



SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

**SASKATOON STATION 4057180**

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

Preliminary **MARCH 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	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	-14.7	-4.8	-27.6	-14.3	-21.2	-9.6	0.0	39.2	0.0	0.0		16	85	63	1034	1016
2	-21.1	-4.5	-30.8	-15.3	-26.0	-10.0	0.0	44.0	0.0	0.0		16	73	65	1035	1030
3	-15.4	-4.3	-23.4	-14.3	-19.4	-9.3	0.0	37.4	0.0	0.0		14	69	62	1030	1025
4	-9.8	-4.6	-17.9	-14.2	-13.9	-9.5	0.0	31.9	0.0	0.0		14	70	62	1024	1019
5	-8.2	-5.0	-17.2	-14.2	-12.7	-9.6	0.0	30.7	0.0	0.0		14	79	60	1024	1021
6	-7.8	-5.2	-24.5	-14.7	-16.2	-10.0	0.0	34.2	0.0	0.0		14	84	57	1028	1022
7	-10.5	-4.1	-22.4	-15.1	-16.5	-9.6	0.0	34.5	0.0	0.2		14	83	68	1022	1008
8	-8.2	-4.2	-13.5	-14.7	-10.9	-9.5	0.0	28.9	0.0	0.0		14	89	67	1007	1004
9	-6.0	-2.1	-13.9	-12.0	-10.0	-7.1	0.0	28.0	0.0	0.0		14	87	63	1014	1005
10	-6.0	-1.0	-20.0	-11.5	-13.0	-6.3	0.0	31.0	0.0	0.2		13	87	59	1019	1015
11	0.0	-1.2	-13.1	-11.5	-6.6	-6.4	0.0	24.6	0.0	0.0		14	84	59	1015	999
12	3.2	-0.6	-4.2	-9.9	-0.5	-5.3	0.0	18.5	0.0	0.0		14	87	62	1003	995
13	3.4	-0.6	-3.7	-9.6	-0.2	-5.1	0.0	18.2	0.0	0.0		12	87	58	1019	1003
14	1.7	-0.9	-8.3	-10.9	-3.3	-5.9	0.0	21.3	0.0	0.0		11	84	66	1021	1019
15	2.6	0.0	-9.6	-9.5	-3.5	-4.8	0.0	21.5	0.0	0.0		11	91	55	1021	1019
16	3.4	-0.2	-7.1	-9.7	-1.9	-5.0	0.0	19.9	0.0	0.0		8	83	53	1023	1020
17	3.8	0.0	-10.3	-8.9	-3.3	-4.5	0.0	21.3	0.0	0.0		3	87	50	1026	1021
18	5.4	0.6	-2.2	-8.9	1.6	-4.2	0.0	16.4	0.0	0.0	discontinuous snow cover	1	86	57	1021	1018
19	8.1	1.2	-2.2	-8.3	3.0	-3.6	0.0	15.0	0.0	0.0		0	86	54	1021	1016
20	12.1	1.6	-2.2	-8.3	5.0	-3.3	0.0	13.0	0.0	0.0		0	90	48	1020	1017
21	11.5	1.5	-2.4	-7.0	4.6	-2.8	0.0	13.4	0.0	0.0		0	93	47	1022	1017
22	15.5	2.5	-1.0	-6.8	7.3	-2.2	2.3	10.7	0.0	0.0		0	90	41	1020	1011
23	9.1	2.9	-1.6	-7.4	3.8	-2.2	0.0	14.2	0.0	0.0		0	96	58	1026	1011
24	1.8	1.6	-5.3	-6.8	-1.8	-2.6	0.0	19.8	0.0	0.0		0	83	52	1029	1026
25	6.5	2.3	-7.8	-8.0	-0.7	-2.9	0.0	18.7	0.0	0.0		0	85	33	1028	1015
26	14.2	3.5	-0.3	-6.7	7.0	-1.6	2.0	11.0	0.0	0.3	rain	0	97	46	1015	1005
27	3.9	4.1	-2.0	-5.1	1.0	-0.5	0.0	17.0	0.0	3.2	rain/snow	0	97	56	1022	1005
28	7.5	4.7	-4.8	-5.3	1.4	-0.3	0.0	16.6	0.0	0.0		0	89	42	1025	1019
29	4.0	4.9	-2.5	-4.9	0.8	0.0	0.0	17.2	0.0	0.0		0	83	46	1028	1019
30	12.6	6.3	-3.9	-4.0	4.4	1.1	0.0	13.6	0.0	0.0		0	81	34	1027	1019
31	5.1	6.8	-2.6	-4.3	1.3	1.3	0.0	16.7	0.0	0.0		0	84	34	1027	1020
Total							4.3	698.4	0.0	3.9			Extreme / Date	Extreme / Date	Extreme / Date	Extreme / Date
Avg	0.9	0.0	-9.9	-9.7	-4.5	-4.9	1981-2010 Normal			13.8	Normal					
Extreme Date	15.5		-30.8				3.0	708.8	0.0	26.5	Cumulative		97	33	1035	995
	22		2							38.6	Cumulative No		26	25	2	12

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

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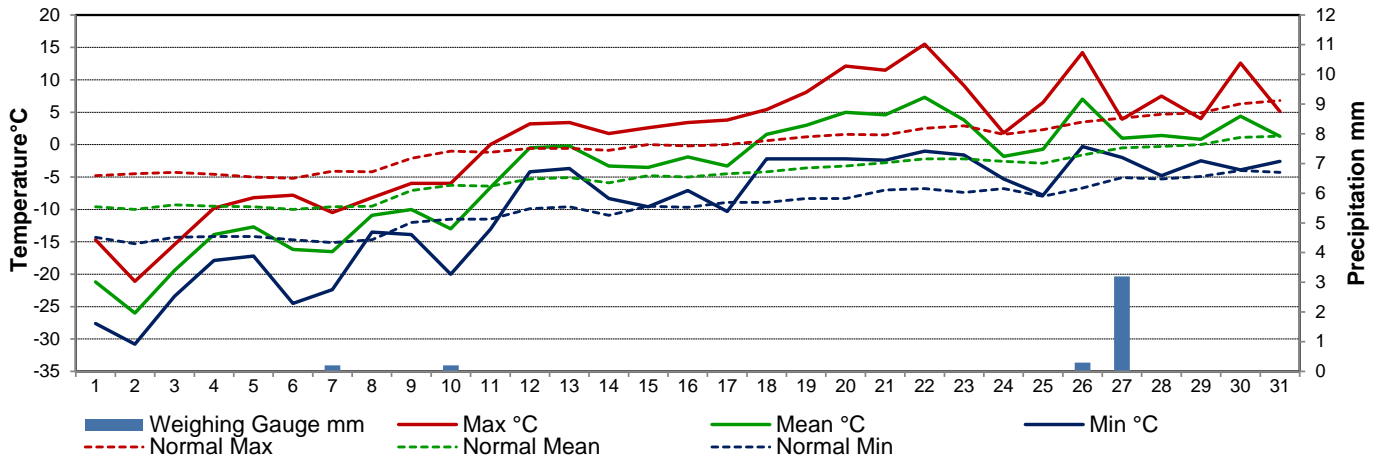


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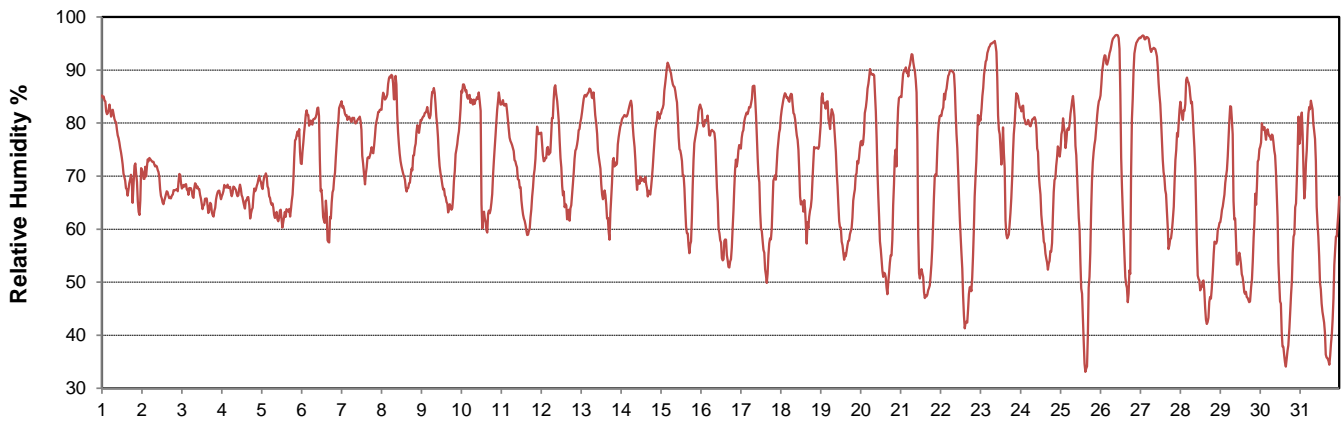
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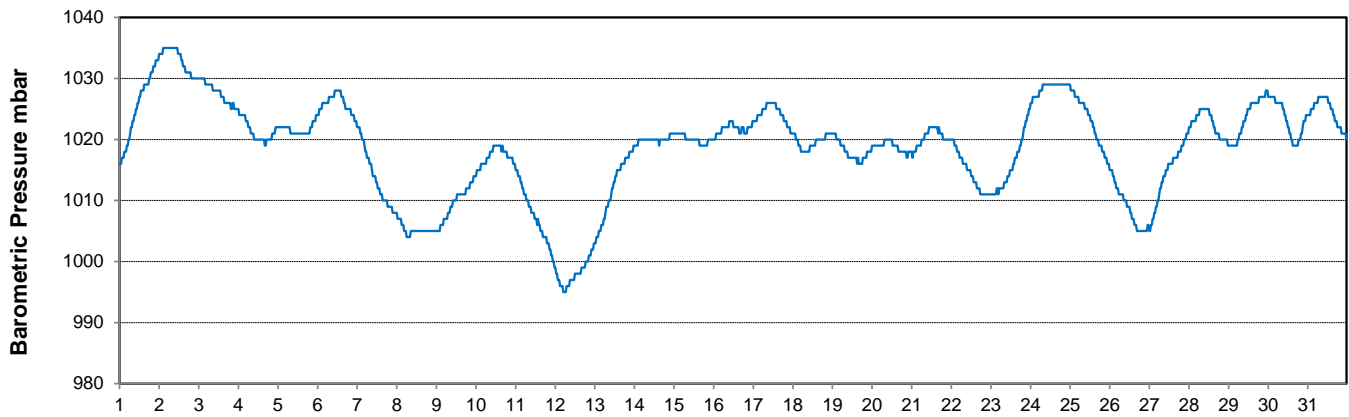
### Temperature and Precipitation for March 2019



### Relative Humidity for March 2019



### Barometric Pressure Corrected to Sea Level for March 2019





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**SASKATOON STATION 4057180**

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

Preliminary **MARCH 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 <sup>2</sup>	MJ/m <sup>2</sup>
1	35.4	N	9:53	-16.5	-6.0	-6.0	-5.5	-3.5	-0.5	0.5	3.0	9.2	10.9	84.5	12.3	5.1
2	46.6	WNW	16:29	-25.0	-6.0	-6.0	-5.5	-3.5	-0.5	0.5	3.0	10.5	11.0	95.8	14.6	2.6
3	46.3	WNW	15:24	-19.0	-6.5	-6.5	-6.0	-3.5	-0.5	0.5	3.0	7.7	11.0	69.8	11.7	4.6
4	49.3	NW	16:31	-15.0	-7.0	-6.5	-6.0	-3.5	-0.5	0.5	3.0	4.0	11.1	36.1	9.6	5.8
5	40.9	WNW	12:23	-10.0	-6.5	-6.5	-6.0	-3.5	-0.5	0.5	3.0	10.2	11.2	91.4	13.9	1.8
6	13.5	S	19:43	-19.0	-6.5	-6.0	-6.0	-3.5	-0.5	0.5	3.0	7.4	11.2	65.9	12.6	3.9
7	28.7	SE	15:51	-18.0	-6.5	-6.0	-6.0	-3.5	-0.5	0.5	3.0	7.2	11.3	63.8	11.6	3.8
8	43.0	SW	15:14	-12.5	-6.5	-6.0	-6.0	-3.5	-0.5	0.5	3.0	9.4	11.4	82.7	14.2	2.6
9	29.3	WNW	11:01	-12.0	-6.0	-6.0	-5.5	-3.5	-1.0	0.5	3.0	9.3	11.4	81.4	13.3	2.1
10	23.1	SSW	17:10	-18.5	-6.0	-5.5	-5.5	-3.5	-1.0	0.5	3.0	10.1	11.5	87.8	14.7	2.2
11	26.5	SSW	10:07	-12.0	-6.0	-5.5	-5.5	-3.5	-1.0	0.5	3.0	6.7	11.6	57.9	12.3	5.6
12	33.8	WNW	21:22	-5.0	-5.5	-5.5	-5.5	-3.5	-1.0	0.5	3.0	2.2	11.6	18.9	10.1	7.2
13	26.2	WNW	12:57	-2.0	-4.5	-4.5	-4.5	-3.5	-1.0	0.5	2.5	10.6	11.7	90.6	14.1	3.2
14	33.0	NW	16:06	-6.0	-2.5	-3.0	-3.5	-3.0	-1.0	0.5	2.5	10.4	11.8	88.4	14.4	2.5
15	26.3	WSW	18:46	-9.0	-2.5	-2.5	-3.0	-2.5	-1.0	0.5	2.5	7.1	11.8	60.0	12.1	5.5
16	32.4	WNW	16:51	-6.5	-2.5	-2.5	-2.5	-2.5	-0.5	0.5	2.5	11.5	11.9	96.6	15.3	1.7
17	31.1	WSW	16:19	-8.5	-2.0	-2.0	-2.5	-2.0	-0.5	0.5	2.5	11.6	12.0	96.9	15.8	2.1
18	33.8	WNW	8:24	-1.5	-1.5	-1.5	-2.0	-2.0	-0.5	0.5	2.5	11.4	12.0	94.7	15.2	1.8
19	41.1	W	14:52	0.0	-0.5	-0.5	-1.0	-1.5	-0.5	0.5	2.5	11.7	12.1	96.6	15.2	2.2
20	22.8	SW	13:38	0.5	0.0	0.0	-0.5	-1.0	-0.5	0.5	2.5	11.8	12.2	97.0	15.6	1.8
21	31.2	ESE	10:42	0.0	0.0	0.0	-0.5	-0.5	-0.5	0.5	2.5	11.8	12.2	96.4	16.4	1.5
22	27.2	S	13:02	2.0	0.0	0.0	0.0	-0.5	-0.5	0.5	2.5	11.9	12.3	96.7	16.1	1.6
23	59.1	ENE	20:42	1.0	0.0	0.0	0.0	-0.5	0.0	0.5	2.5	11.7	12.4	94.5	16.1	1.9
24	38.7	E	0:02	-2.5	0.0	0.0	0.0	0.0	0.0	0.5	2.5	8.8	12.5	70.7	15.0	3.0
25	29.1	SSE	15:57	-4.0	0.0	0.0	0.0	0.0	0.0	0.5	2.5	10.1	12.5	80.7	14.2	4.9
26	32.9	NE	20:50	1.0	0.0	0.0	0.0	0.0	0.0	0.5	2.5	5.9	12.6	46.9	12.1	5.6
27	36.7	NW	15:33	0.5	1.0	1.0	1.0	0.0	0.0	0.5	2.5	0.1	12.7	0.8	6.0	4.7
28	39.2	W	14:56	-1.5	0.0	0.5	0.5	0.0	0.0	0.5	2.5	10.2	12.7	80.2	17.1	2.8
29	48.3	NNE	9:45	0.0	0.5	0.5	0.5	0.0	0.0	0.5	2.5	7.6	12.8	59.5	13.4	5.6
30	41.2	NNW	17:34	-1.5	0.5	0.5	0.5	0.5	0.0	0.5	2.5	6.4	12.9	49.8	13.5	4.8
31	30.3	N	2:51	-0.5	0.5	1.0	1.0	0.5	0.0	0.5	2.5	9.4	12.9	72.8	16.5	4.5
Total												273.9	369.03	74.2	425.0	109.0
Mean				-7.1	-2.9	-2.7	-2.8	-2.0	-0.5	0.5	2.7	1981-2010 Normal for Radiation				
Extreme	59.1	ENE	20:42	1971- 2000 Normal for Soil Temperatures								182.0	369.4	49.3	371.9	162.6
Date	23			-3.1	-2.8	-2.4	-1.5	-0.4	0.6	2.7	No. of Bright Sunshine days = 31					

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

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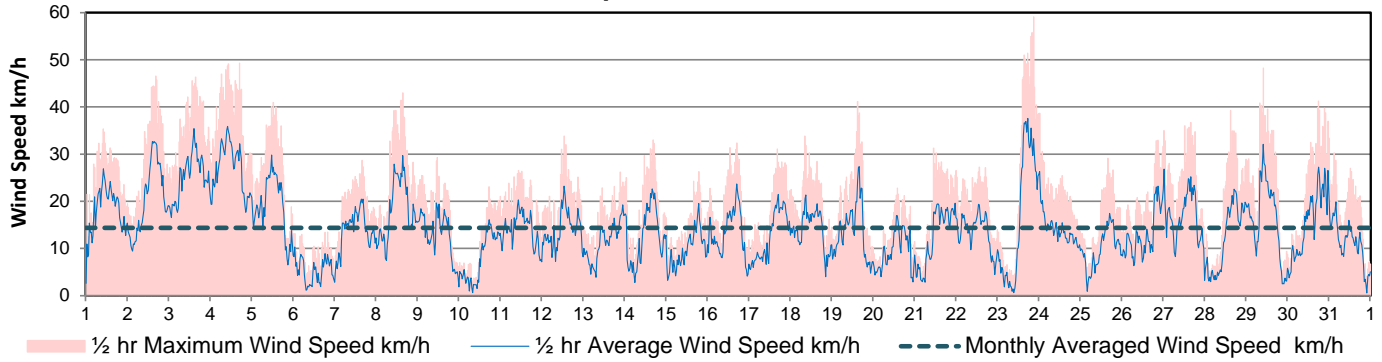


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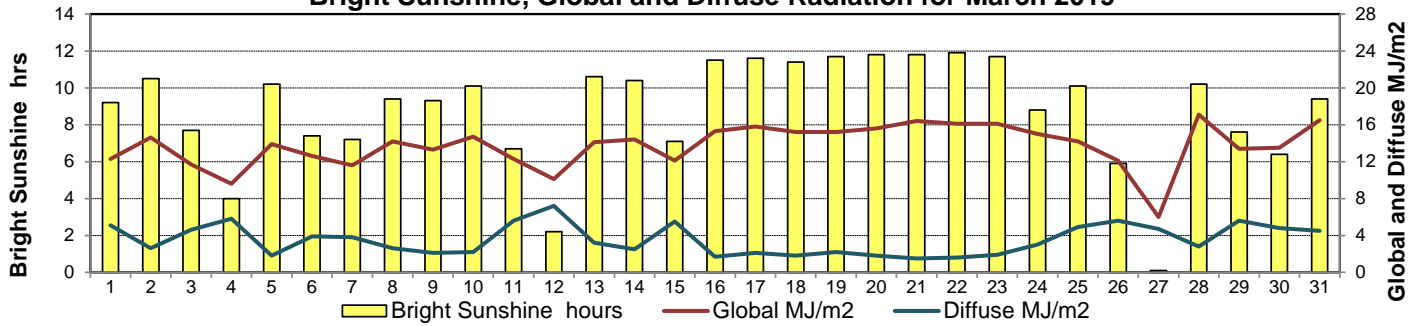
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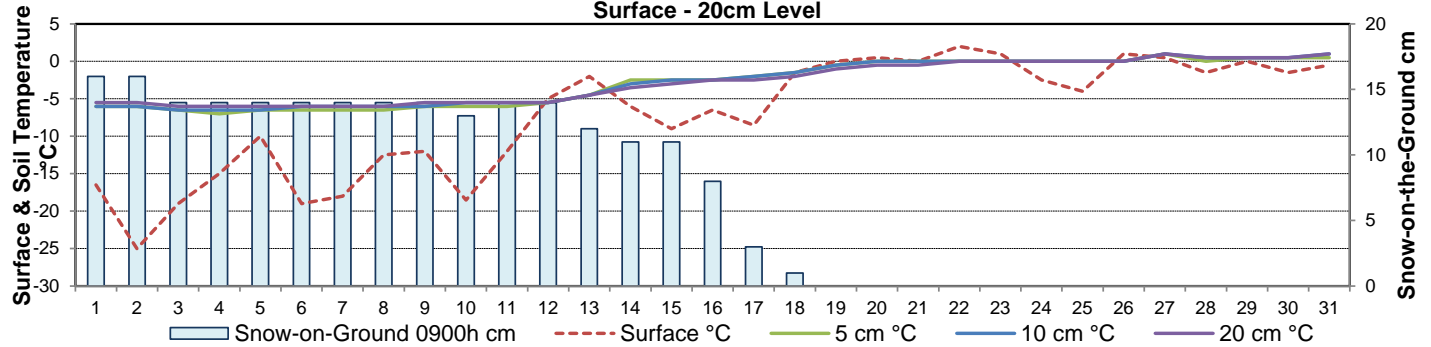
### Wind Speed for March 2019



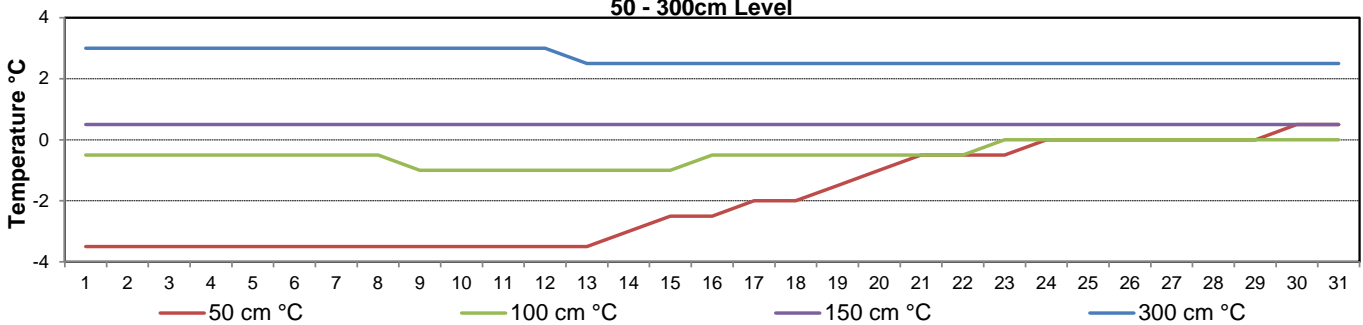
### Bright Sunshine, Global and Diffuse Radiation for March 2019



### Soil Temperatures for March 2019 Surface - 20cm Level



### Soil Temperatures for March 2019 50 - 300cm Level





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

Preliminary **MARCH 2019**

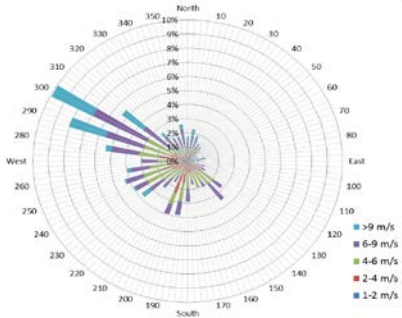
### Extreme Records for March

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	248.7	2013	31	1996*
-43.3	14/1897	SM	-38.9 02/1972	0.0	1915*	SE*	0.8 2010					102.8	1983	21	1983*

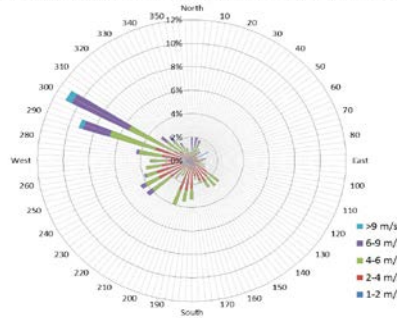
\*\*1975 forward \* more than one

Notable Events for CRS Saskatoon - March						Saskatoon Area Stations			Glossary	
Element	Type	Day	New Record	Old Record	Year	Station	Location	Period	Term	Definition
Temperature	Maximum Daily	20	12.1	10.0	2010	SM	NWMP	c. 1892-1901	T	Trace of precipitation
	Average Daily	20	5.0	4.2	1973	SE	Eby	1901-1941	Normal	30 year average beginning with the decade
Bright Sunshine	Greatest Monthly Hours		273.9	253.5	2014	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	March 7 = 20 cm March 14 = 14.5 cm March 17 = discontinuous snow cover but averaged over the 3 sticks = 3 cm March 25 = no snow	
						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 March 2019



10 minute Average Wind Speed and Direction Saskatoon March 2019



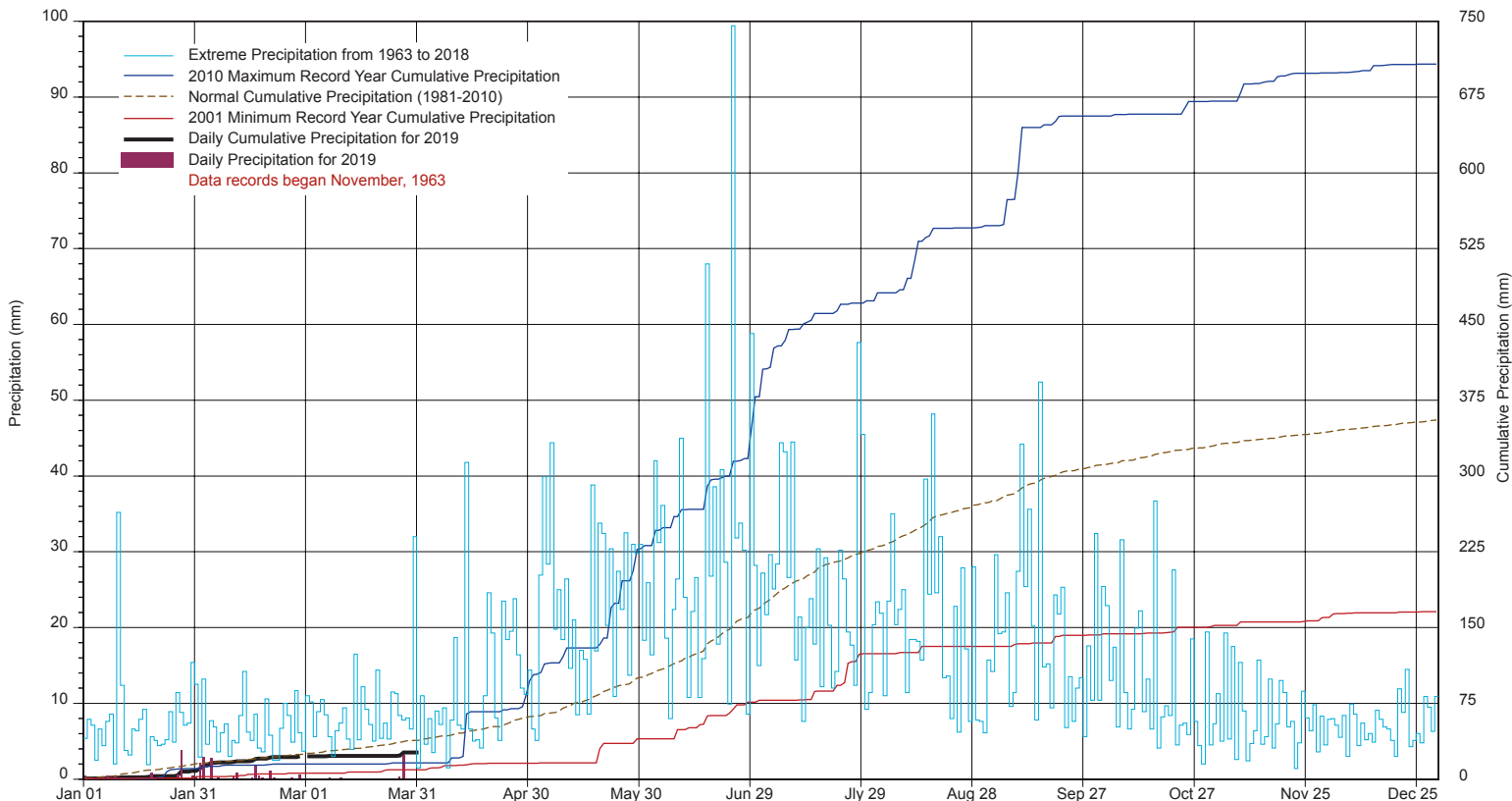
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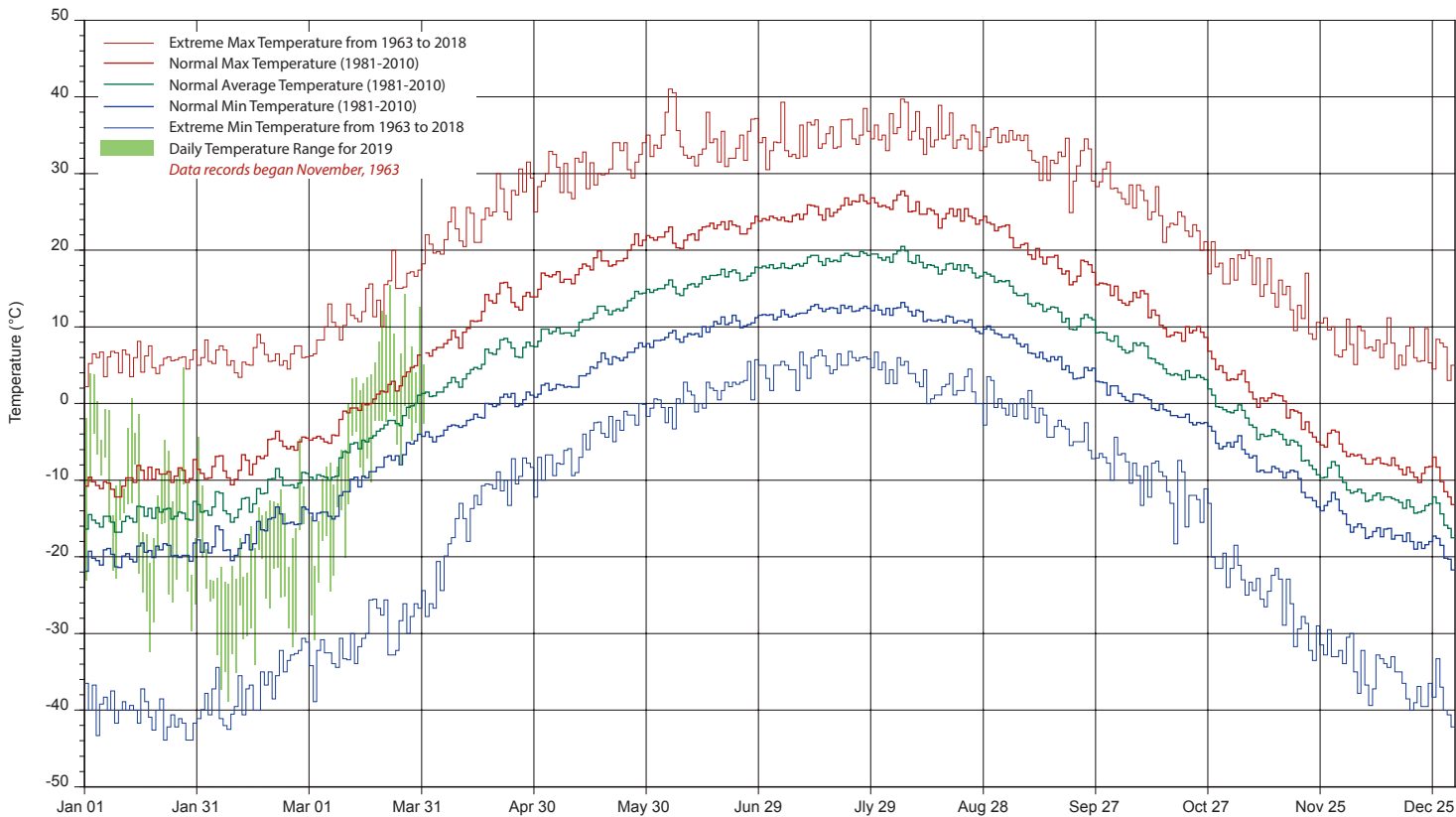
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## 2019 TEMPERATURES AND NORMALS



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