.0	9.0	7.5	7.5												
6	11.0	18.8	33.3	9.0	7.5	7.5												
7	23.0	32.6	48.8	9.0	8.0	8.0												
8	11.0	21.0	31.0	9.0	7.0	7.5												
9	11.0	21.9	31.6	8.5	7.0	7.5												
10	10.0	15.8	25.2	9.0	7.0	7.5												
11	16.0	22.3	36.2	9.0	7.0	8.0												
12	17.0	23.2	31.6	9.0	7.5	7.5												
13	15.0	23.7	34.4	8.5	7.0	7.5												
14	15.0	23.0	35.0	7.5	6.5	7.5												
15	11.0	20.6	28.7	8.0	6.5	7.5												
16	17.0	27.7	45.4	8.0	6.5	7.5												
17	11.0	25.0	36.2	8.5	6.5	7.5												
18	6.0	10.5	15.4	8.0	6.5	7.5												
19	5.0	12.4	17.2	8.0	6.5	7.5												
20	9.0	17.0	29.3	8.0	6.5	7.5												
21	10.0	16.4	22.9	8.0	6.5	7.5												
22	10.0	19.8	29.8		7.0	7.5												
23	12.0	24.8	37.9		7.5	7.5												
24	18.0	27.2	38.5		7.5	7.5												
25	7.0	13.5	21.8		7.5	7.5												
26	12.0	19.7	30.4		7.5	7.5												
27	12.0	17.3	26.4		7.5	7.5												
28	13.0	17.9	26.4		8.0	7.5												
29	12.0	20.8	35.0		7.5	8.0												
30	10.0	15.5	24.1	29.0	7.5	7.5												
31	16.0	0.0	34.0	31.0	7.5	7.5												
Total																		
Mean				10	7	7.6												
Extreme	23.0	39.7	54.6	31	8	8												
Date	1	1	1	31	7	1												

Soil Moisture probes do not accurately measure soil moisture when soil temperature is near zero hence the missing data for the 10 cm probe.

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

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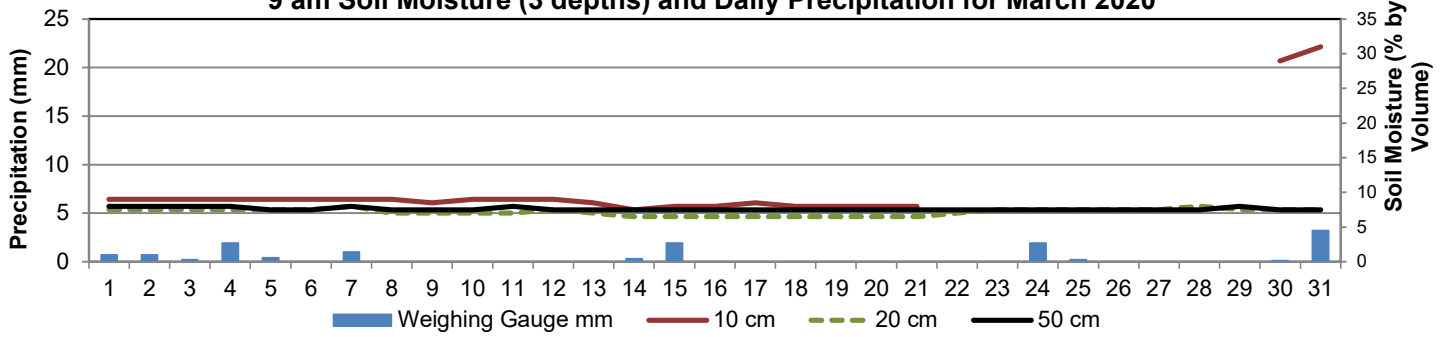


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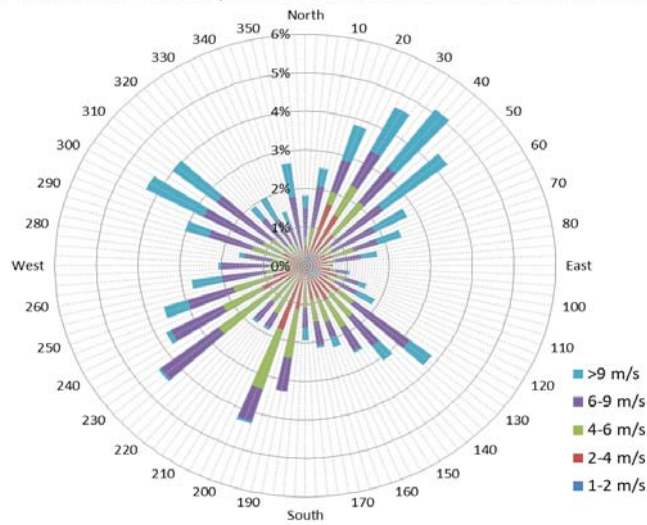
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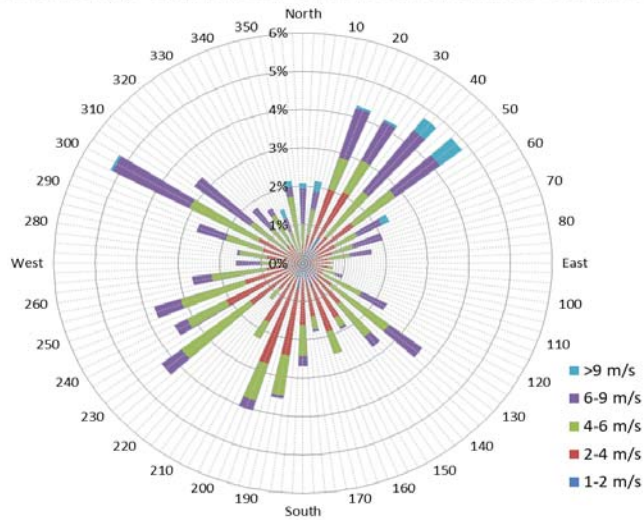
### 9 am Soil Moisture (3 depths) and Daily Precipitation for March 2020



### 1/2 hr Maximum Wind Speed and Direction Saskatoon Mar 2020



### 10 minute Average Wind Speed and Direction Saskatoon Mar 2020





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**SASKATOON STATION** 4057180

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

Preliminary **MARCH** 2020

## Extreme Records for March

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
22.8	23/1910	SE	20.0 23/1993	59.0	1927	SE	57.1 1967	93 <sup>W</sup>	18/1959	89 <sup>W</sup>	08/1977	273.9	2019	31	1996*
-43.3	14/1897	SM	-38.9 02/1972	0.0	1915*	SE*	0.8 2010					102.8	1983	21	1983*

\*\*1975 forward \* more than one

Notable Events for CRS Saskatoon - March						Saskatoon Area Stations			Glossary		
Element	Type	Day	New Record	Old Record	Year	Station	Operational Period	Code	Description		
Precipitation	Daily total	31	3.2	1.5	1974	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 -	<b>Degree-days</b>			
						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)			
					K	S'toon Kernen Farm 1993-2004	Date			Depth (cm)	
					KCS	S'toon Kernen Farm CS 1996-	March			4	9
					RCS	Environment Canada 2008-				10	11
						SF	Sutherland Forestry 1943-1970		18	12	
									22	11	
									28	5	discontinuous cover

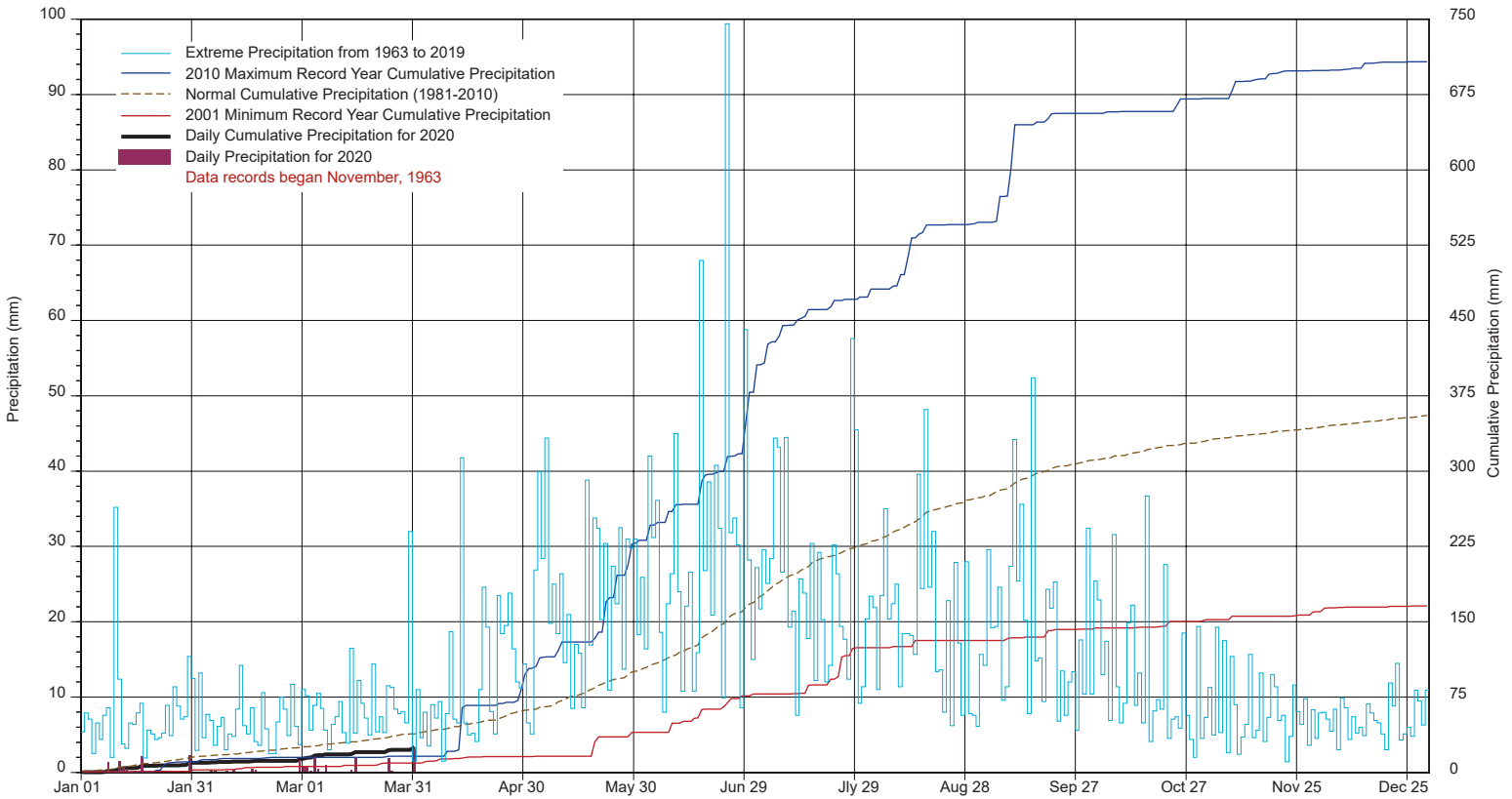
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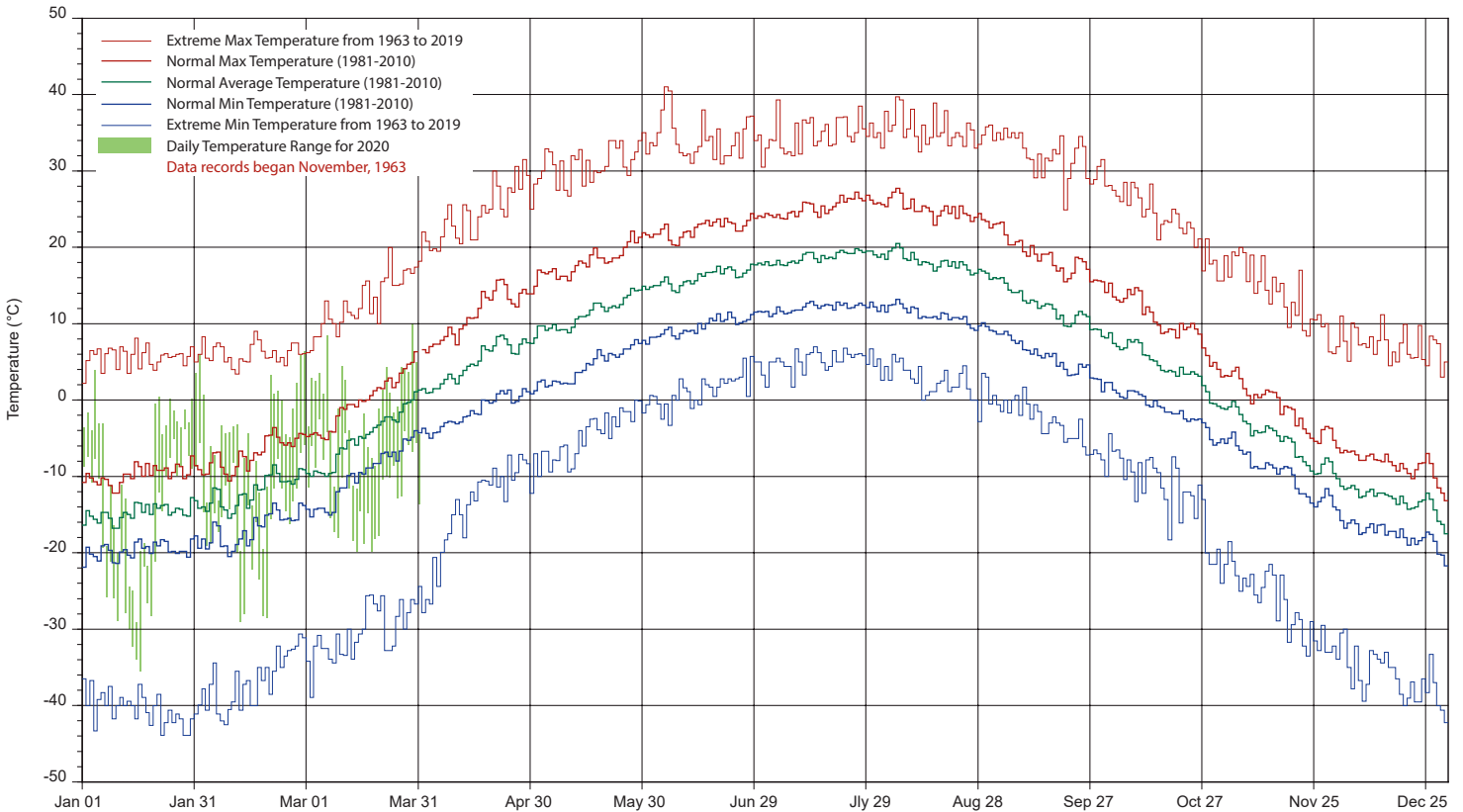
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# SASKATCHEWAN RESEARCH COUNCIL SASKATOON CLIMATE REFERENCE STATION 2020 PRECIPITATION AND NORMALS



## 2020 TEMPERATURES AND NORMALS



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