



# SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

## SASKATOON STATION 4057180

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

Preliminary

**JULY**

**2016**

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	22.2	23.9	14.2	11.5	18.2	17.7	13.2	0.0	0.2	0.1	0.0		79	61	1017	1013
2	23.1	24.4	14.3	11.6	18.7	18.1	13.7	0.0	0.7	0.3	0.6		89	59	1014	1010
3	26.6	24.2	14.7	10.9	20.7	17.6	15.7	0.0	2.7	11.0	9.8		90	53	1009	1003
4	23.0	23.9	13.2	11.3	18.1	17.7	13.1	0.0	0.1	2.6	2.2		91	39	1008	1001
5	23.1	24.3	11.7	12.2	17.4	18.3	12.4	0.6	0.0	0.4	0.4		91	45	1009	1007
6	22.7	23.8	11.9	11.6	17.3	17.7	12.3	0.7	0.0	0.7	0.8		87	52	1008	1007
7	24.1	23.7	11.7	11.3	17.9	17.6	12.9	0.1	0.0	0.0	0.0		92	41	1011	1007
8	23.2	24.5	12.7	11.4	18.0	18.0	13.0	0.0	0.0	7.1	7.6		91	55	1012	1009
9	26.1	24.7	17.3	11.7	21.7	18.2	16.7	0.0	3.7	8.7	9.8		87	57	1010	1008
10	24.8	24.0	16.3	11.8	20.6	17.9	15.6	0.0	2.6	0.0	0.0		87	57	1008	1003
11	18.4	24.7	15.1	11.8	16.8	18.3	11.8	1.2	0.0	13.8	12.2		93	86	1003	995
12	21.7	25.9	15.6	12.2	18.7	19.1	13.7	0.0	0.7	9.8	10.2		92	59	1003	996
13	23.1	25.8	13.1	12.7	18.1	19.3	13.1	0.0	0.1	0.0	0.0		87	48	1016	1003
14	22.1	25.7	12.6	12.9	17.4	19.3	12.4	0.6	0.0	0.0	0.0		94	51	1020	1016
15	24.5	24.6	9.5	12.4	17.0	18.5	12.0	1.0	0.0	0.0	0.0		94	38	1020	1015
16	25.2	23.9	10.1	12.0	17.7	18.0	12.7	0.3	0.0	0.0	0.0		93	39	1015	1010
17	24.7	25.4	14.1	12.3	19.4	18.9	14.4	0.0	1.4	0.0	0.0		86	39	1016	1010
18	28.3	24.4	12.7	12.5	20.5	18.5	15.5	0.0	2.5	0.0	0.0		93	39	1018	1014
19	30.0	24.9	16.1	12.4	23.1	18.7	18.1	0.0	5.1	1.2	1.4		90	33	1016	1008
20	27.6	25.3	16.8	11.8	22.2	18.5	17.2	0.0	4.2	0.0	0.0		85	43	1010	1008
21	26.9	25.8	15.8	12.8	21.4	19.3	16.4	0.0	3.4	0.1	0.0		87	46	1014	1010
22	27.8	26.8	11.2	12.4	19.5	19.6	14.5	0.0	1.5	4.8	4.8		92	36	1018	1011
23	24.6	25.9	16.2	12.7	20.4	19.3	15.4	0.0	2.4	0.0	0.2		94	44	1012	1006
24	26.1	26.4	12.4	12.0	19.3	19.2	14.3	0.0	1.3	0.0	0.0		85	42	1014	1012
25	25.9	26.3	13.5	12.1	19.7	19.2	14.7	0.0	1.7	0.2	0.2		90	27	1018	1013
26	26.0	27.2	9.9	12.4	18.0	19.8	13.0	0.0	0.0	0.0	0.0		92	30	1020	1017
27	26.8	26.4	10.1	12.7	18.5	19.6	13.5	0.0	0.5	0.0	0.0		92	34	1021	1019
28	28.5	26.1	13.2	12.4	20.9	19.3	15.9	0.0	2.9	0.0	0.0		89	35	1021	1016
29	26.1	26.8	15.6	12.1	20.9	19.5	15.9	0.0	2.9	7.1	7.4		92	50	1017	1011
30	28.5	26.2	15.3	12.8	21.9	19.5	16.9	0.0	3.9	1.5	2.0		92	37	1010	1004
31	24.0	25.7	14.8	12.2	19.4	19.0	14.4	0.0	1.4	7.7	7.8		91	58	1008	1002
Total							444.4	4.5	45.9	77.1	77.4		Extreme / Date	Extreme / Date	Extreme / Date	Extreme / Date
Avg	25.0	25.2	13.6	12.1	19.3	18.7	1981-2010 Normal			59.0	Normal					
Extreme Date	30.0		9.5				424.0	30.7	51.7	Cumulative			94	27	1021	995
Date	19		15							226.5	Cumulative Normal		14	25	27	11

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

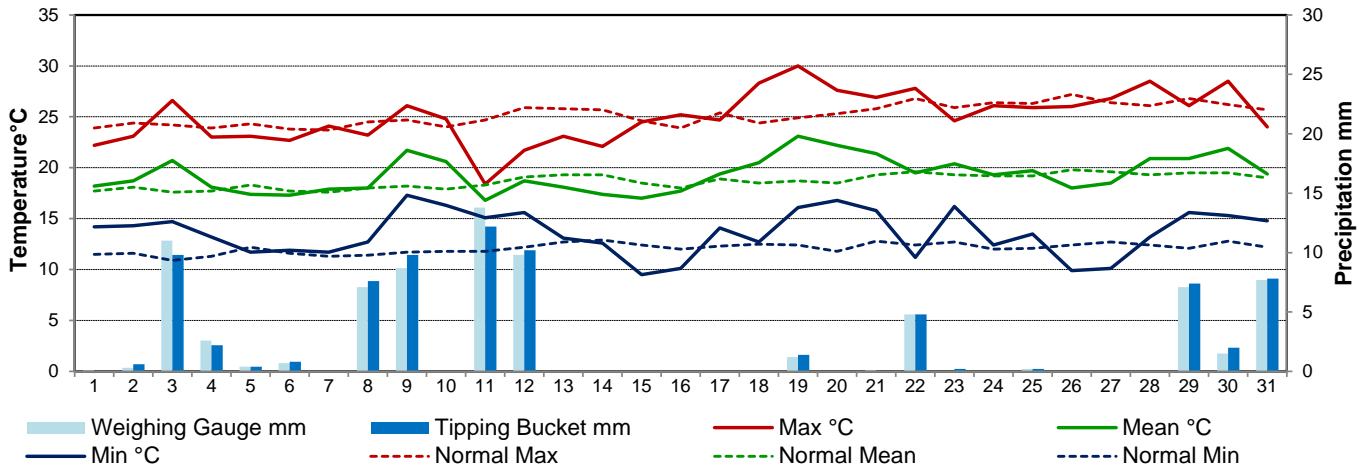
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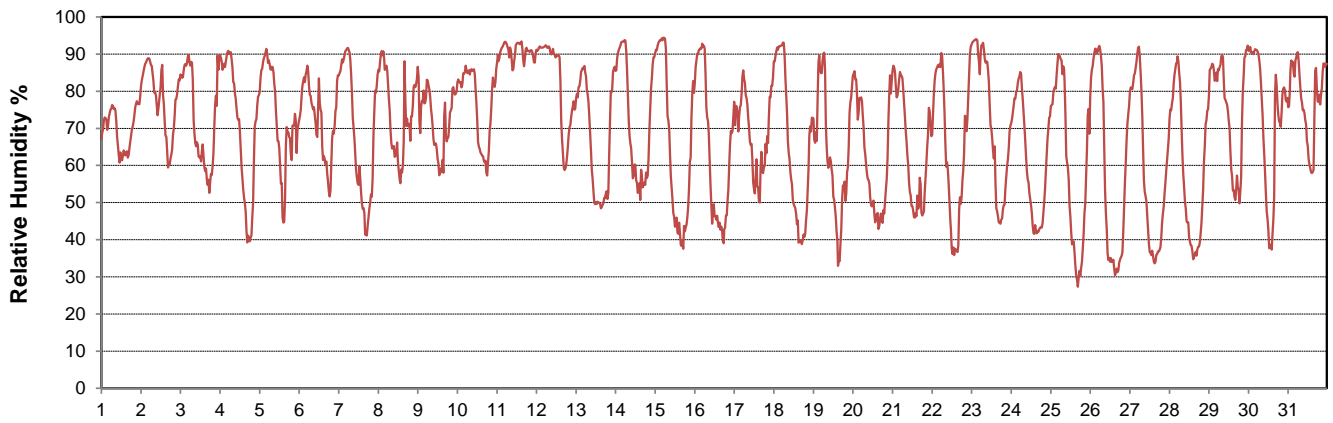
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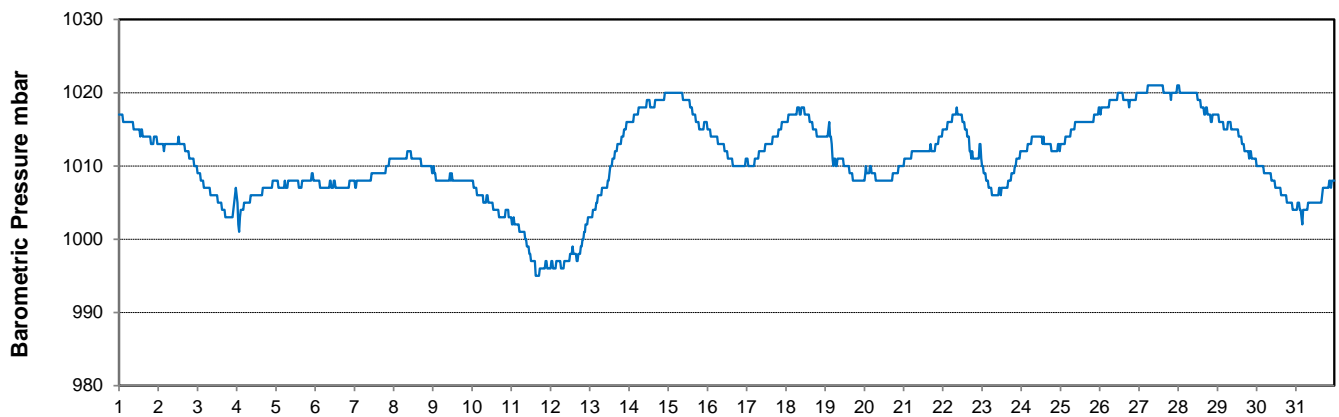
### Temperature and Precipitation for July 2016



### Relative Humidity for July 2016



### Barometric Pressure Corrected to Sea Level for July 2016





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Preliminary

### JULY 2016

Day	Wind Gust			Soil Temperatures at 0900hrs								Soil Moisture 30 cm	Radiation				
	Max	Direction	Time	Surface	5 cm	10 cm	20 cm	50 cm	100 cm	150 cm	300 cm		0900hrs	Bright Sunshine	Possible	% Possible	Global
	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	SE	21:28	15.0	18.5	19.0	19.0	17.0	13.0	11.0	8.5	17.4	2.1	16.7	12.6	12.4	8.7
2	32.9	ESE	5:49	18.0	18.0	18.5	18.5	16.5	13.0	11.5	8.5	17.1	4.7	16.6	28.2	13.9	7.6
3	64.9	NNW	22:12	22.0	19.0	19.0	18.5	16.5	13.0	11.5	8.5	16.9	9.6	16.6	57.8	22.2	8.1
4	44.5	ENE	1:19	16.5	18.5	19.0	19.0	16.5	13.0	11.5	8.5	19.8	9.3	16.6	56.1	22.5	6.5
5	37.3	WNW	16:00	15.5	17.5	18.5	18.5	16.5	13.0	11.5	8.5	18.6	6.1	16.6	36.8	17.8	6.7
6	34.4	NW	19:48	17.5	17.5	18.0	18.5	16.5	13.0	11.5	9.0	18.1	9.1	16.5	55.0	19.7	8.6
7	25.5	NW	16:27	18.0	17.5	18.0	18.0	16.5	13.0	11.5	9.0	17.7	10.3	16.5	62.3	24.3	6.2
8	32.4	SSE	15:54	20.0	18.0	18.5	18.5	16.5	13.0	11.5	9.0	17.4	3.2	16.5	19.4	11.2	7.3
9	50.9	SSE	16:09	21.0	18.5	18.5	18.5	16.5	13.5	12.0	9.0	18.9	9.7	16.5	58.9	22.3	6.0
10	27.9	E	7:24	18.0	20.0	20.5	20.0	17.0	13.5	12.0	9.0	21	3.9	16.4	23.7	15.0	8.2
11	48.5	NE	16:43	16.0	20.0	20.5	20.0	17.0	13.5	12.0	9.0	20.1	0.1	16.4	0.6	4.3	3.3
12	48.0	NNW	11:09	15.5	18.0	18.5	18.5	17.0	13.5	12.0	9.0	23.9	0.7	16.4	4.3	7.1	5.3
13	41.3	NW	15:25	18.5	17.0	17.5	17.5	16.5	13.5	12.0	9.0	25.4	11.6	16.3	71.0	23.4	7.6
14	32.3	NE	15:34	18.5	18.0	18.5	18.0	16.5	13.5	12.0	9.5	24.8	12.7	16.3	78.0	24.8	6.8
15	19.5	NE	12:20	18.0	17.5	18.5	18.5	17.0	13.5	12.0	9.5	24.2	14.5	16.3	89.2	26.3	3.9
16	25.7	WNW	15:22	19.5	18.0	18.5	19.0	17.0	13.5	12.0	9.5	23.8	14.4	16.2	88.8	27.6	5.5
17	37.9	NNE	15:55	19.5	19.5	20.0	19.5	17.0	13.5	12.0	9.5	23.4	10.7	16.2	66.2	21.6	8.7
18	32.7	SSW	14:19	20.5	19.0	20.0	20.0	17.5	13.5	12.5	9.5	23.1	13.9	16.1	86.2	26.8	5.4
19	51.9	WNW	2:24	23.5	21.0	21.5	21.0	18.0	14.0	12.5	9.5	23	11.4	16.1	70.9	24.2	2.7
20	48.3	WNW	17:34	22.0	21.0	21.5	21.5	18.5	14.0	12.5	9.5	22.7	13.9	16.1	86.6	27.6	2.9
21	35.8	W	18:45	21.5	20.5	21.0	21.0	18.5	14.0	12.5	9.5	22.3	13.2	16.0	82.5	23.1	3.9
22	35.6	WSW	23:03	20.0	19.5	20.5	20.5	18.5	14.5	12.5	10.0	21.8	10.6	16.0	66.5	22.3	4.4
23	51.6	WNW	16:58	18.5	20.5	21.0	21.0	18.5	14.5	12.5	10.0	22.2	7.7	15.9	48.4	17.4	5.8
24	32.9	WSW	17:56	18.5	18.0	19.0	19.5	18.5	14.5	13.0	10.0	21.4	14.4	15.9	90.8	26.1	3.0
25	38.4	WNW	15:14	18.5	19.5	20.0	20.0	18.5	14.5	13.0	10.0	21.2	11.5	15.8	72.7	25.3	2.7
26	21.6	ESE	11:42	19.5	18.5	19.5	20.0	18.5	14.5	13.0	10.0	20.7	13.4	15.8	85.0	23.3	6.4
27	28.4	ESE	18:10	20.5	18.5	19.5	20.0	18.5	14.5	13.0	10.0	20.3	14.6	15.7	92.9	25.5	3.2
28	27.0	SSW	16:50	21.0	19.5	20.0	20.5	18.5	14.5	13.0	10.0	20	11.4	15.7	72.8	24.4	3.5
29	44.8	WNW	20:11	18.0	20.5	21.5	21.0	18.5	15.0	13.0	10.0	19.9	6.5	15.6	41.6	17.0	6.6
30	48.4	SSW	15:53	21.5	19.0	20.0	20.5	19.0	15.0	13.0	10.5	20.6	8.4	15.6	54.0	16.9	6.4
31	44.2	SW	1:46	20.0	19.5	20.0	20.0	18.5	15.0	13.5	10.5	20.8	9.7	15.5	62.5	19.3	5.5
Total													293.3	501.13	58.5	635.6	177.4
Mean				19.0	18.9	19.5	19.5	17.5	13.8	12.2	9.4	20.9	1981-2010 Normal for Radiation				
Extreme	64.9	NNW	22:12	1971- 2000 Normal for Soil Temperatures								298.8	501.80	59.5	650.6	213.5	
Date	3			17.5	18.0	18.9	16.7	13.1	10.9	7.5		No. of Bright Sunshine days = 31					

Note: Red numbers indicate manual calculation

NOTE: thick smoke from forest fires in northern Saskatchewan July 1

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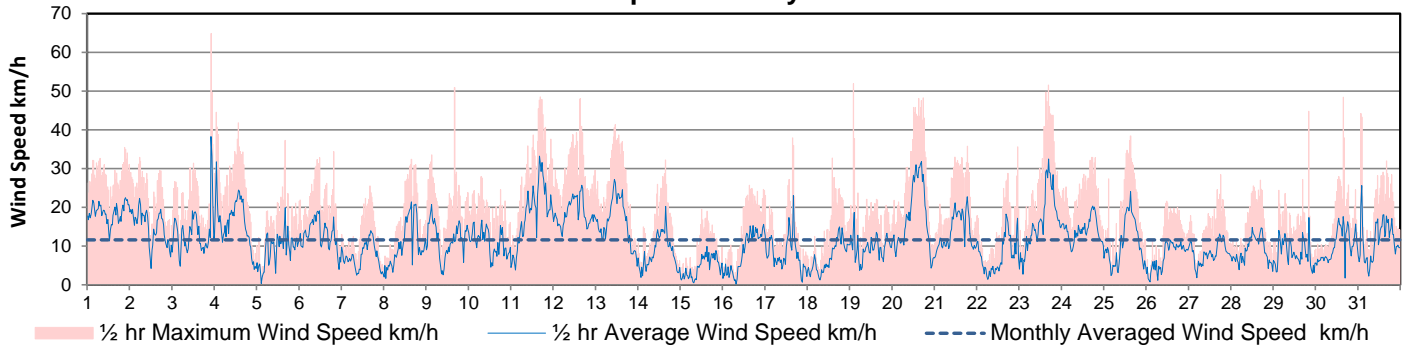


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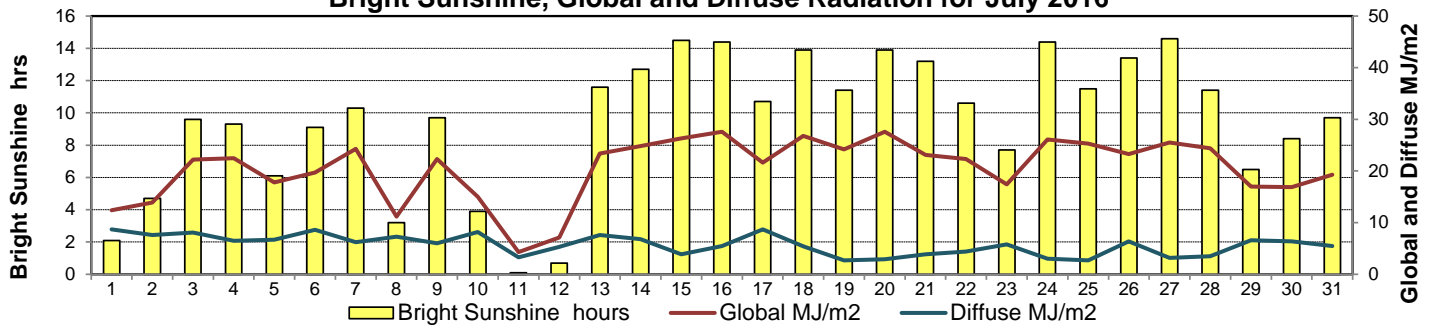


CAMPBELL SCIENTIFIC WHEN MEASUREMENTS MATTER

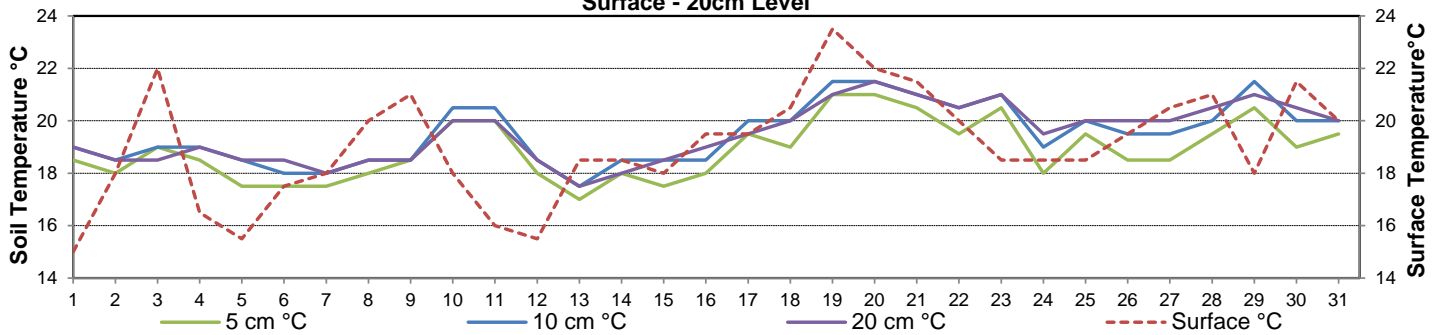
**Wind Speed for July 2016**



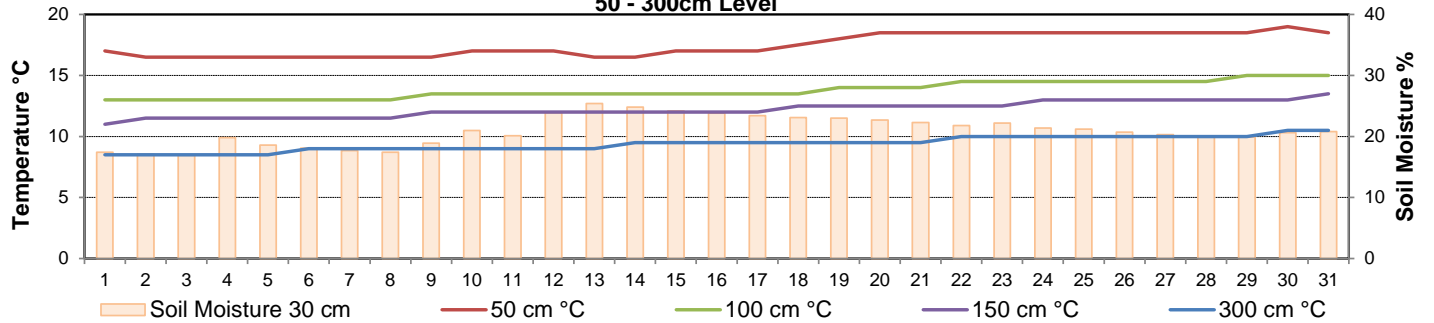
**Bright Sunshine, Global and Diffuse Radiation for July 2016**



**Soil Temperatures for July 2016  
Surface - 20cm Level**



**Soil Temperatures for July 2016  
50 - 300cm Level**





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

Preliminary JULY 2016

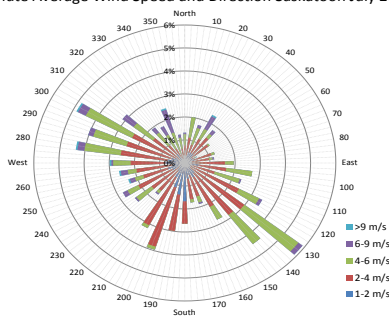
### Extreme Records for July

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
40.0	(1919,41)1946	(SE SA) US	39.3	05/2001	162.9	1928	SE	125.9	1971	113 <sup>E</sup>	05/1955	160	1985	386.2	1974	31	1967*
-0.6	25/1918	SE	1.7	02,09/1967,78	0.0	1988	SC	13.0	1984					185.5	1998	27	2004

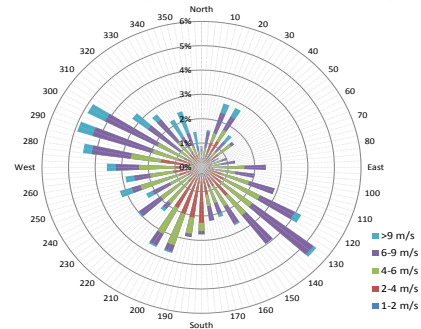
\*\*1975 forward \* more than one year

Notable Events for CRS Saskatoon - July						Saskatoon Area Stations			Glossary	
Element	Type	Day	New Record	Old Record	Year	Station	Location	Period	Term	Definition
Temperature	Highest temperature of the Lowest Mean Daily		16.8	16.2	2006	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		
						K	S'toon Kernen Farm	1993-2004		
						KCS	S'toon Kernen Farm CS	1996-		
						RCS	Environment Canada	2008-		
						SF	Sutherland Forestry	1943-1970		

10 minute Average Wind Speed and Direction Saskatoon July 2016



1/2 hr Maximum Wind Speed and Direction Saskatoon July 2016



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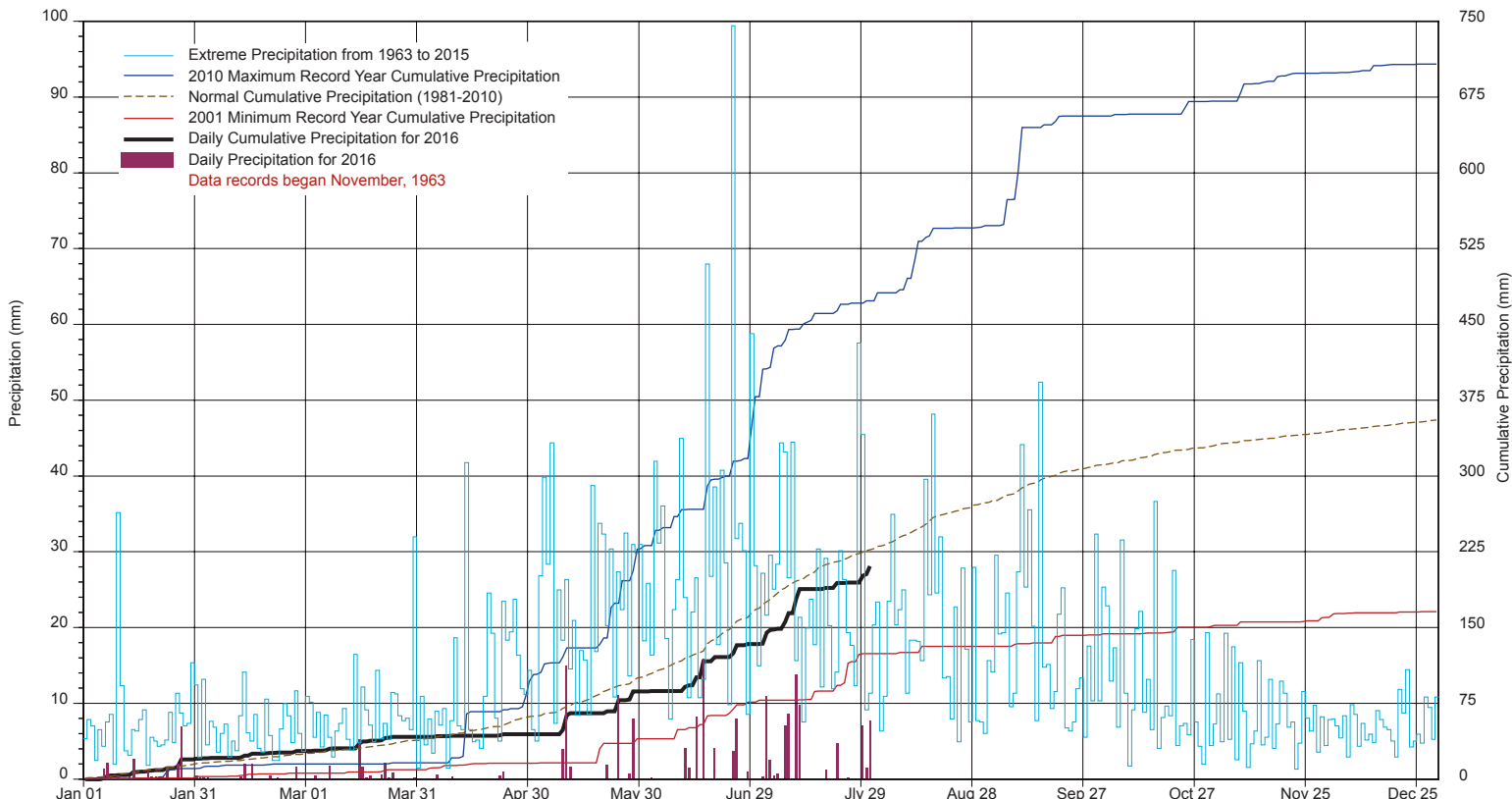


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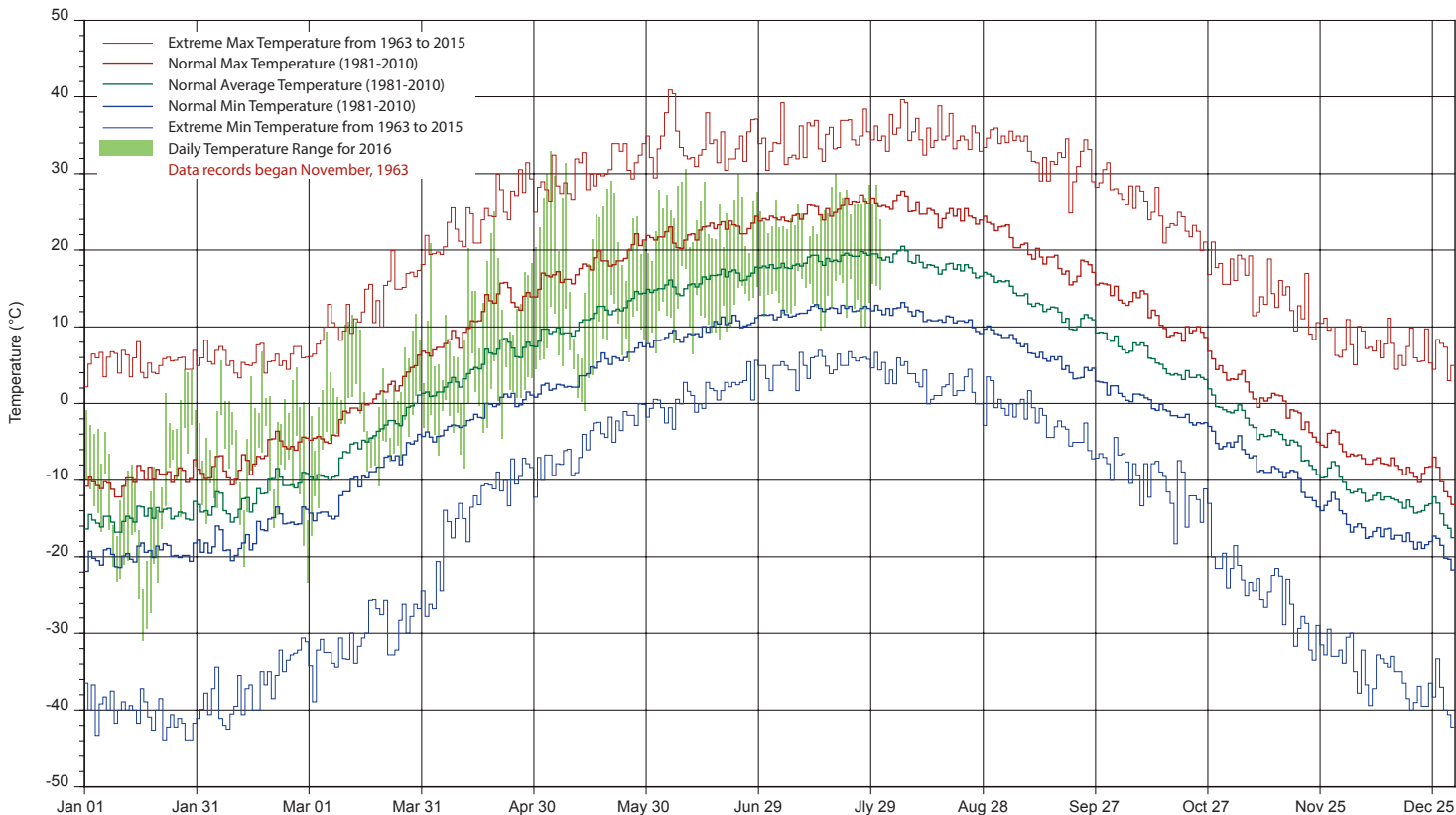
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# SASKATCHEWAN RESEARCH COUNCIL SASKATOON CLIMATE REFERENCE STATION 2016 PRECIPITATION AND NORMALS



## 2016 TEMPERATURES AND NORMALS



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