



# SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

## SASKATOON STATION 4057180

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

Preliminary **DECEMBER 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	Comments	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	-1.3	-5.3	-4.1	-14.0	-2.7	-9.6	0.0	20.7	0.0	0.0		0	97	83	1016	1013
2	-1.5	-6.3	-3.2	-14.4	-2.4	-10.3	0.0	20.4	0.0	0.0		0	88	77	1018	1009
3	-2.4	-6.9	-5.5	-15.8	-4.0	-11.3	0.0	22.0	0.0	0.0		0	94	83	1009	1004
4	0.4	-6.6	-8.3	-16.8	-4.0	-11.7	0.0	22.0	0.0	0.0		0	97	58	1006	1000
5	-4.5	-6.8	-13.7	-16.1	-9.1	-11.5	0.0	27.1	0.0	0.1	light snow	0	87	66	1017	1003
6	-13.6	-6.7	-18.3	-15.7	-16.0	-11.2	0.0	34.0	0.0	0.0		0	77	67	1024	1017
7	-14.0	-7.2	-18.5	-16.2	-16.3	-11.7	0.0	34.3	0.0	0.0		0	81	68	1036	1024
8	-17.9	-7.9	-23.5	-17.6	-20.7	-12.8	0.0	38.7	0.0	0.0		0	81	71	1037	1035
9	-19.5	-7.9	-24.4	-17.4	-22.0	-12.6	0.0	40.0	0.0	0.0		0	81	68	1036	1028
10	-16.8	-7.3	-24.4	-16.7	-20.6	-12.0	0.0	38.6	0.0	0.3	light snow	0	80	72	1028	1016
11	-16.2	-7.1	-22.1	-16.2	-19.2	-11.7	0.0	37.2	0.0	0.2	light snow	0	83	65	1016	1012
12	-15.2	-7.8	-21.8	-17.4	-18.5	-12.6	0.0	36.5	0.0	0.1		0	79	51	1013	1009
13	-16.9	-7.9	-21.2	-16.4	-19.1	-12.2	0.0	37.1	0.0	0.1		0	84	47	1019	1008
14	-16.4	-8.1	-23.4	-16.3	-19.9	-12.2	0.0	37.9	0.0	0.0		0	80	63	1024	1020
15	-16.1	-7.1	-21.4	-17.7	-18.8	-12.4	0.0	36.8	0.0	0.0		0	84	63	1020	1018
16	-20.8	-8.1	-27.7	-17.2	-24.3	-12.6	0.0	42.3	0.0	0.0		-	80	64	1021	1018
17	-19.6	-8.6	-29.6	-17.2	-24.6	-12.9	0.0	42.6	0.0	0.0		-	80	63	1021	1015
18	0.1	-9.3	-26.3	-18.0	-13.1	-13.7	0.0	31.1	0.0	0.1	light snow	0	86	68	1015	1001
19	1.1	-8.3	-3.6	-16.9	-1.3	-12.6	0.0	19.3	0.0	0.0		0	78	55	1003	994
20	-1.1	-9.0	-11.5	-18.0	-6.3	-13.5	0.0	24.3	0.0	0.0		0	92	50	1006	1000
21	1.5	-9.6	-11.0	-19.0	-4.8	-14.3	0.0	22.8	0.0	0.2	light snow	0	91	56	1012	1004
22	2.4	-10.3	-7.5	-18.1	-2.6	-14.2	0.0	20.6	0.0	0.0		0	83	50	1009	1000
23	-4.1	-9.1	-17.2	-18.9	-10.7	-14.0	0.0	28.7	0.0	0.2	light snow	0	92	74	1021	1001
24	-15.7	-8.3	-19.9	-18.4	-17.8	-13.3	0.0	35.8	0.0	0.4	light snow	0	81	67	1025	1021
25	-13.8	-8.2	-16.9	-18.0	-15.4	-13.1	0.0	33.4	0.0	1.8	light snow	3	84	78	1025	1017
26	-12.3	-7.0	-17.6	-17.3	-15.0	-12.2	0.0	33.0	0.0	0.3	light snow	4	84	71	1017	1012
27	-3.6	-8.3	-19.4	-17.6	-11.5	-13.0	0.0	29.5	0.0	0.0		5	86	77	1012	995
28	-0.4	-10.2	-10.0	-18.5	-5.2	-14.4	0.0	23.2	0.0	0.0		3	81	67	1012	998
29	-3.6	-11.5	-11.2	-20.2	-7.4	-15.9	0.0	25.4	0.0	0.0		3	81	63	1019	1007
30	-6.1	-12.2	-13.2	-20.3	-9.7	-16.3	0.0	27.7	0.0	6.3	snow	13	94	74	1008	1001
31	-6.1	-13.2	-15.7	-21.7	-10.9	-17.5	0.0	28.9	0.0	0.1	light snow	12	89	76	1008	997
Total							0.0	951.9	0.0	10.2			Extreme / Date	Extreme / Date	Extreme / Date	Extreme / Date
Avg	-8.8	-8.3	-16.5	-17.4	-12.7	-12.9	1981-2010 Normal			12.7	Normal					
Extreme	2.4		-29.6				0.1	957.5	0.0	363.6	Cumulative		97	47	1037	994
Date	22		17							355.3	Cumulative No		1	13	8	19

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

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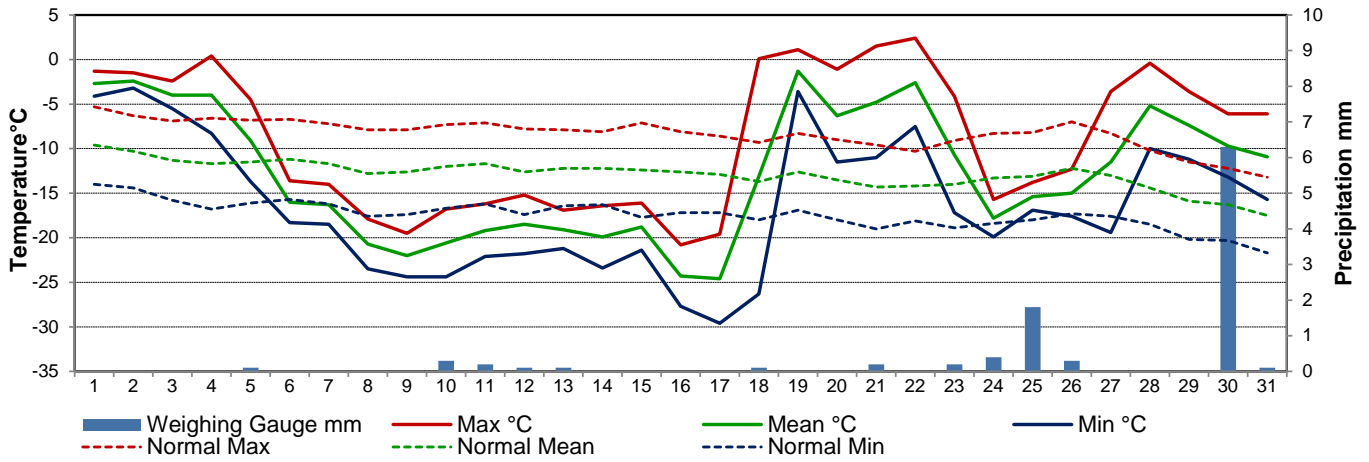


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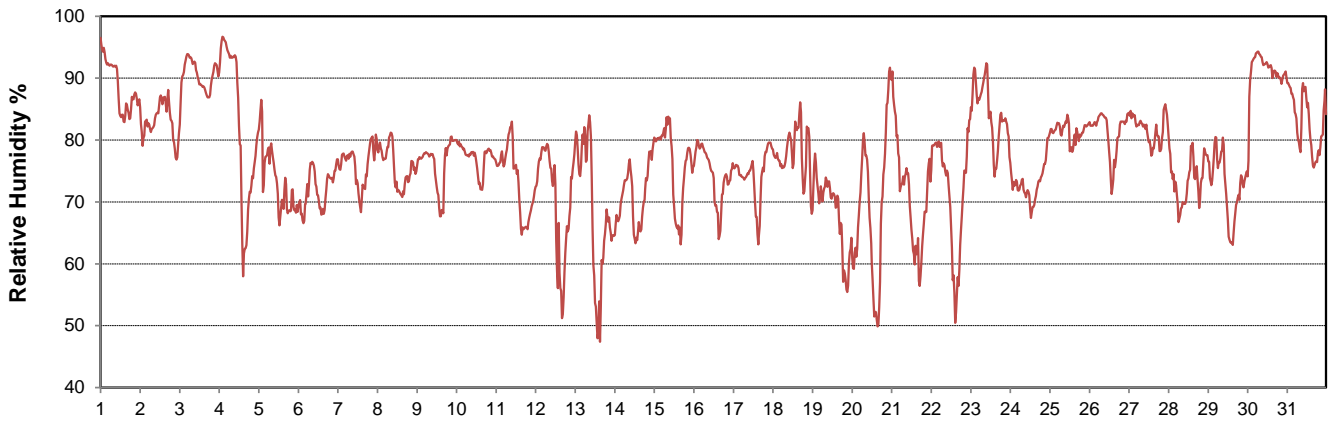
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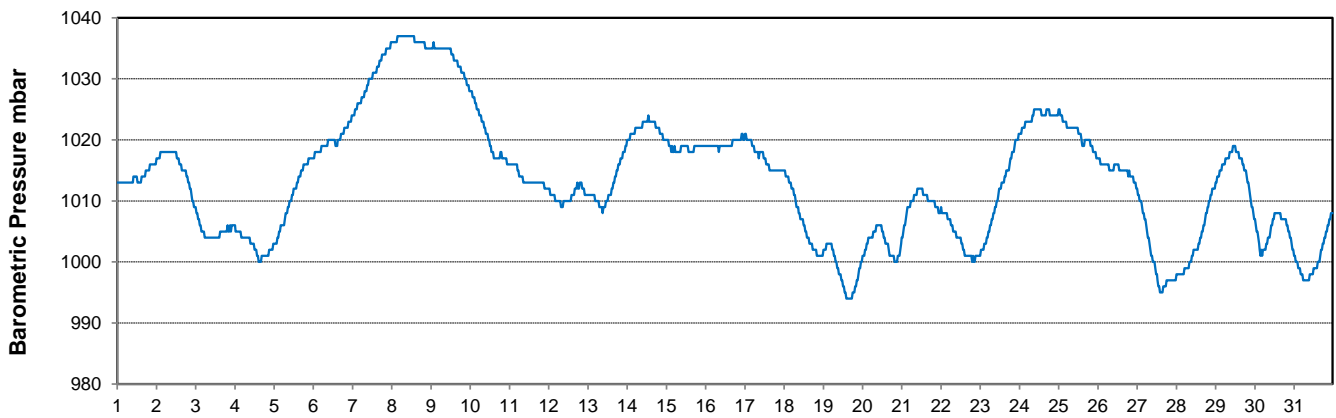
### Temperature and Precipitation for December 2016



### Relative Humidity for December 2016



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





# SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

**SASKATOON STATION 4057180**

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

Preliminary **DECEMBER 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	18.3	SE	13:38	-3.5	-0.5	0.5	1.0	3.0	5.5	6.5	8.5	20.4	0.0	8.1	0.0	1.8	1.5
2	29.5	SE	22:23	-2.0	0.0	0.5	1.0	3.0	5.5	6.5	8.5	20.4	0.0	8.0	0.0	0.5	0.4
3	29.1	ESE	2:33	-5.5	-0.5	0.0	0.5	3.0	5.0	6.5	8.5	19.9	0.2	8.0	2.5	1.4	1.1
4	17.3	WSW	0:18	-8.5	-1.0	0.0	0.5	2.5	5.0	6.5	8.5	19.5	2.9	8.0	36.4	3.5	1.3
5	42.9	NW	3:12	-9.0	-1.5	-0.5	0.5	2.5	5.0	6.5	8.5	18.8	0.0	7.9	0.0	1.3	1.1
6	38.9	NW	19:13	-18.0	-4.0	-2.0	0.0	2.5	5.0	6.5	8.5	16.7	3.5	7.9	44.2	2.4	1.6
7	34.6	NW	6:50	-17.5	-6.0	-4.0	-1.0	2.0	5.0	6.0	8.5	13.2	4.0	7.9	50.7	3.1	1.8
8	22.2	NW	18:04	-21.5	-7.0	-5.5	-2.5	2.0	4.5	6.0	8.0	10.5	7.1	7.9	90.2	4.4	1.3
9	13.1	NW	11:56	-24.5	-9.0	-7.0	-4.0	1.5	4.5	6.0	8.0	9.5	6.4	7.9	81.5	4.5	1.0
10	23.5	SE	12:52	-23.5	-10.0	-8.5	-5.5	1.0	4.5	6.0	8.0	8.9	6.2	7.8	79.2	5.1	1.0
11	43.6	WNW	14:33	-18.0	-9.5	-8.5	-6.0	0.5	4.0	6.0	8.0	8.8	1.0	7.8	12.8	1.8	1.3
12	54.3	WNW	17:46	-19.5	-10.0	-9.0	-7.0	0.0	4.0	5.5	8.0	8.6	5.3	7.8	68.0	3.5	1.7
13	38.8	NW	13:05	-14.5	-9.5	-8.5	-7.0	-0.5	3.5	5.5	8.0	8.7	5.1	7.8	65.6	3.2	1.3
14	33.8	NW	12:30	-22.0	-11.0	-9.5	-7.5	-1.0	3.5	5.5	8.0	8.3	4.8	7.8	61.9	3.0	1.6
15	27.0	NNE	11:33	-20.0	-11.0	-9.5	-7.5	-1.5	3.5	5.5	8.0	8.3	5.5	7.8	71.0	3.8	1.6
16	30.9	NW	16:26	-26.0	-11.5	-10.0	-8.0	-2.0	3.0	5.0	7.5	8.1	6.9	7.7	89.1	5.3	1.2
17	16.5	SSW	10:26	-29.0	-13.5	-12.0	-9.5	-2.5	3.0	5.0	7.5	7.7	7.0	7.7	90.6	5.3	0.9
18	32.8	WSW	20:29	-20.0	-13.0	-12.5	-10.0	-3.0	2.5	5.0	7.5	7.7	0.6	7.7	7.8	2.2	1.6
19	48.1	WNW	22:29	-4.0	-7.5	-7.5	-7.0	-3.5	2.5	4.5	7.5	8.5	0.0	7.7	0.0	1.5	1.2
20	19.2	SE	18:07	-6.5	-6.0	-6.0	-5.0	-3.0	2.0	4.5	7.5	8.8	7.0	7.7	90.7	3.7	0.6
21	33.9	WSW	19:24	-9.5	-7.5	-7.0	-5.5	-2.5	2.0	4.5	7.5	8.7	4.2	7.7	54.4	2.7	1.2
22	25.0	SW	13:33	-6.5	-6.5	-6.0	-5.0	-2.5	2.0	4.0	7.5	8.9	3.4	7.7	44.0	2.8	1.6
23	32.7	NNE	12:45	-7.0	-6.0	-6.0	-5.0	-2.5	1.5	4.0	7.0	9	2.2	7.7	28.5	2.1	1.3
24	29.3	E	14:10	-18.5	-8.5	-7.5	-6.0	-2.5	1.5	4.0	7.0	8.5	1.6	7.7	20.7	2.3	1.6
25	29.8	E	5:48	-15.5	-8.0	-7.5	-6.5	-3.0	1.5	3.5	7.0	8.4	1.3	7.7	16.8	2.3	1.7
26	20.4	NNE	0:49	-15.0	-7.0	-6.5	-6.0	-3.0	1.5	3.5	7.0	8.5	3.6	7.8	46.5	3.1	1.3
27	24.8	W	15:19	-15.0	-6.5	-6.0	-5.5	-3.0	1.5	3.5	7.0	8.6	0.0	7.8	0.0	1.6	1.4
28	45.0	NW	18:08	-9.0	-6.0	-5.5	-5.0	-2.5	1.0	3.5	7.0	8.7	2.3	7.8	29.6	2.6	1.5
29	32.0	WNW	2:23	-12.5	-5.0	-4.5	-4.0	-2.5	1.0	3.5	6.5	8.9	6.1	7.8	78.3	3.6	0.7
30	37.6	NNE	7:34	-8.0	-4.5	-4.5	-4.0	-2.5	1.0	3.0	6.5	9.1	0.6	7.8	7.7	2.2	1.8
31	33.8	W	4:49	-6.5	-4.5	-4.0	-3.5	-2.0	1.0	3.0	6.5	9.2	0.4	7.8	5.1	2.3	1.9
Total													99.2	242.23	41.0	88.9	41.1
Mean				-14.1	-6.8	-6.0	-4.5	-0.7	3.1	5.0	7.7	10.9	1981-2010 Normal for Radiation				
Extreme	54.3	WNW	17:46	1971- 2000 Normal for Soil Temperatures									85.7	242.3	35.4	100.0	50.0
Date	12			-7.1	-6.6	-5.6	-1.7	2.0	3.8	6.4		No. of Bright Sunshine days = 26					

Note: Red numbers indicate manual calculation

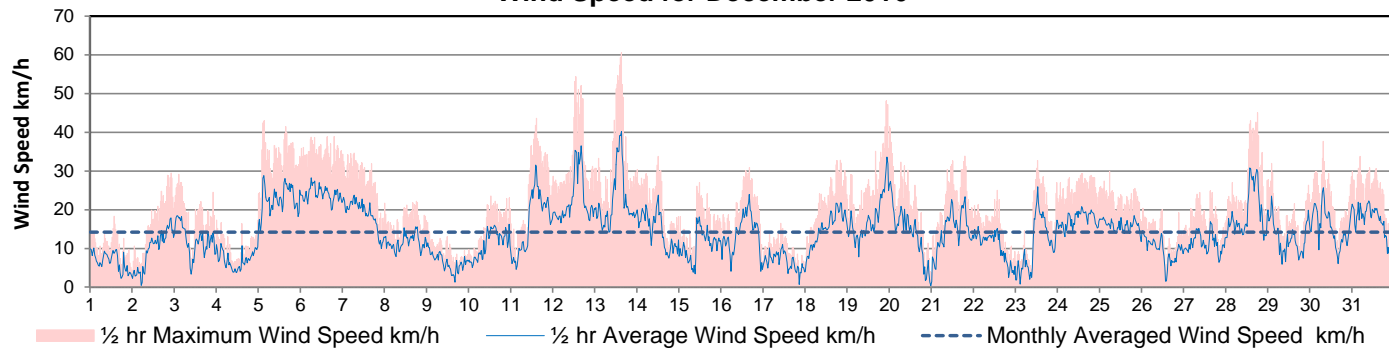
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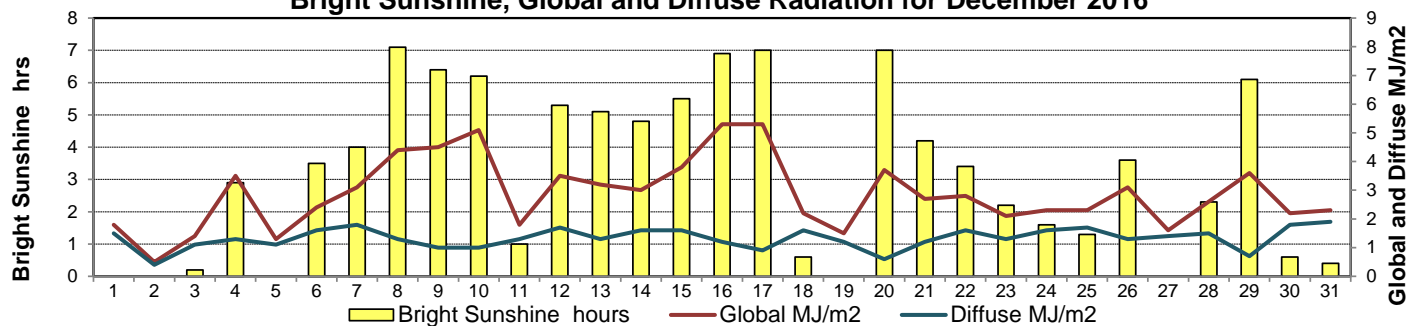
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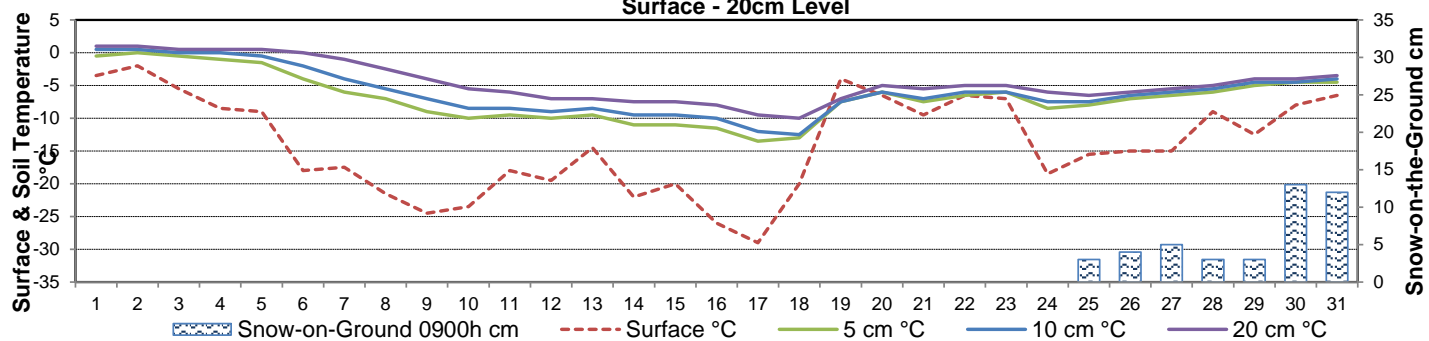
### Wind Speed for December 2016



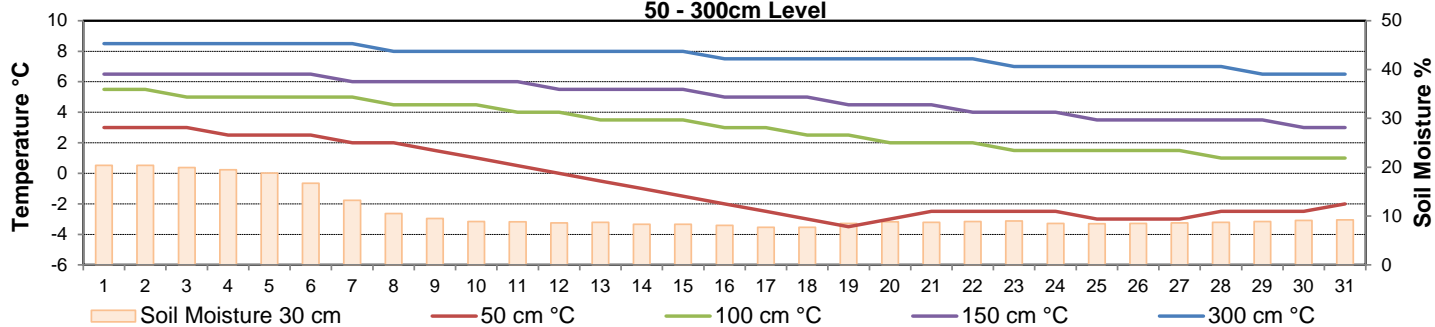
### Bright Sunshine, Global and Diffuse Radiation for December 2016



### Soil Temperatures for December 2016 Surface - 20cm Level



### Soil Temperatures for December 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 **DECEMBER 2015**

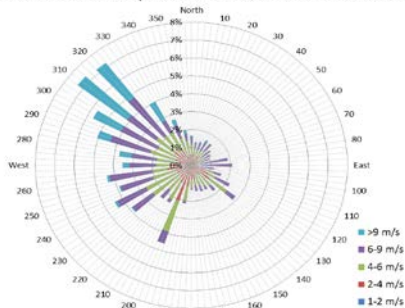
### Extreme Records for December

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
14.4	05/1939	SE	11.2	14/1997	59.2	1956	SA	48.2	1973	121 <sup>W</sup>	12/1955	89.4	1992	123.3	2006	27	1994*
-43.9	22/1892	SM	-42.2	31/1973	0.0	1906, '30	SE	0.4	2009					49.1	1973	17	1966*

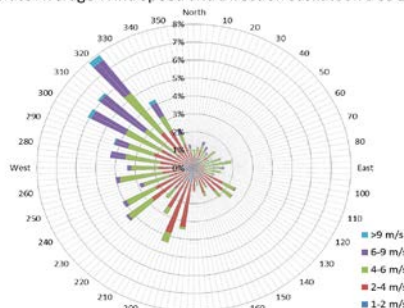
\*\*1975 forward \* more than one year

Notable Events for CRS Saskatoon - December						Saskatoon Area Stations			Glossary	
Element	Type	Day	New Record	Old Record	Year	Station	Location	Period	Term	Definition
Temperature	Highest Minimum Daily	19	-3.6	-4	1988	SM	NWMP	c. 1892-1901	T	Trace of precipitation
Precipitation	Total Daily	30	6.3	5.3	1965	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	Site maintenance on Dec 9, 13, 20	
						K	S'toon Kernen Farm	1993-2004		
						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 Dec 2016



10 minute Average Wind Speed and Direction Saskatoon Dec 2016



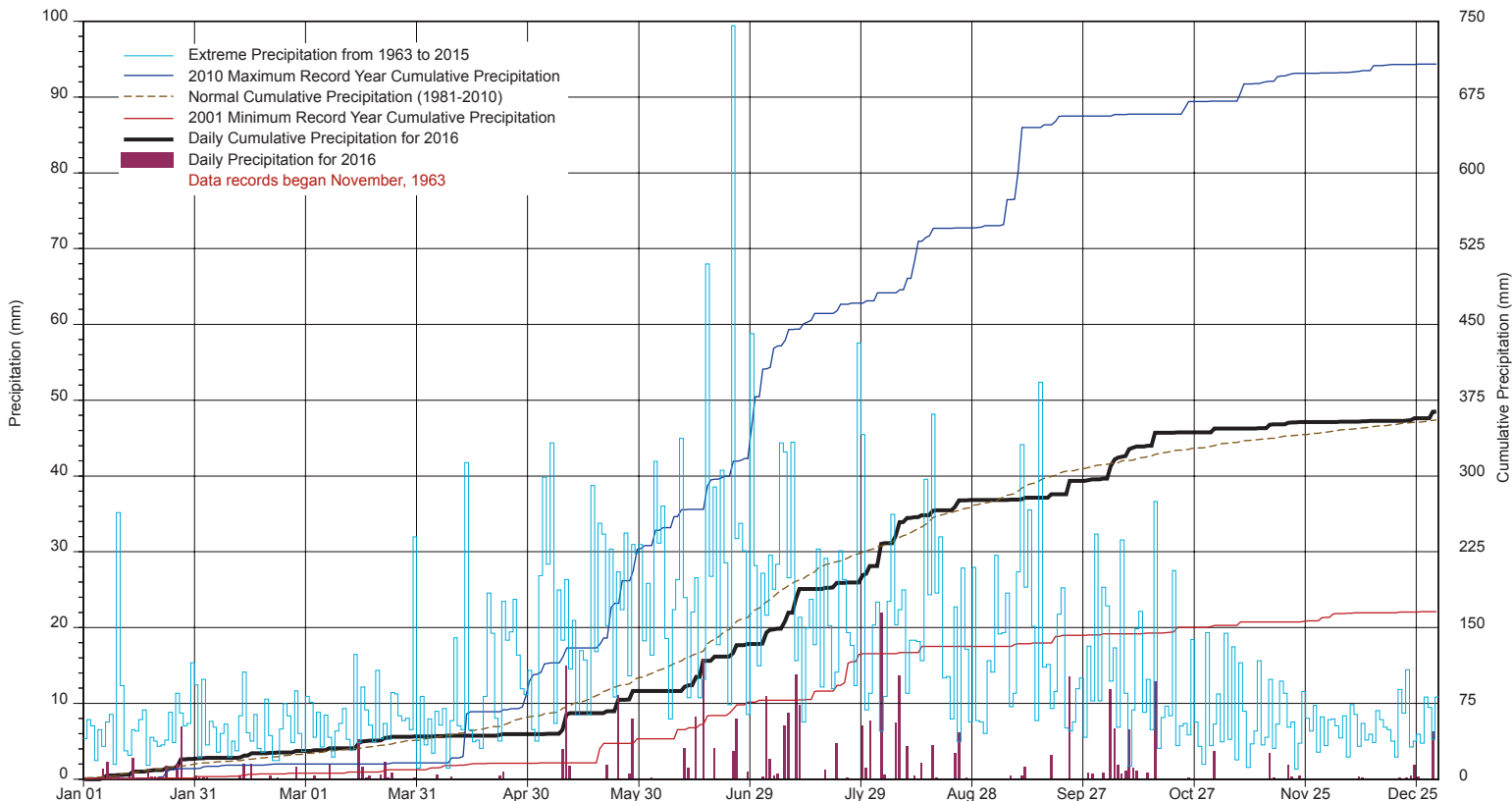
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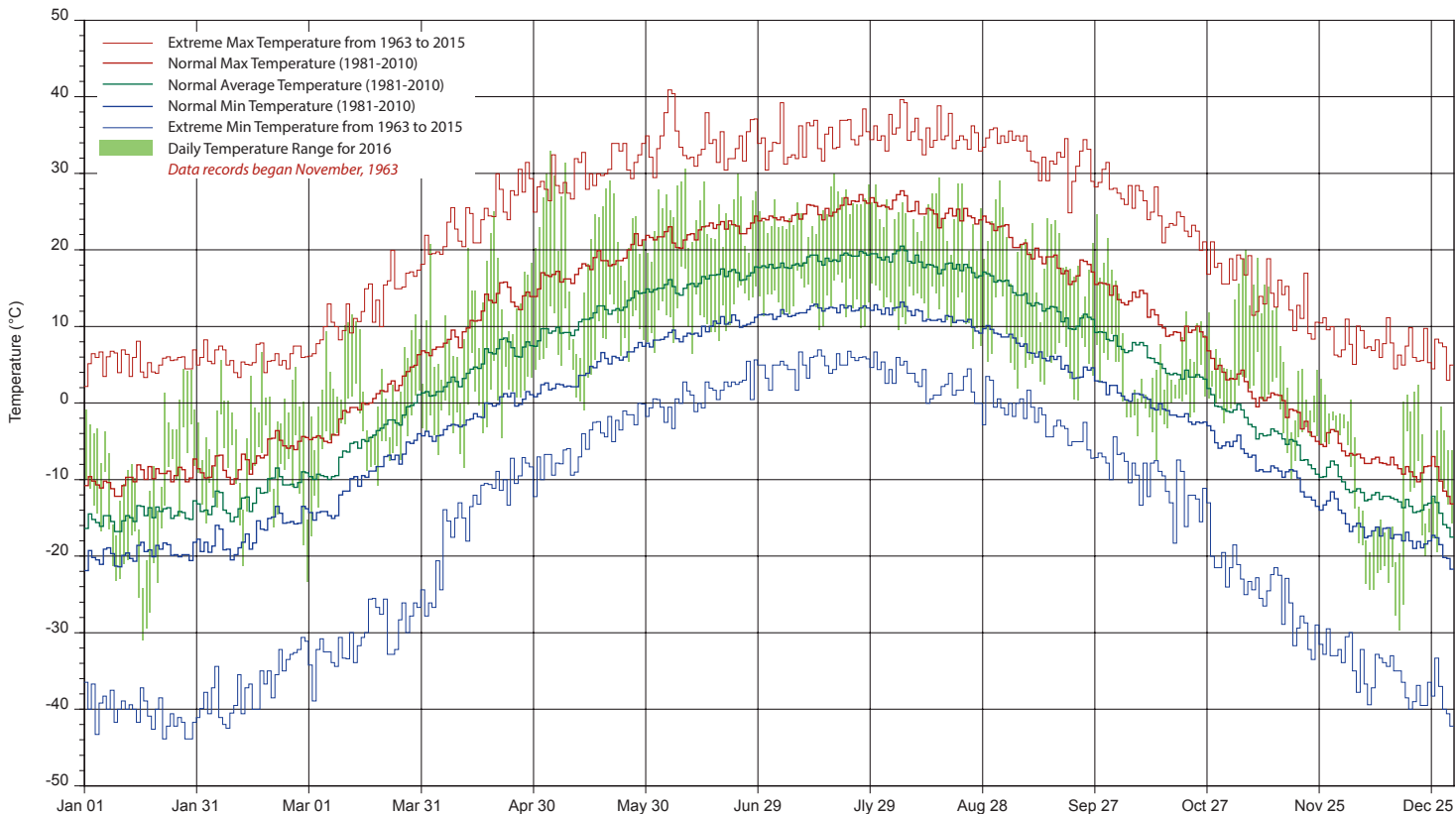
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# SASKATCHEWAN RESEARCH COUNCIL SASKATOON CLIMATE REFERENCE STATION 2016 PRECIPITATION AND NORMALS



## 2016 TEMPERATURES AND NORMALS



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