



SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

SASKATOON STATION 4057180

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

Preliminary MAY 2019

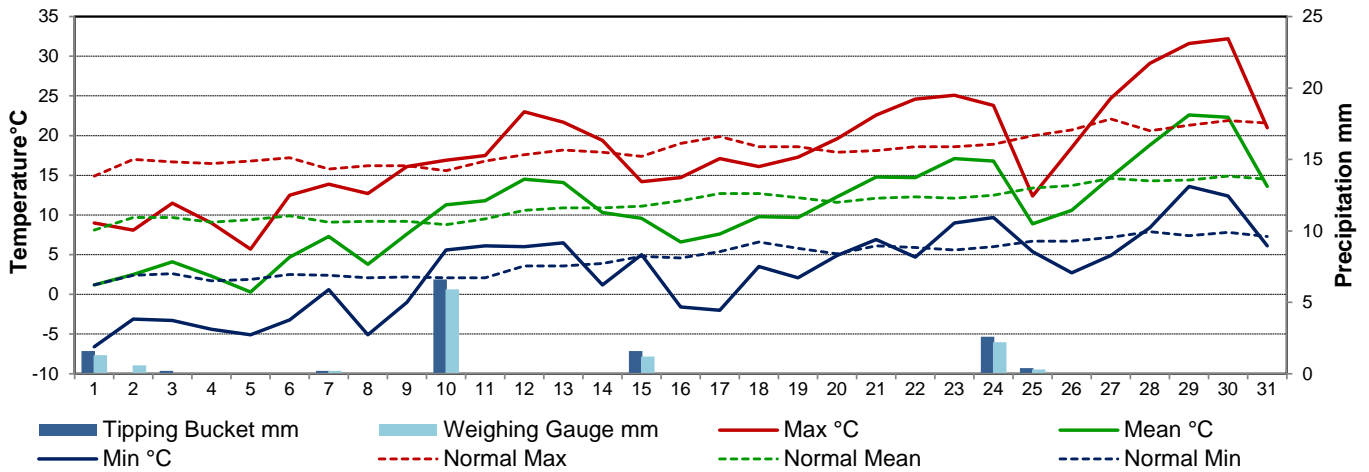
Day	Temperature						Degree-days			Precipitation			Relative Humidity		Station Pressure (sea level)	
	Max	Normal Max	Min	Normal Min	Mean	Normal Mean	Growing	Heating	Cooling	Weighing Gauge	Tipping Bucket	Notes	Max ½ hr Avg	Min ½ hr Avg	Max ½ hr Avg	Min ½ hr Avg
	°C	1981-2010	°C	1981-2010	°C	1981-2010	5°C base	18°C base	18°C base	mm	mm		%	%	mbar	mbar
1	9.0	14.9	-6.6	1.2	1.2	8.1	0.0	16.8	0.0	1.3	1.6	light rain	89	30	1020	1011
2	8.1	17.0	-3.1	2.4	2.5	9.7	0.0	15.5	0.0	0.6	0.0	fog am/light snow pm	96	62	1012	1008
3	11.5	16.7	-3.3	2.6	4.1	9.7	0.0	13.9	0.0	0.0	0.2	light snow	92	28	1012	1007
4	9.0	16.5	-4.4	1.7	2.3	9.1	0.0	15.7	0.0	0.0	0.0		80	23	1016	1012
5	5.7	16.8	-5.1	1.9	0.3	9.4	0.0	17.7	0.0	0.0	0.0		91	35	1020	1016
6	12.5	17.2	-3.2	2.5	4.7	9.9	0.0	13.3	0.0	0.0	0.0		83	21	1021	1018
7	13.9	15.8	0.6	2.4	7.3	9.1	2.3	10.7	0.0	0.2	0.2	shower	66	19	1023	1016
8	12.7	16.2	-5.1	2.1	3.8	9.2	0.0	14.2	0.0	0.0	0.0		83	18	1028	1023
9	16.1	16.2	-1.0	2.2	7.6	9.2	2.6	10.4	0.0	0.0	0.0		61	16	1025	1013
10	16.9	15.6	5.6	2.1	11.3	8.8	6.3	6.7	0.0	5.9	6.6	t-storm	77	25	1013	1006
11	17.5	16.8	6.1	2.1	11.8	9.5	6.8	6.2	0.0	0.0	0.0		80	30	1013	1009
12	23.0	17.6	6.0	3.6	14.5	10.6	9.5	3.5	0.0	0.0	0.0		71	18	1009	1002
13	21.7	18.2	6.5	3.6	14.1	10.9	9.1	3.9	0.0	0.0	0.0		81	14	1012	1003
14	19.4	17.9	1.2	3.9	10.3	10.9	5.3	7.7	0.0	0.0	0.0		84	29	1016	1009
15	14.2	17.4	5.0	4.8	9.6	11.1	4.6	8.4	0.0	1.2	1.6	light rain	87	37	1015	1003
16	14.7	19.0	-1.6	4.6	6.6	11.8	1.6	11.4	0.0	0.0	0.0		93	19	1019	1016
17	17.1	19.9	-2.0	5.4	7.6	12.7	2.6	10.4	0.0	0.0	0.0		79	17	1019	1016
18	16.1	18.6	3.5	6.6	9.8	12.7	4.8	8.2	0.0	0.0	0.0		65	18	1022	1018
19	17.3	18.6	2.1	5.8	9.7	12.2	4.7	8.3	0.0	0.0	0.0		67	25	1023	1019
20	19.6	17.9	4.9	5.1	12.3	11.6	7.3	5.7	0.0	0.0	0.0		65	22	1021	1016
21	22.6	18.1	6.9	6.1	14.8	12.1	9.8	3.2	0.0	0.0	0.0		52	15	1017	1015
22	24.6	18.6	4.7	5.9	14.7	12.3	9.7	3.3	0.0	0.0	0.0		66	15	1017	1014
23	25.1	18.6	9.0	5.6	17.1	12.1	12.1	0.9	0.0	0.0	0.0		51	13	1018	1010
24	23.8	18.9	9.7	6.0	16.8	12.5	11.8	1.2	0.0	2.2	2.6	light rain	74	17	1010	1005
25	12.4	20.0	5.4	6.7	8.9	13.4	3.9	9.1	0.0	0.3	0.4	light rain	89	54	1019	1008
26	18.5	20.7	2.7	6.7	10.6	13.7	5.6	7.4	0.0	0.0	0.0		93	27	1021	1019
27	24.7	22.1	4.9	7.2	14.8	14.6	9.8	3.2	0.0	0.0	0.0		71	17	1020	1011
28	29.1	20.6	8.4	7.9	18.8	14.3	13.8	0.0	0.8	0.0	0.0	smoke haze	58	14	1013	1010
29	31.6	21.3	13.6	7.4	22.6	14.4	17.6	0.0	4.6	0.0	0.0	smoke haze	43	11	1011	1007
30	32.2	21.9	12.4	7.8	22.3	14.9	17.3	0.0	4.3	0.0	0.0	smoke haze	59	13	1016	1005
31	21.0	21.6	6.1	7.3	13.6	14.5	8.6	4.4	0.0	0.0	0.0		84	28	1020	1015
Total							187.5	241.3	9.7	11.7	13.2		Extreme / Date	Extreme / Date	Extreme / Date	Extreme / Date
Avg	18.1	18.3	2.9	4.6	10.5	11.5	1981-2010 Normal			39.4	1981-2010 Normal					
Extreme Date	32.2		-6.6				206.9	209.3	6.3	41.1	Cumulative		96	11	1028	1002
	30		1							100.9	Cumulative Normal		2	29	8	12

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

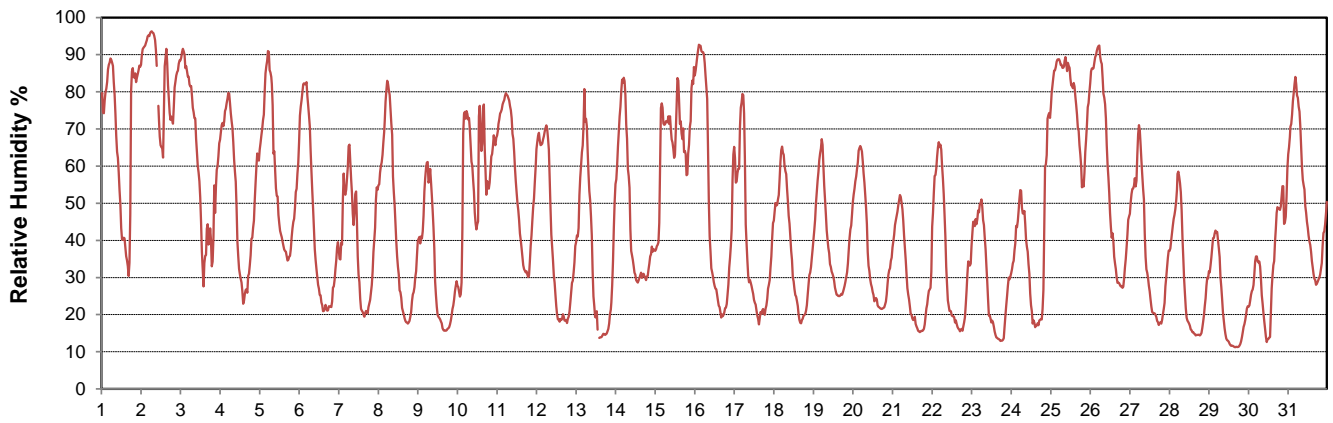
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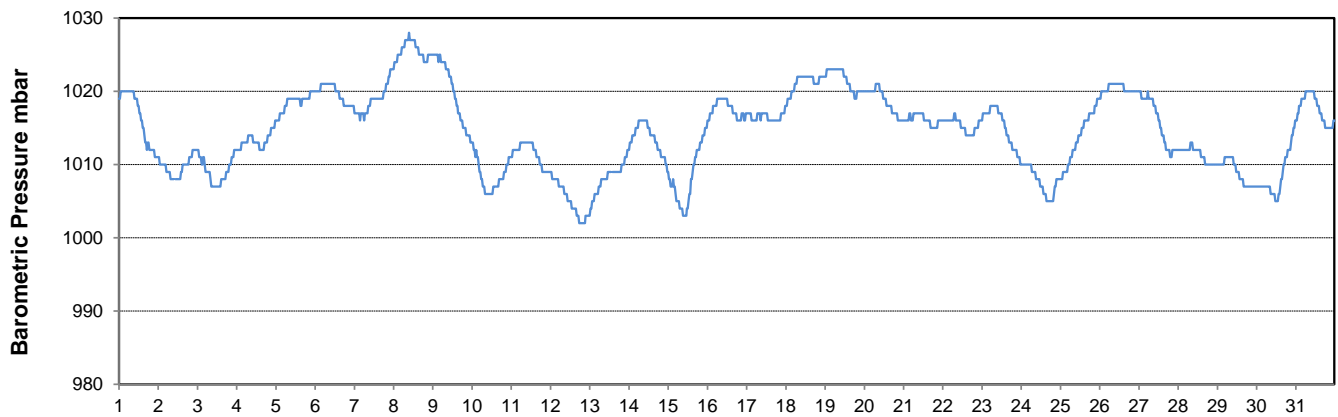
Temperature and Precipitation for May 2019



Relative Humidity for May 2019



Barometric Pressure Corrected to Sea Level for May 2019





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SASKATOON STATION 4057180

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

Preliminary **MAY** 2019

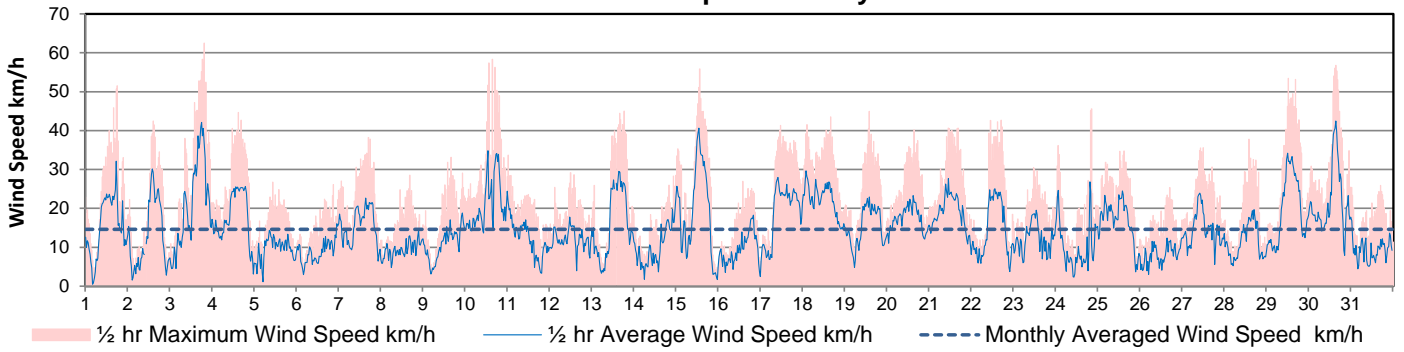
Day	10 m tower Wind Gust			Soil Temperatures at 0900hrs (rounded to the nearest 0.5C)								Radiation				
	Max	Direction	Time	Surface	5 cm	10 cm	20 cm	50 cm	100 cm	150 cm	300 cm	Bright Sunshine	Possible	% Possible	Global	Diffuse
	km/h			°C	°C	°C	°C	°C	°C	°C	°C	hours	hours		MJ/m ²	MJ/m ²
1	51.5	WSW	17:47	-1.0	3.5	5.0	6.0	6.5	4.5	4.0	3.5	8.8	14.9	59.0	19.1	6.2
2	42.4	NNW	14:25	3.5	4.0	5.0	6.0	6.0	4.5	4.0	3.5	5.5	15.0	36.7	7.9	4.6
3	62.5	NW	19:03	3.0	3.0	4.0	5.0	6.0	4.5	4.0	3.5	5.2	15.0	34.6	7.3	4.5
4	44.7	WNW	14:49	2.5	3.0	3.5	5.0	5.5	4.5	4.0	3.5	13.2	15.1	87.4	24.4	2.6
5	26.8	NNW	10:05	2.0	3.5	4.0	5.0	5.5	4.5	4.0	3.5	5.1	15.2	33.6	11.6	6.1
6	26.1	SW	20:30	5.0	4.0	4.5	5.5	5.5	4.5	4.0	3.5	11.3	15.2	74.2	25.0	3.1
7	38.2	N	16:59	9.5	7.0	7.5	7.5	6.0	4.5	4.0	4.0	11.9	15.3	77.9	21.6	4.9
8	28.5	NNE	16:28	4.5	5.5	6.5	7.5	6.5	4.5	4.0	4.0	14.0	15.3	91.3	27.2	3.2
9	33.2	WSW	15:32	9.0	7.0	7.5	8.0	7.0	4.5	4.0	4.0	13.2	15.4	85.8	26.4	4.0
10	58.4	N	15:26	11.5	9.0	9.5	9.5	7.5	5.0	4.0	4.0	7.8	15.4	50.5	16.6	8.2
11	33.7	N	0:15	8.0	8.5	9.0	9.0	8.0	5.0	4.0	4.0	7.9	15.5	51.0	19.0	15.6
12	29.2	S	18:21	13.5	9.0	9.5	9.5	8.0	5.0	4.5	4.0	7.4	15.6	47.6	17.2	13.8
13	45.0	NW	11:42	14.5	9.5	10.0	10.0	8.5	5.5	4.5	4.0	11.0	15.6	70.5	18.6	7.4
14	28.5	SE	23:54	12.0	9.5	10.0	10.5	9.0	5.5	4.5	4.0	10.3	15.7	65.8	21.0	6.2
15	55.8	NNE	13:14	10.5	11.5	12.0	11.5	9.0	5.5	4.5	4.0	3.0	15.7	19.1	9.0	6.0
16	27.0	NE	13:38	8.5	7.0	8.0	9.5	9.5	6.0	5.0	4.0	15.4	15.8	97.7	27.6	3.2
17	41.3	ESE	11:08	12.5	8.0	9.0	10.0	9.0	6.0	5.0	4.5	14.1	15.8	89.2	24.0	3.4
18	43.5	E	15:45	7.5	9.0	9.5	10.0	9.0	6.0	5.0	4.5	15.3	15.9	96.5	27.6	3.4
19	44.9	ESE	13:59	11.5	9.5	10.0	10.5	9.5	6.5	5.0	4.5	15.3	15.9	96.2	28.6	3.0
20	40.2	ESE	15:01	13.5	10.5	11.0	11.5	9.5	6.5	5.0	4.5	14.9	16.0	93.4	28.2	4.0
21	40.6	SE	16:01	16.5	11.5	12.0	12.0	10.0	6.5	5.5	4.5	14.5	16.0	90.6	26.8	4.3
22	42.7	NE	16:30	17.0	12.0	12.5	13.0	11.0	6.5	5.5	4.5	11.0	16.0	68.6	23.2	5.8
23	30.5	SSW	11:27	15.5	13.0	13.5	13.5	11.0	7.0	5.5	4.5	11.1	16.1	69.0	22.6	7.6
24	45.6	NNE	20:01	15.0	13.5	14.0	14.0	11.5	7.0	5.5	4.5	5.3	16.1	32.9	17.6	8.8
25	34.8	ENE	14:42	8.5	13.5	14.0	14.0	12.0	7.5	6.0	4.5	2.5	16.2	15.5	6.9	4.7
26	25.3	E	16:58	9.0	9.5	10.5	11.5	11.5	7.5	6.0	5.0	12.3	16.2	75.9	25.1	7.4
27	35.6	SW	11:44	13.5	11.0	11.5	12.0	11.5	7.5	6.0	5.0	14.2	16.3	87.4	28.8	3.3
28	37.8	WNW	13:51	18.0	13.0	13.5	13.5	11.5	7.5	6.5	5.0	13.6	16.3	83.5	24.6	8.1
29	53.4	W	12:18	23.0	14.5	15.0	15.0	12.0	8.0	6.5	5.0	14.4	16.3	88.2	28.2	4.0
30	56.8	N	15:11	24.0	16.5	17.0	16.0	13.0	8.0	6.5	5.0	10.9	16.4	66.6	24.6	5.1
31	25.9	NNW	16:38	11.5	15.0	16.0	16.0	13.5	8.0	6.5	5.0	9.4	16.4	57.4	23.2	7.6
Total												329.8	487.4	67.7	659.5	180.1
Mean				10.7	9.2	9.8	10.2	9.0	5.9	4.9	4.2	1981-2010 Normal for Radiation				
Extreme	62.5	NW	19:03	1971- 2000 Normal for Soil Temperatures								256.9	487.6	52.7	603.5	221.5
Date	3			10.3	10.8	11.3	9.3	6.4	4.8	3.4	No. of Bright Sunshine days = 31					

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

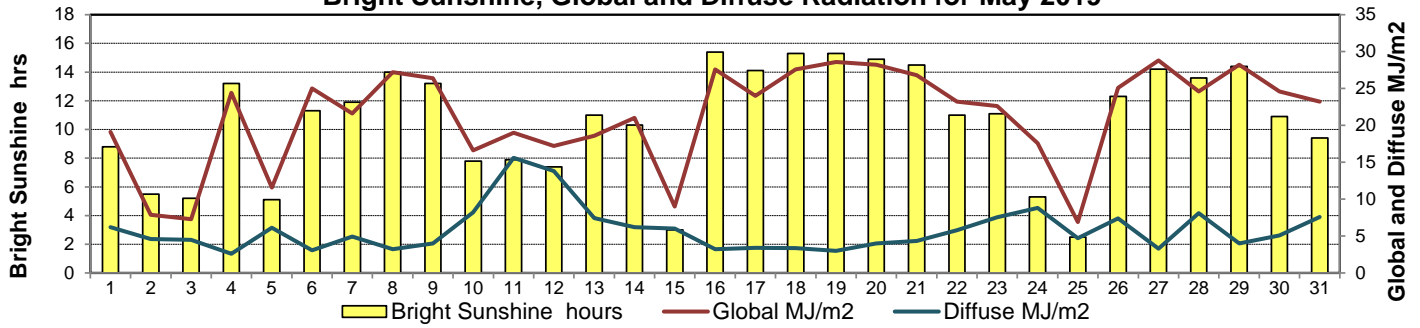
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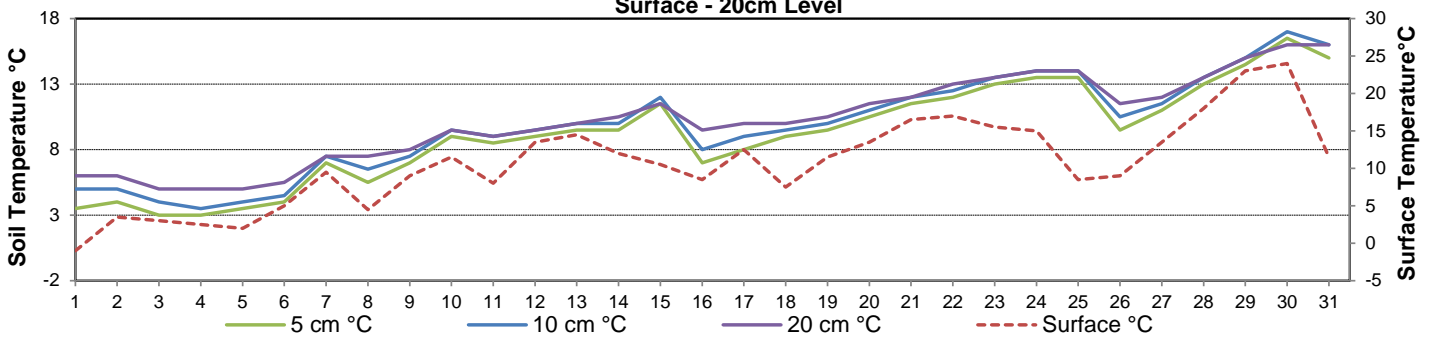
10 m tower Wind Speed for May 2019



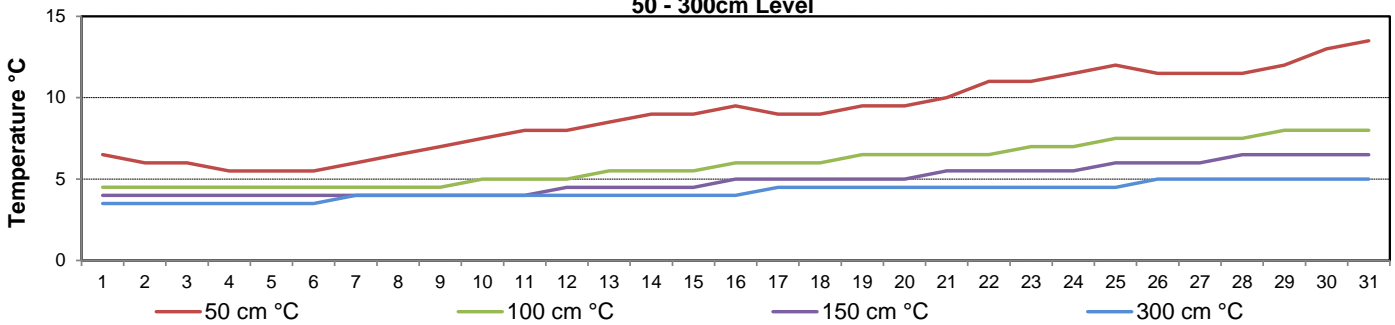
Bright Sunshine, Global and Diffuse Radiation for May 2019



**9 am Soil Temperatures for May 2019
Surface - 20cm Level**



**9 am Soil Temperatures for May 2019
50 - 300cm Level**





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Preliminary **MAY** 2019

Extreme Records for May

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	
37.2	27/1936	SE	35.0	30/1988	178.0	1977	SWT	145.3	1977	132	17 ^{SW}	1965	108	1991	389.3	1980	31	1966*
-12.8	06/1907	SE	-10.0	02/1967	0.0	02, 02, 1988	SWT, K, SC	0.2	2002					153.0	1996	24	2006	

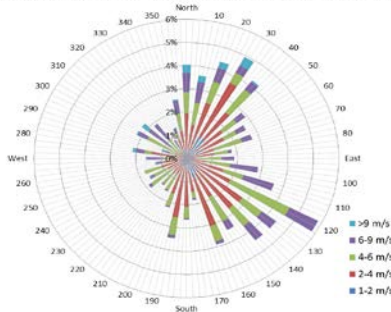
**1975 forward * more than one year

Notable Events for CRS Saskatoon - May						Saskatoon Area Stations			Glossary	
Element	Type	Day	New Record	Old Record	Year	SM	NWMP	c. 1892-1901	T	Trace of precipitation
Bright Sunshine	Number of hours	Spring	890.4	872.8	2015	SE	Eby	1901-1941	Normal	30 year average beginning with the decade
	Number of days	Spring	91	89	1994, 2002	US	Univ. of Sask.	1915-1964		SOG
	# of days greater or equal to 1 hour	Spring	90	88.0	1994	S	Saskatoon	1941-1942	na	not available
	% of Bright Sunshine hours vs Possible Daylight Hours	Spring	69.9	68.5	2015	SA	Saskatoon A	1942 -	Degree-days	
Precipitation	Total Precipitation	Spring	18.5	19	2009	NRC	Nat. Res. Council	1952-1966	Tm	Mean Temperature
						SC	S'toon Central Ave	1974-1989	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
						S1	Saskatoon 1	1976-1978	Cooling	(Tm-18°C); if Tm ≥ 18°C then CDD = 0
						S2	Saskatoon 2	1977-1990	Extreme Cooling	(Tm-24°C); if Tm ≥ 24°C then CDD = 0
						K	S'toon Kernen Farm	1993-2004	May 2 - spring general maintenance	
						KCS	S'toon Kernen Farm CS	1996-	May 2 - missing the 10:30am data.	
						RCS	Environment Canada	2008-	May 11 and 12th diffuse ring mis-aligned.	
SF	Sutherland Forestry	1943-1970	May 2 - 23 Daily radiation totals corrected due to data logger time sampling issues							

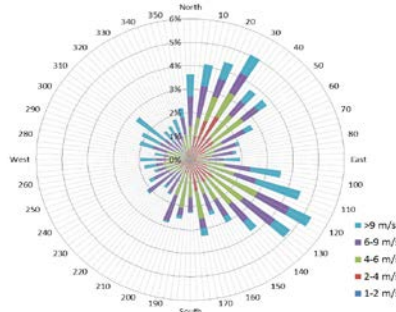
Spring = March, April and May

May 23 Dalalogger program updated
 May 28 Datalogger program updated
 During May, several new instruments were installed at CRS Saskatoon including:
 - Cup anemometer at the All-season precipitation Gauge
 - Stevens HydraProbe Soil Moisture Sensors at the 10 cm, 20 cm and 50 cm soil depths
 - duplicate HMP Air Temp & RH sensor May 28 that is calibrated to -50C

10 minute Average Wind Speed and Direction Saskatoon May 2019



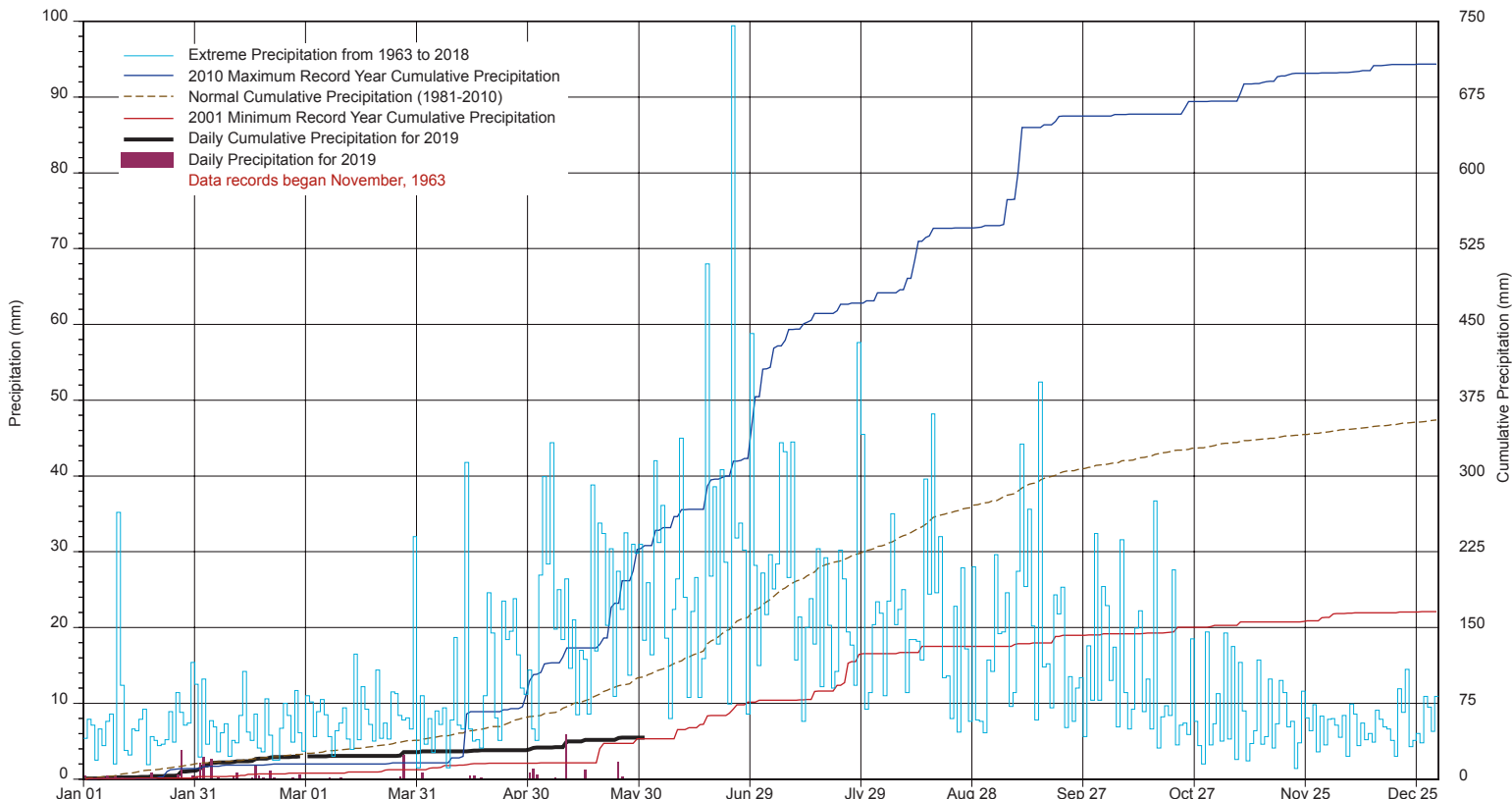
1/2 hr Maximum Wind Speed and Direction Saskatoon May 2019



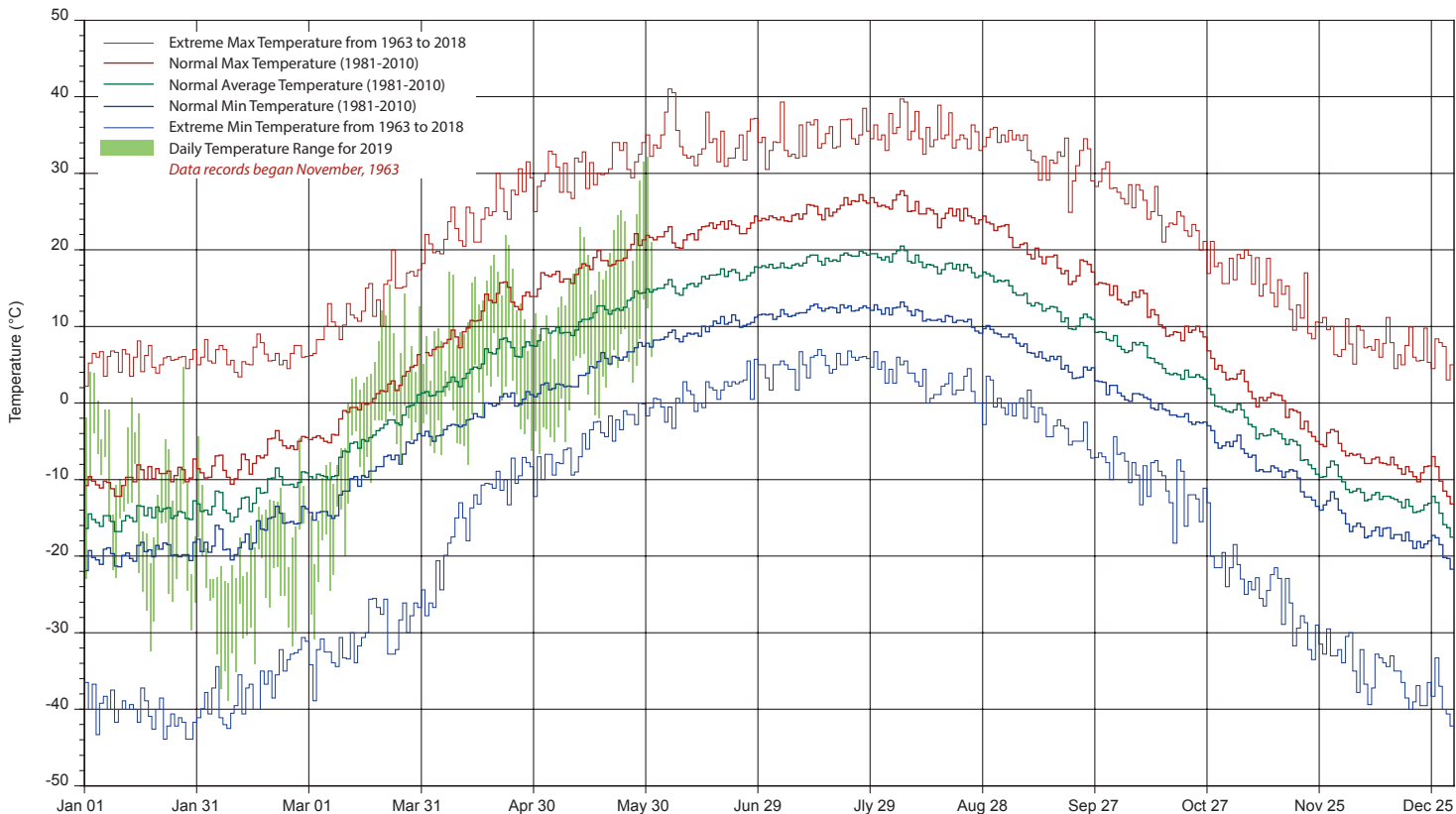
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2019 TEMPERATURES AND NORMALS



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