



# SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

## SASKATOON STATION 4057180

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

Preliminary **NOVEMBER 2016**

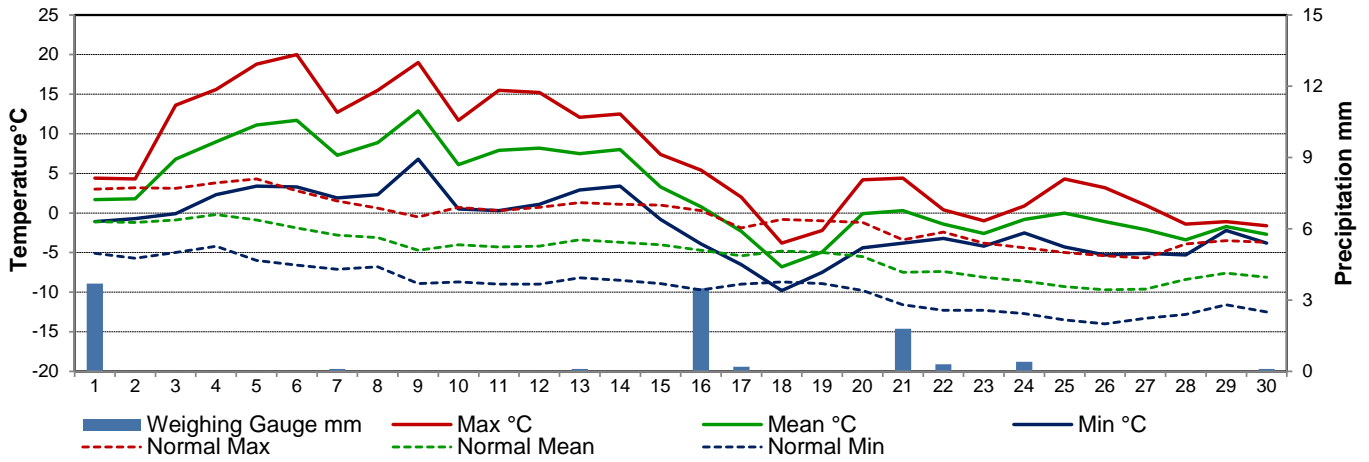
Day	Temperature						Degree-days			Precipitation			Relative Humidity		Station Pressure (sea level)	
	Max	Normal Max	Min	Normal Min	Mean	Normal Mean	Growing	Heating	Cooling	Weighing Gauge	Notes	Snow-on-Ground 0900h	Max ½ hr Avg	Min ½ hr Avg	Max ½ hr Avg	Min ½ hr Avg
	°C	1981-2010	°C	1981-2010	°C	1981-2010	5°C base	18°C base	18°C base	mm		cm	%	%	mbar	mbar
1	4.4	3.0	-1.1	-5.1	1.7	-1.1	0.0	16.3	0.0	3.7	rain/snow mix	0	95	83	1014	999
2	4.3	3.2	-0.7	-5.7	1.8	-1.2	0.0	16.2	0.0	0.0		0	94	86	1016	1013
3	13.6	3.1	-0.1	-5.0	6.8	-0.9	1.8	11.2	0.0	0.0		0	98	60	1017	1012
4	15.6	3.8	2.3	-4.2	9.0	-0.2	4.0	9.0	0.0	0.0		0	86	44	1019	1013
5	18.8	4.3	3.4	-6.0	11.1	-0.9	6.1	6.9	0.0	0.0		0	81	30	1013	1005
6	20.0	2.8	3.3	-6.6	11.7	-1.9	6.7	6.3	0.0	0.0		0	82	26	1009	1001
7	12.7	1.5	1.9	-7.1	7.3	-2.8	2.3	10.7	0.0	0.1		0	94	57	1023	1010
8	15.5	0.6	2.3	-6.8	8.9	-3.1	3.9	9.1	0.0	0.0		0	89	53	1022	1012
9	19.0	-0.5	6.8	-8.9	12.9	-4.7	7.9	5.1	0.0	0.0		0	75	37	1017	1009
10	11.7	0.7	0.5	-8.7	6.1	-4.0	1.1	11.9	0.0	0.0		0	86	45	1028	1018
11	15.5	0.3	0.3	-9.0	7.9	-4.3	2.9	10.1	0.0	0.0		0	80	43	1026	1009
12	15.2	0.7	1.1	-9.0	8.2	-4.2	3.2	9.8	0.0	0.0		0	89	45	1010	998
13	12.1	1.3	2.9	-8.2	7.5	-3.4	2.5	10.5	0.0	0.1		0	90	49	1012	1000
14	12.5	1.1	3.4	-8.5	8.0	-3.7	3.0	10.0	0.0	0.0		0	86	45	1009	1000
15	7.4	1.0	-0.8	-8.9	3.3	-4.0	0.0	14.7	0.0	0.0		0	74	44	1010	1002
16	5.4	0.3	-3.9	-9.7	0.8	-4.7	0.0	17.2	0.0	3.5	rain/snow mix	1	97	60	1013	998
17	2.0	-1.9	-6.5	-9.0	-2.3	-5.4	0.0	20.3	0.0	0.2		0	97	70	1026	1000
18	-3.8	-0.8	-9.8	-8.7	-6.8	-4.8	0.0	24.8	0.0	0.0		0	89	67	1030	1026
19	-2.2	-1.0	-7.5	-8.9	-4.9	-5.0	0.0	22.9	0.0	0.0		0	88	76	1028	1014
20	4.2	-1.2	-4.4	-9.8	-0.1	-5.5	0.0	18.1	0.0	0.0		0	91	62	1014	1010
21	4.4	-3.4	-3.8	-11.6	0.3	-7.5	0.0	17.7	0.0	1.8	rain/snow mix	0	97	82	1010	1004
22	0.4	-2.4	-3.2	-12.3	-1.4	-7.4	0.0	19.4	0.0	0.3		0	97	90	1020	1007
23	-1.0	-3.8	-4.2	-12.3	-2.6	-8.1	0.0	20.6	0.0	0.0		0	97	91	1020	1013
24	0.9	-4.4	-2.5	-12.7	-0.8	-8.6	0.0	18.8	0.0	0.4	light snow	0	98	90	1016	1014
25	4.3	-5.0	-4.3	-13.5	0.0	-9.3	0.0	18.0	0.0	0.0		0	98	68	1015	1006
26	3.2	-5.4	-5.3	-14.0	-1.1	-9.7	0.0	19.1	0.0	0.0		0	92	67	1014	1001
27	1.0	-5.7	-5.1	-13.3	-2.1	-9.6	0.0	20.1	0.0	0.0		0	96	80	1001	992
28	-1.4	-3.9	-5.3	-12.8	-3.4	-8.4	0.0	21.4	0.0	0.0		0	97	87	1002	992
29	-1.1	-3.5	-2.2	-11.6	-1.7	-7.6	0.0	19.7	0.0	0.0		0	88	77	1014	1003
30	-1.6	-3.7	-3.8	-12.5	-2.7	-8.1	0.0	20.7	0.0	0.1		0	95	84	1014	1012
Total							45.4	456.6	0.0	10.2			Extreme / Date	Extreme / Date	Extreme / Date	Extreme / Date
Avg	7.1	-0.6	-1.5	-9.4	2.8	-5.0	1981-2010 Normal			13.4	Normal					
Extreme Date	20.0		-9.8				2.9	690.1	0.0	353.4	Cumulative		98	26	1030	992
	6		18							342.6	Cumulative Norm		3	6	18	27

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

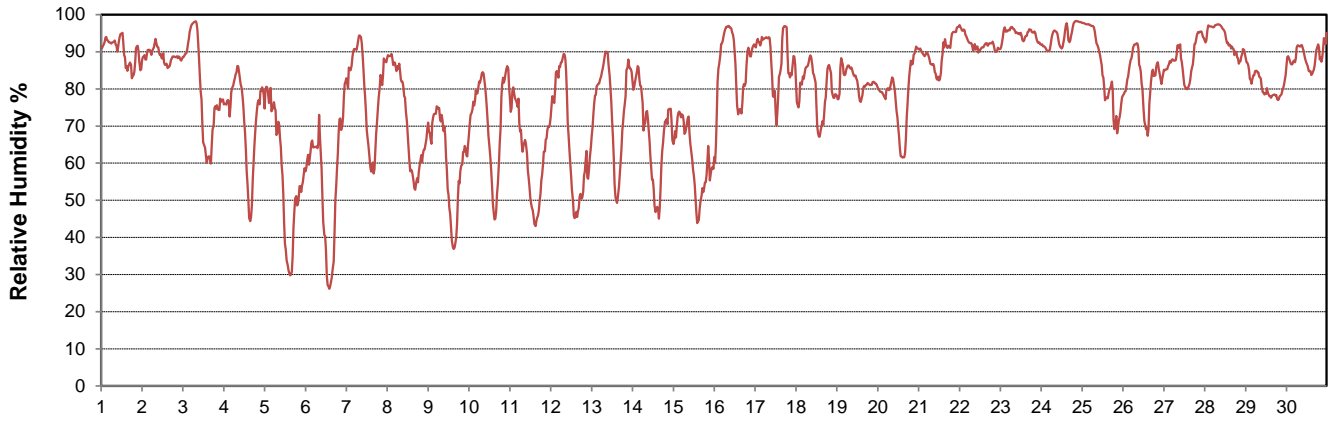
### SRC proudly recognizes the following CRS supporters:



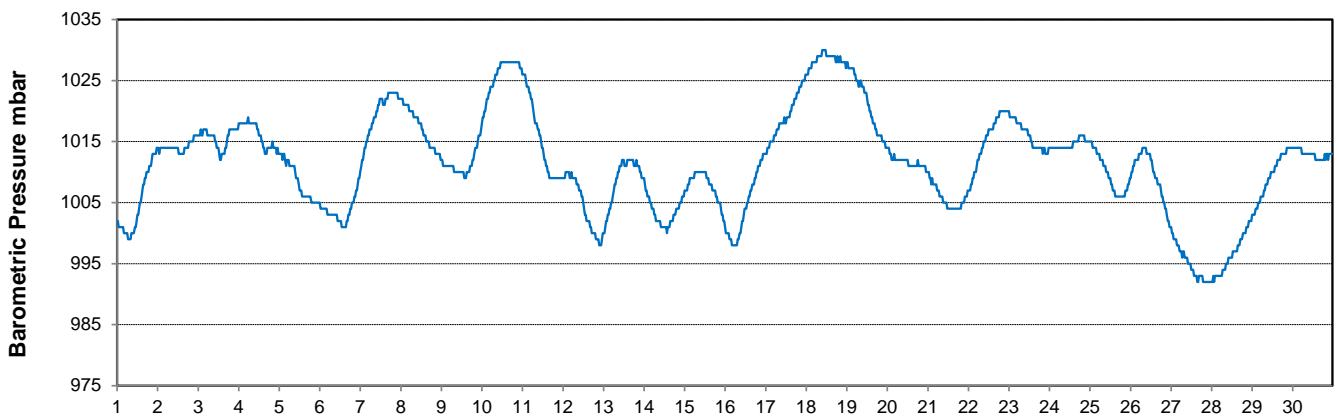
### Temperature and Precipitation for November 2016



### Relative Humidity for November 2016



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





# SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

**SASKATOON STATION 4057180**

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

Preliminary **NOVEMBER 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	37.7	N	13:38	3.5	4.0	4.5	5.0	6.5	8.0	9.0	10.0		0.0	9.6	0.0	2.2	1.8
2	22.9	SE	12:46	0.5	2.5	3.0	4.0	6.0	8.0	8.5	10.0		0.0	9.5	0.0	2.1	1.7
3	27.5	SW	14:05	0.5	3.5	4.0	4.5	6.0	7.5	8.5	10.0		6.9	9.4	73.1	6.1	2.3
4	22.9	S	23:53	2.0	3.5	4.0	5.0	6.0	7.5	8.5	10.0	24	4.8	9.4	51.2	5.1	2.0
5	36.1	SW	14:49	3.5	3.0	4.0	4.5	6.0	7.5	8.5	10.0	24	9.0	9.3	96.6	7.0	0.9
6	32.4	NW	23:36	4.5	4.0	5.0	5.5	6.0	7.5	8.5	9.5	24	7.2	9.3	77.8	6.9	2.2
7	36.0	NW	1:26	1.5	5.0	5.5	6.0	6.5	7.5	8.5	9.5	24	8.4	9.2	91.2	6.7	0.9
8	26.5	SSW	21:08	3.5	4.0	4.5	5.5	6.5	7.5	8.5	9.5	24	2.0	9.2	21.9	3.4	2.4
9	39.0	NW	21:07	7.5	5.0	5.5	5.5	6.5	7.5	8.5	9.5	24	7.2	9.1	79.2	6.1	1.1
10	30.9	NW	3:39	1.0	4.5	5.5	6.0	7.0	7.5	8.5	9.5	24	8.6	9.0	95.1	5.8	0.9
11	45.4	S	8:58	5.0	3.0	4.0	5.0	6.5	7.5	8.5	9.5	24	8.5	9.0	94.7	6.1	1.2
12	41.0	NW	4:11	1.0	3.5	4.5	5.0	6.5	7.5	8.5	9.5	24	7.4	8.9	82.9	6.0	1.1
13	37.9	NW	23:45	4.0	5.5	6.0	6.0	6.5	7.5	8.0	9.5	24	5.4	8.9	60.9	4.2	1.6
14	36.5	WNW	15:33	4.5	4.5	5.0	5.5	6.5	7.5	8.0	9.5	24	6.9	8.8	78.2	5.3	1.0
15	28.2	W	6:41	-0.5	3.0	4.0	5.0	6.5	7.5	8.0	9.5	23	7.0	8.8	79.8	5.4	0.9
16	46.8	NNE	8:52	0.5	3.0	4.0	4.5	6.0	7.5	8.0	9.5	24	3.9	8.7	44.8	3.3	2.0
17	25.5	NNE	23:59	-7.5	1.0	2.0	3.5	6.0	7.5	8.0	9.0	23	6.7	8.7	77.4	6.5	1.2
18	28.6	N	0:31	-10.0	0.5	1.5	2.5	5.0	7.0	8.0	9.0	22	6.5	8.6	75.5	6.0	1.2
19	48.5	ESE	16:41	-7.0	0.0	1.0	2.0	4.5	7.0	8.0	9.0	22	0.1	8.6	1.2	2.4	2.0
20	37.7	SE	0:18	-2.5	0.0	0.5	1.5	4.5	7.0	8.0	9.0	21	8.0	8.5	93.9	4.9	0.7
21	39.3	ESE	8:47	-2.0	0.0	0.5	1.5	4.0	6.5	8.0	9.0	21	0.2	8.5	2.4	1.3	1.1
22	32.9	NNW	9:36	-1.5	0.0	0.5	1.5	4.0	6.5	7.5	9.0	22	0.0	8.4	0.0	0.9	0.7
23	39.3	SSE	18:15	-3.5	0.0	0.5	1.5	3.5	6.5	7.5	9.0	22	0.0	8.4	0.0	1.6	1.4
24	32.9	SSE	0:03	0.0	0.0	0.5	1.5	3.5	6.0	7.5	9.0	22	0.0	8.3	0.0	1.7	1.5
25	25.2	SW	20:38	-4.0	0.0	0.5	1.5	3.5	6.0	7.5	9.0	22	2.8	8.3	33.8	3.7	2.2
26	37.9	SE	21:42	-6.5	0.0	0.5	1.5	3.5	6.0	7.0	9.0	21	6.6	8.3	80.0	5.2	1.0
27	35.1	SE	0:49	-5.0	0.0	0.5	1.0	3.5	6.0	7.0	9.0	21	1.8	8.2	21.9	2.4	1.6
28	49.2	N	21:23	-2.5	0.0	0.5	1.0	3.0	5.5	7.0	9.0	21	0.0	8.2	0.0	0.4	0.3
29	48.1	N	0:42	-1.5	0.0	0.5	1.0	3.0	5.5	7.0	8.5	21	0.0	8.1	0.0	0.4	0.4
30	20.4	NNW	4:44	-3.0	-0.5	0.5	1.0	3.0	5.5	7.0	8.5	21	0.0	8.1	0.0	1.3	1.1
Total													125.9	263.16	47.8	120.4	40.4
Mean				-0.5	2.1	2.8	3.5	5.2	7.0	8.0	9.3	22.7	1981-2010 Normal for Radiation				
Extreme	49.2	N	21:23	1971- 2000 Normal for Soil Temperatures									97.0	270.3	35.9	127.2	63.8
Date	28				-2.2	-1.7	-0.5	3.0	5.6	6.8	8.1		No. of Bright Sunshine days = 22				

Note: Red numbers indicate manual calculation

New soil moisture sensor installed Nov 3, 2016

## SRC proudly recognizes the following CRS supporters:

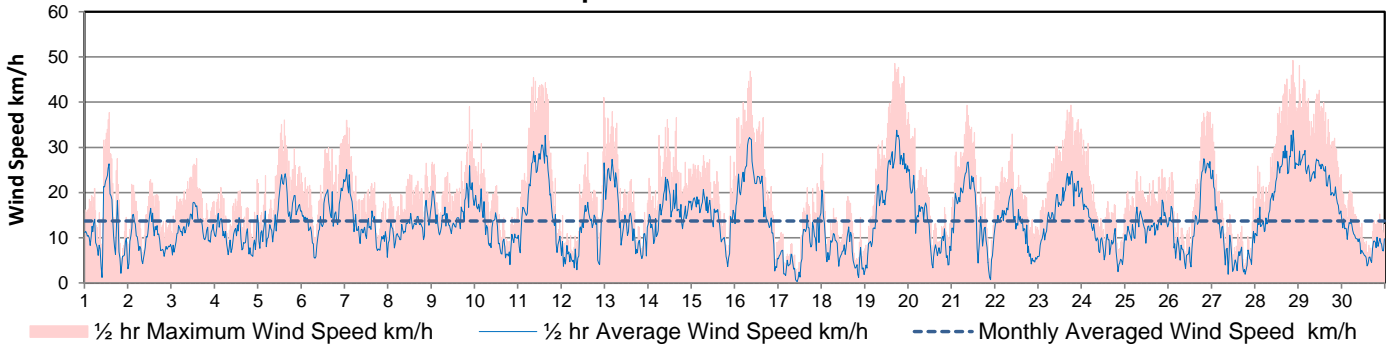


Agriculture and Agri-Food Canada

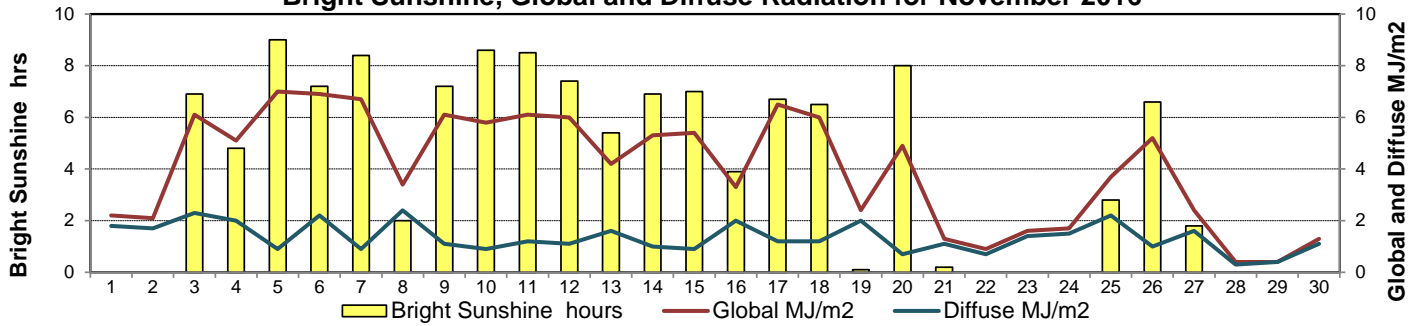
Agriculture et Agroalimentaire Canada



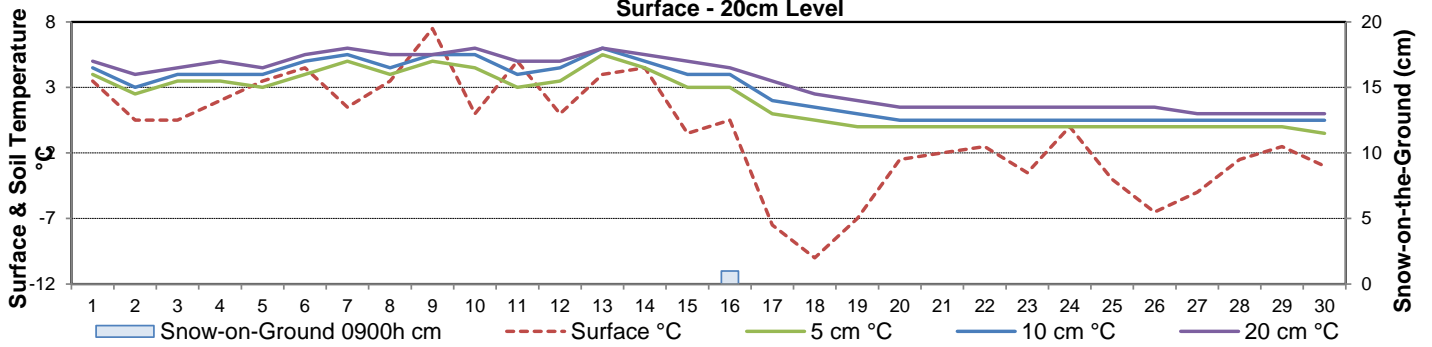
**Wind Speed for November 2016**



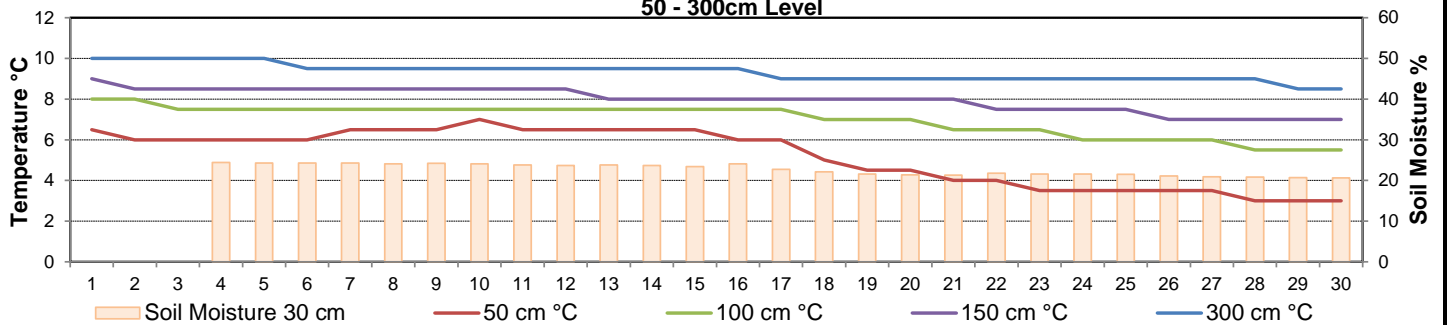
**Bright Sunshine, Global and Diffuse Radiation for November 2016**



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



**Soil Temperatures for November 2016  
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 **NOVEMBER 2016**

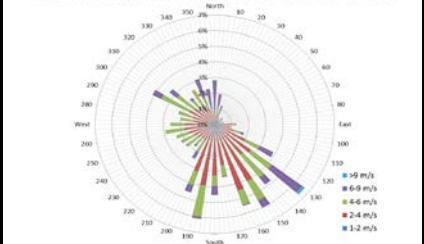
**Extreme Records for November**

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
21.7	03/1903	SE	19.4	04/1975	57.3	1940	SE	48.2	1973	100 <sup>W</sup>	17/1976	101	1976	188.5	1976	30	1976
-39.4	30/1893	SM	-33.5	24/1985	0.0	2002*	SWT*	0.4	2009					37.2	1972	10	1972

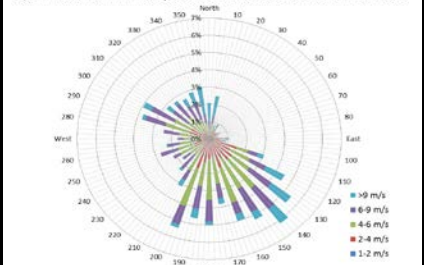
\*\*1975 forward \* more than one year

Notable Events for CRS Saskatoon - November						Saskatoon Area Stations			Glossary	
Element	Type	Day	New Record	Old Record	Year (day)	Station	Location	Period	Term	Definition
Temperature	Highest Maximum Daily	6	20.0	16.8	2009	SM	NWMP	c. 1892-1901	T	Trace of precipitation
	Highest Maximum Daily	8	15.5	11.5	1999	SE	Eby	1901-1941	Normal	30 year average beginning with the decade
	Highest Maximum Daily	9	19.0	12.0	1981	US	Univ. of Sask.	1915-1964	SOG	Depth of snow-on-the-ground in cm
	Highest Maximum Daily	11	15.5	13.0	1981	S	Saskatoon	1941-1942	na	not available
	Highest Maximum Monthly	6	20.0	19.4	1975 (4)	SA	Saskatoon A	1942 -	<b>Degree-days</b>	
	Average Maximum Monthly		7.1	6.7	2009	NRC	Nat. Res. Council	1952-1966	Tm	Mean Temperature
	Highest Minimum Daily	8	2.3	0.6	1970	SRC	Sask. Res. Council	1963-	Growing	(Tm-5°C); if Tm ≤ 5°C then GDD = 0
	Highest Minimum Daily	9	6.8	-0.6	2010	SWT	S'toon Water Treatment Plant	1974 -	Heating	(18°C-Tm); if Tm ≤ 18°C then HDD = 0
	Highest Minimum Daily	13	2.9	-0.5	1981	SC	S'toon Central Ave	1974-1989	Cooling	(Tm-18°C); if Tm ≥ 18°C then CDD = 0
	Highest Minimum Daily	14	3.4	1.2	2001	S1	Saskatoon 1	1976-1978	<b>Extreme Cooling</b>	
	Highest Minimum Daily	29	-2.2	-2.3	2004	S2	Saskatoon 2	1977-1990	(Tm-24°C); if Tm ≥ 24°C then CDD = 0	
	Highest Max temp of Daily Minimum during Month	9	6.8	6.1	1975 (5)	K	S'toon Kernen Farm	1993-2004		
	Highest Daily Minimum of Minimum during Month	18	-9.8	-10.5	1981 (30)	KCS	S'toon Kernen Farm CS	1996-		
	Average Minimum Monthly		-1.5	-3.7	1981	RCS	Environment Canada	2008-		
	Highest Mean Daily	6	11.7	9.3	2009	SF	Sutherland Forestry	1943-1970		
	Highest Mean Daily	8	8.9	5.1	1999					
	Highest Mean Daily	9	12.9	4.6	2001					
	Highest Mean Daily	11	7.9	5.8	1981					
	Highest Mean Daily	13	7.5	5.3	1990					
	Highest Mean Daily	14	8	6.9	2001					
Highest Mean Monthly	9	12.9	12.5	1975 (5)						
Average Mean Monthly		2.8	1.1	2009						
						<b>Type</b>	<b>New Record</b>	<b>Old Record</b>	<b>Year (day)</b>	
						No. of days ≥10°C	12	8	1981	
						No. of days ≥20°C	1	0	1963-2015	
						No. of Frost Free Days	11	7	2005	
						No. of days ≤ 2°	23	27	2015	
						No. of days ≤ -2°	15	18	1970	
						No. of days ≤ -10°	0	1	1981	
						Total Monthly Growing Degree-days	45.4	16.4	1975	
						Lowest Monthly Heating Degree-Day	456.6	505.8	2009	
						Autumn Average Min Temperatures	1.5	1.3	2009	

10 minute Average Wind Speed and Direction Saskatoon Nov 2016



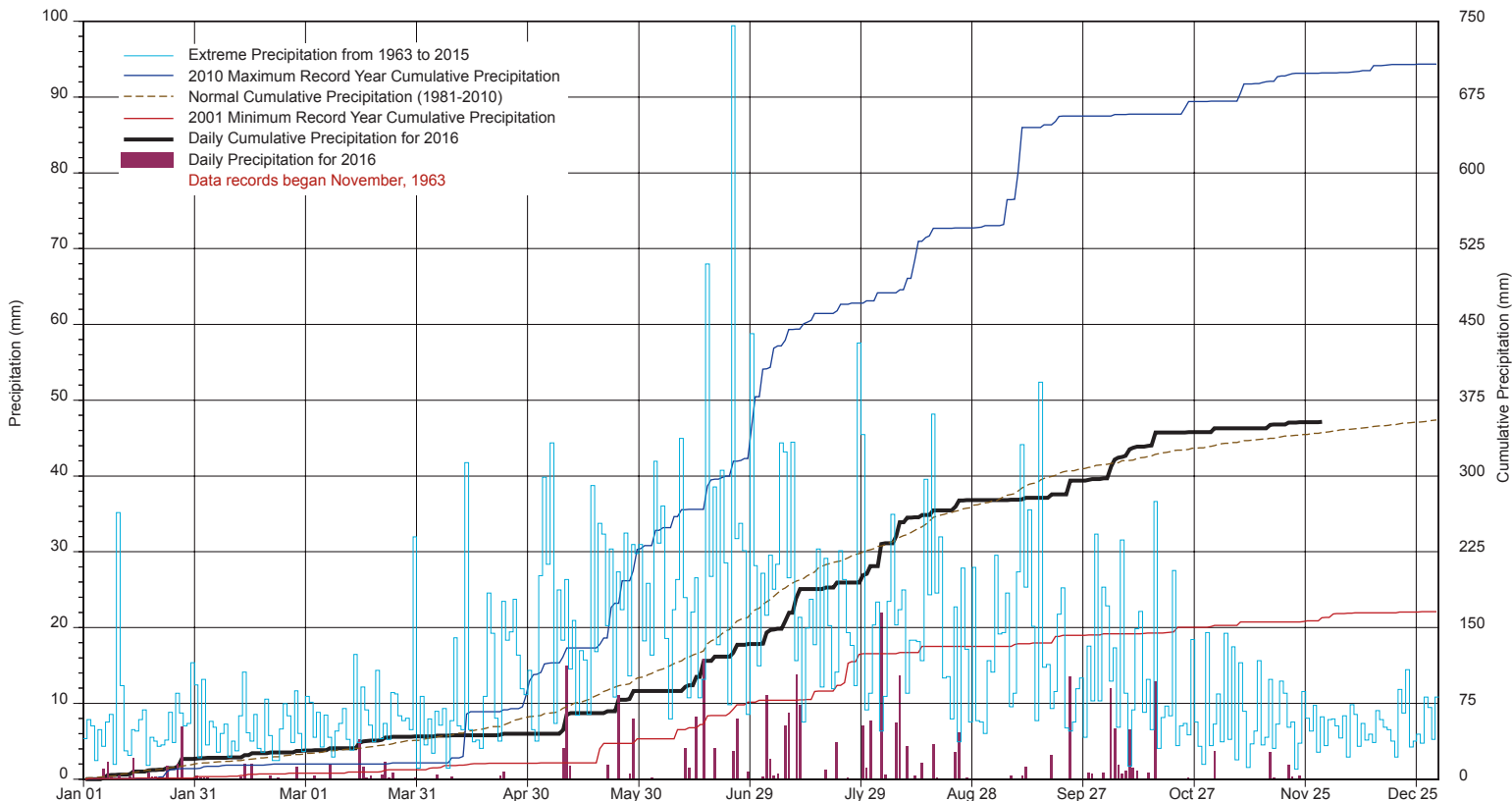
1/2 hr Maximum Wind Speed and Direction Saskatoon Nov 2016



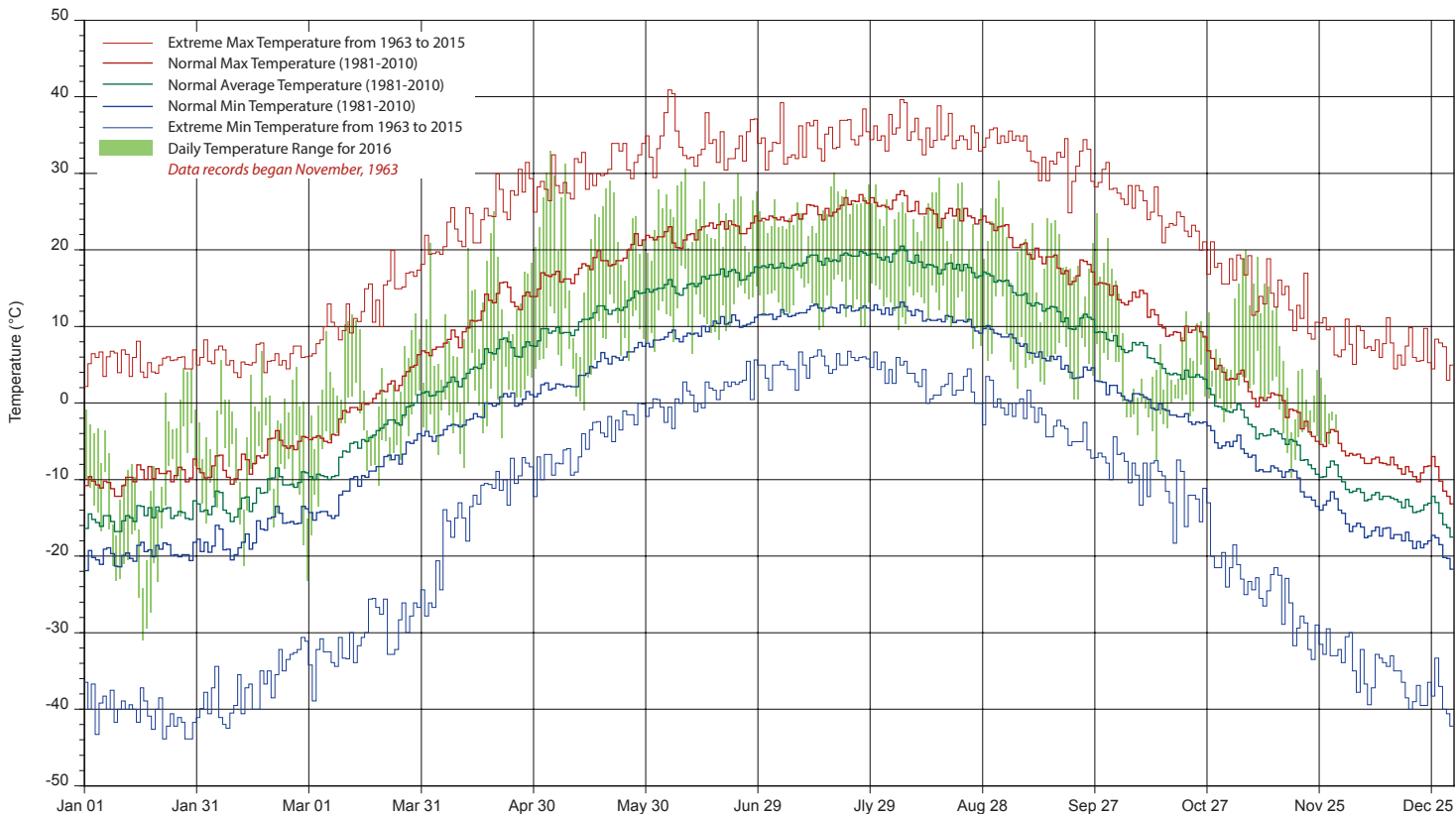
**SRC proudly recognizes the following CRS supporters:**



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



## 2016 TEMPERATURES AND NORMALS



SRC proudly recongnizes the following CRS supporters:

