



SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

SASKATOON STATION 4057180

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

Preliminary **DECEMBER 2017**

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	0.8	-5.3	-7.8	-14.0	-3.5	-9.6	0.0	21.5	0.0	0.0		5	88	70	1010	1007
2	-3.3	-6.3	-7.5	-14.4	-5.4	-10.3	0.0	23.4	0.0	0.0		5	90	77	1011	1006
3	-4.4	-6.9	-11.2	-15.8	-7.8	-11.3	0.0	25.8	0.0	0.4	light snow	6	95	87	1013	1008
4	-8.7	-6.6	-17.1	-16.8	-12.9	-11.7	0.0	30.9	0.0	0.1		6	88	73	1019	1013
5	0.3	-6.8	-16.7	-16.1	-8.2	-11.5	0.0	26.2	0.0	2.3	light snow	6	94	79	1025	1011
6	-2.5	-6.7	-18.1	-15.7	-10.3	-11.2	0.0	28.3	0.0	0.0		6	91	79	1034	1024
7	-0.6	-7.2	-7.1	-16.2	-3.9	-11.7	0.0	21.9	0.0	0.0		5	86	69	1023	1016
8	0.3	-7.9	-7.7	-17.6	-3.7	-12.8	0.0	21.7	0.0	0.0		5	83	65	1019	1017
9	5.5	-7.9	-9.6	-17.4	-2.1	-12.6	0.0	20.1	0.0	0.0		5	85	50	1017	1012
10	6.2	-7.3	-1.4	-16.7	2.4	-12.0	0.0	15.6	0.0	0.0	very light rain	5	79	56	1018	1010
11	2.5	-7.1	-1.8	-16.2	0.4	-11.7	0.0	17.6	0.0	0.0		4	90	70	1025	1018
12	4.8	-7.8	-1.9	-17.4	1.5	-12.6	0.0	16.5	0.0	0.0	discontinuous snow cover	4	80	64	1018	1005
13	2.4	-7.9	-1.3	-16.4	0.6	-12.2	0.0	17.4	0.0	0.0		3	85	77	1019	1012
14	0.1	-8.1	-2.4	-16.3	-1.2	-12.2	0.0	19.2	0.0	0.0		3	88	79	1021	1008
15	4.0	-7.1	-0.8	-17.7	1.6	-12.4	0.0	16.4	0.0	0.0	light rain	4	85	76	1007	998
16	2.0	-8.1	-4.8	-17.2	-1.4	-12.6	0.0	19.4	0.0	0.1		3	86	69	1011	1004
17	1.6	-8.6	-6.2	-17.2	-2.3	-12.9	0.0	20.3	0.0	0.0		3	89	66	1011	998
18	0.2	-9.3	-5.7	-18.0	-2.8	-13.7	0.0	20.8	0.0	0.0		3	76	57	1009	998
19	-5.4	-8.3	-16.7	-16.9	-11.1	-12.6	0.0	29.1	0.0	0.0		3	77	61	1020	1010
20	-13.1	-9.0	-19.1	-18.0	-16.1	-13.5	0.0	34.1	0.0	0.0	discontinuous snow cover	3	84	66	1021	1018
21	-6.5	-9.6	-16.1	-19.0	-11.3	-14.3	0.0	29.3	0.0	0.5	light snow	3	86	73	1020	1011
22	-6.5	-10.3	-9.7	-18.1	-8.1	-14.2	0.0	26.1	0.0	0.2	light snow	3	89	71	1020	1017
23	-8.4	-9.1	-23.7	-18.9	-16.1	-14.0	0.0	34.1	0.0	0.4	light snow	3	89	73	1021	1016
24	-19.6	-8.3	-25.7	-18.4	-22.7	-13.3	0.0	40.7	0.0	0.0		3	79	57	1028	1019
25	-23.5	-8.2	-28.5	-18.0	-26.0	-13.1	0.0	44.0	0.0	0.0		3	74	62	1032	1027
26	-24.6	-7.0	-30.2	-17.3	-27.4	-12.2	0.0	45.4	0.0	0.0		3	76	66	1032	1029
27	-21.4	-8.3	-29.1	-17.6	-25.3	-13.0	0.0	43.3	0.0	0.0		3	77	68	1029	1023
28	-19.2	-10.2	-27.6	-18.5	-23.4	-14.4	0.0	41.4	0.0	0.0		3	77	72	1028	1025
29	-26.2	-11.5	-32.1	-20.2	-29.2	-15.9	0.0	47.2	0.0	0.1	very light snow	3	73	62	1038	1028
30	-26.5	-12.2	-33.6	-20.3	-30.1	-16.3	0.0	48.1	0.0	0.0		3	73	66	1038	1034
31	-22.2	-13.2	-29.0	-21.7	-25.6	-17.5	0.0	43.6	0.0	0.0		3	78	62	1040	1037
Total							0.0	889.4	0.0	4.1			Extreme / Date	Extreme / Date	Extreme / Date	Extreme / Date
Avg	-6.8	-8.3	-14.5	-17.4	-10.7	-12.9	1981-2010 Normal			12.7	Normal					
Extreme	6.2		-33.6				0.1	957.5	0.0	257.1	Cumulative		95	50	1040	998
Date	10		30							355.3	Cumulative No		3	9	31	15

manual snow depth is average of three meter sticks inside the site

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

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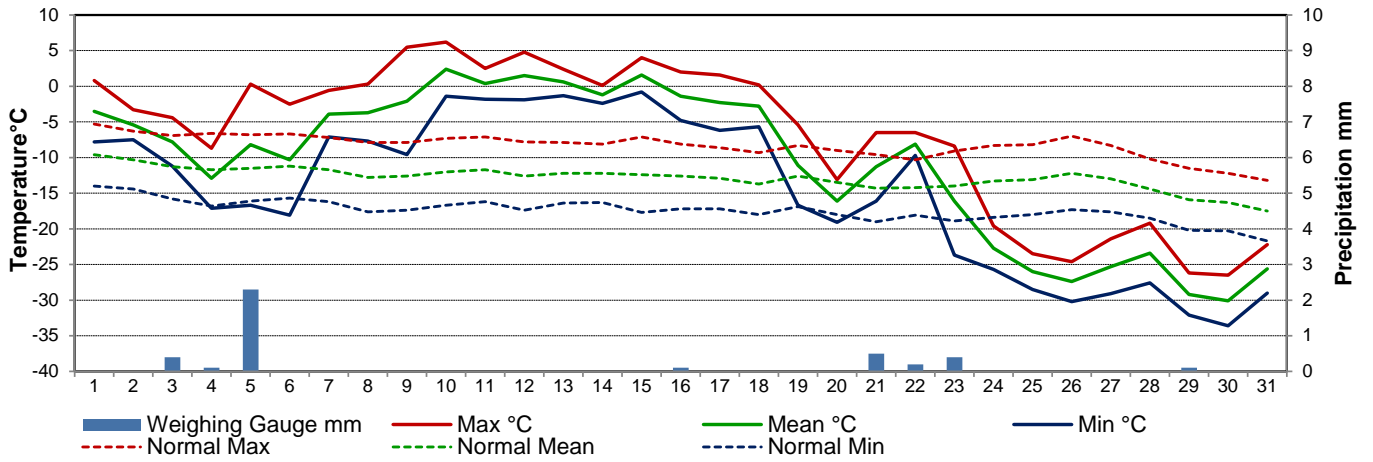


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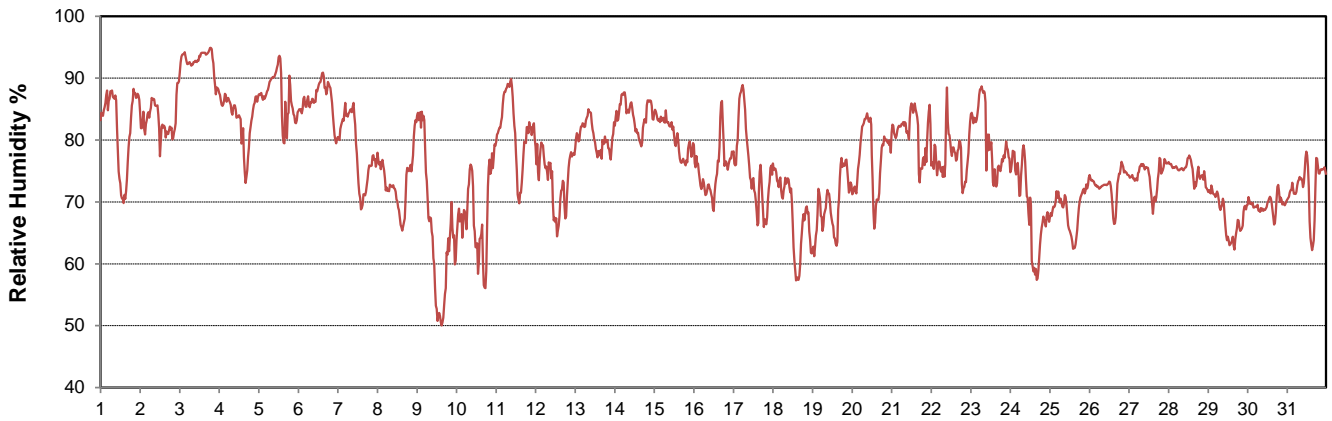
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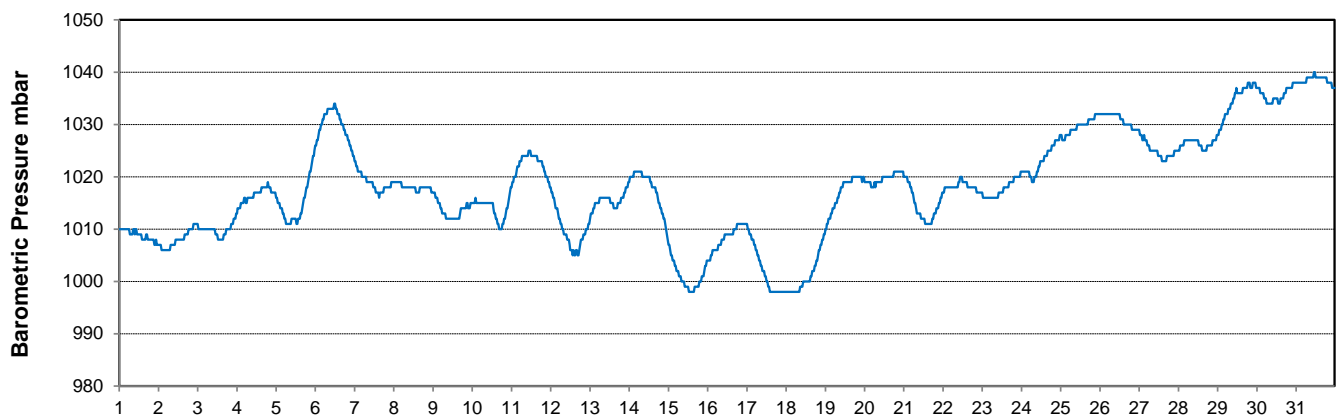
Temperature and Precipitation for December 2017



Relative Humidity for December 2017



Barometric Pressure Corrected to Sea Level for December 2017





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

Preliminary **DECEMBER 2017**

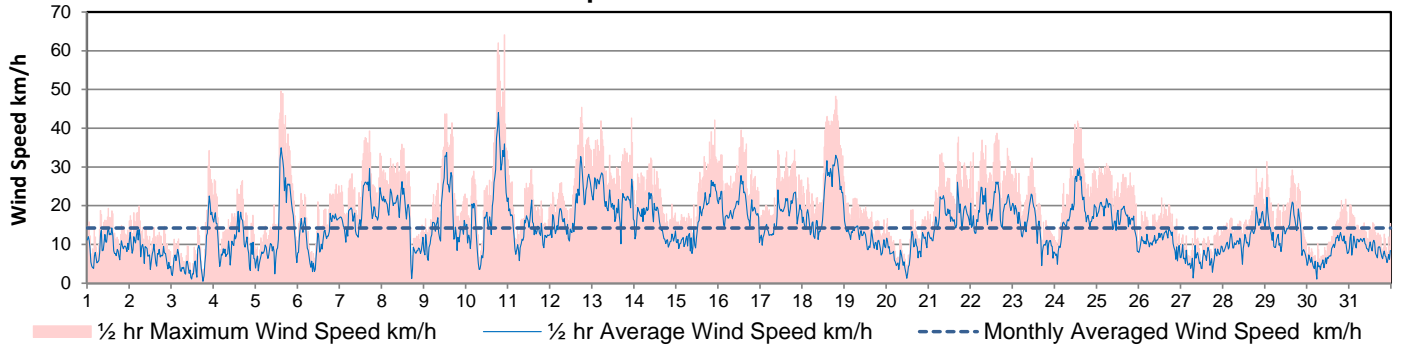
Day	Wind Gust			Soil Temperatures at 0900hrs								Soil Moisture 30 cm	Radiation				
	Max	Direction	Time	Surface	5 cm	10 cm	20 cm	50 cm	100 cm	150 cm	300 cm		0900hrs	Bright Sunshine	Possible	% Possible	Global
	km/h			°C	°C	°C	°C	°C	°C	°C	°C	%	hours	hours		MJ/m ²	MJ/m ²
1	19.3	SSW	12:12	-7.0	-1.0	-0.5	0.0	2.5	5.0	6.5	8.5	11	6.4	8.1	79.2	4.2	0.9
2	19.9	WSW	5:53	-9.0	-1.0	-0.5	0.0	2.5	5.0	6.5	8.5	11	1.5	8.0	18.7	2.6	1.7
3	34.2	NW	21:33	-9.0	-1.0	-0.5	0.0	2.5	5.0	6.5	8.0	10	0.0	8.0	0.0	1.8	1.5
4	26.7	WNW	0:52	-12.0	-1.5	-1.0	0.0	2.5	5.0	6.0	8.0	10	0.0	8.0	0.0	1.2	1.0
5	49.7	NW	14:42	-10.0	-1.5	-1.0	-0.5	2.5	5.0	6.0	8.0	10	0.0	8.0	0.0	1.6	1.3
6	25.5	SW	22:15	-21.5	-1.5	-1.0	-0.5	2.0	5.0	6.0	8.0	10	1.6	7.9	20.2	2.6	1.5
7	39.3	WNW	17:19	-7.0	-2.0	-1.5	-1.0	2.0	5.0	6.0	8.0	10	6.6	7.9	83.5	3.6	0.9
8	35.9	WNW	11:38	-2.5	-1.5	-1.5	-0.5	2.0	4.5	6.0	8.0	10	5.3	7.9	67.3	3.6	1.5
9	43.7	WNW	12:24	-5.0	-2.0	-1.5	-0.5	2.0	4.5	6.0	8.0	10	7.4	7.9	94.3	3.7	1.0
10	64.1	NNW	22:07	-3.5	-1.5	-1.0	-0.5	2.0	4.5	6.0	8.0	10	0.9	7.8	11.5	1.5	1.1
11	31.9	NW	0:07	1.0	-1.0	-0.5	-0.5	2.0	4.5	6.0	7.5	11	4.9	7.8	62.7	3.2	0.8
12	45.4	WNW	22:47	-2.0	-0.5	-0.5	0.0	2.0	4.5	5.5	7.5	11	3.1	7.8	39.8	2.3	1.3
13	42.6	N	18:14	-1.5	-0.5	0.0	0.0	2.0	4.5	5.5	7.5	11	5.6	7.8	72.0	3.2	1.1
14	32.3	WNW	9:41	-1.5	-0.5	0.0	0.5	2.0	4.5	5.5	7.5	11	4.4	7.8	56.6	3.0	1.3
15	42.1	WNW	22:11	1.0	-0.5	0.0	0.5	2.5	4.5	5.5	7.5	11	0.1	7.8	1.3	1.5	1.3
16	39.5	WNW	13:12	-4.0	0.0	0.0	0.5	2.5	4.5	5.5	7.5	11	3.5	7.7	45.2	3.1	1.7
17	34.4	W	19:55	-5.5	-0.5	0.0	0.5	2.5	4.5	5.5	7.5	11	1.2	7.7	15.5	1.7	1.2
18	48.3	WNW	19:20	-4.0	-0.5	0.0	0.5	2.5	4.5	5.5	7.5	11	5.8	7.7	75.0	3.1	0.7
19	26.0	NW	0:06	-13.0	-0.5	0.0	0.5	2.5	4.5	5.5	7.5	10	6.5	7.7	84.2	3.4	1.1
20	19.0	WNW	15:03	-19.0	-2.0	-1.0	0.0	2.5	4.5	5.5	7.5	9	4.2	7.7	54.4	3.2	1.0
21	37.7	NW	17:04	-12.5	-3.0	-2.5	-1.0	2.0	4.5	5.5	7.0	8	0.0	7.7	0.0	1.4	1.2
22	38.7	WNW	15:10	-8.0	-3.0	-2.5	-1.5	1.5	4.0	5.5	7.0	8	1.8	7.7	23.3	2.5	1.9
23	32.3	NNE	11:25	-11.0	-3.0	-2.5	-2.0	1.0	4.0	5.5	7.0	8	2.3	7.7	29.8	2.4	1.5
24	41.8	NNW	13:17	-20.5	-4.5	-3.5	-2.5	1.0	4.0	5.0	7.0	8	6.0	7.7	77.6	3.7	1.1
25	30.9	NW	5:41	-28.0	-6.0	-5.0	-3.5	0.5	4.0	5.0	7.0	7	7.3	7.7	94.3	4.3	0.9
26	22.0	W	13:12	-30.0	-8.0	-7.0	-5.0	0.0	3.5	5.0	7.0	6	7.2	7.8	92.9	5.6	0.9
27	14.7	ESE	8:17	-25.5	-10.0	-9.0	-6.5	-0.5	3.5	5.0	7.0	6	2.4	7.8	30.9	2.9	1.5
28	29.5	NW	19:24	-28.0	-10.5	-9.5	-7.5	-1.5	3.5	5.0	7.0	6	3.1	7.8	39.9	3.3	1.5
29	31.4	N	1:07	-31.5	-11.0	-10.5	-8.0	-2.0	3.0	4.5	7.0	6	7.3	7.8	93.8	6.5	1.0
30	21.7	WNW	22:09	-34.5	-13.0	-12.0	-9.5	-2.5	3.0	4.5	7.0	6	6.2	7.8	79.5	5.5	0.9
31	20.3	WNW	0:58	-26.0	-13.5	-13.0	-10.5	-3.0	2.5	4.5	7.0	6	5.0	7.8	63.9	5.2	1.1
Total													117.6	242.3	48.5	97.4	37.4
Mean				-12.6	-3.4	-2.9	-1.9	1.4	4.3	5.5	7.5	9	1981-2010 Normal for Radiation				
Extreme	64.1	NNW	22:07	1971- 2000 Normal for Soil Temperatures									85.7	242.3	35.4	100.0	50.0
Date	10			-7.1	-6.6	-5.6	-1.7	2.0	3.8	6.4		No. of Bright Sunshine days = 27					

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

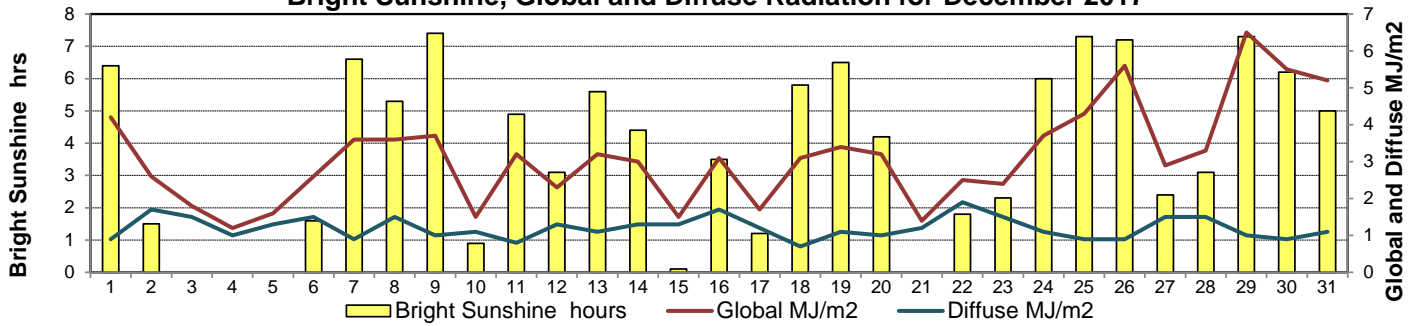
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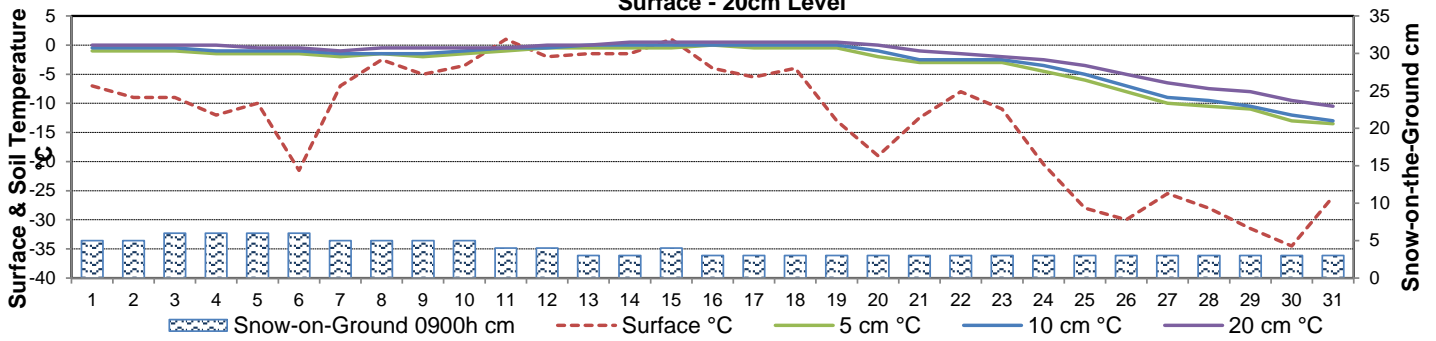
Wind Speed for December 2017



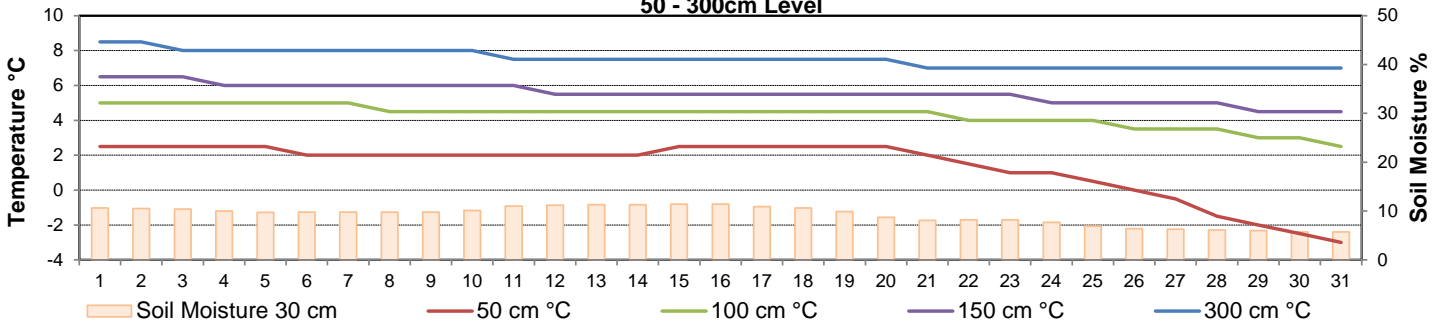
Bright Sunshine, Global and Diffuse Radiation for December 2017



Soil Temperatures for December 2017 Surface - 20cm Level



Soil Temperatures for December 2017 50 - 300cm Level





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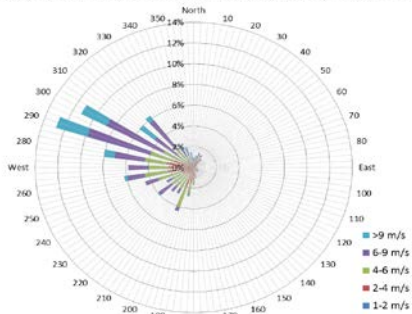
Extreme Records for December

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 ^W	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*

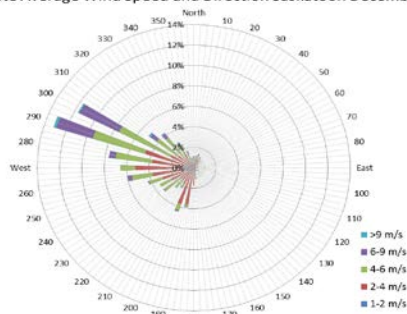
**1975 forward * more than one year

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	13	-1.3	-3.2	2014	SM	NWMP	c. 1892-1901	T	Trace of precipitation
	Lowest No. of days <=-2°		26	28	2014	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 -	Degree-days	
						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	<i>Dec 2 daily temperature, Dec 6 bright sunshine totals are manual calculations due to datalogger error.</i>	
					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 December 2017



10 minute Average Wind Speed and Direction Saskatoon December 2017



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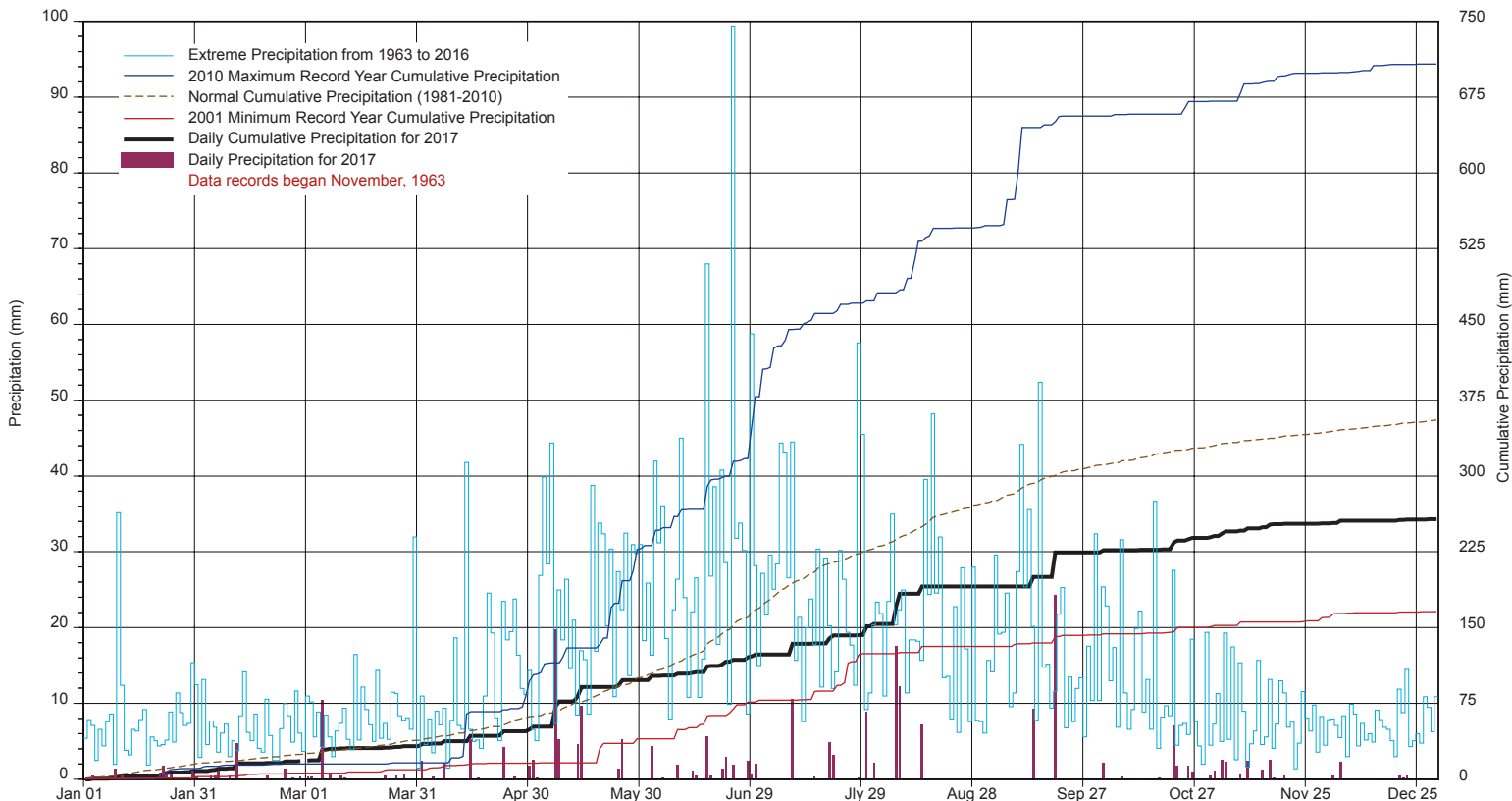


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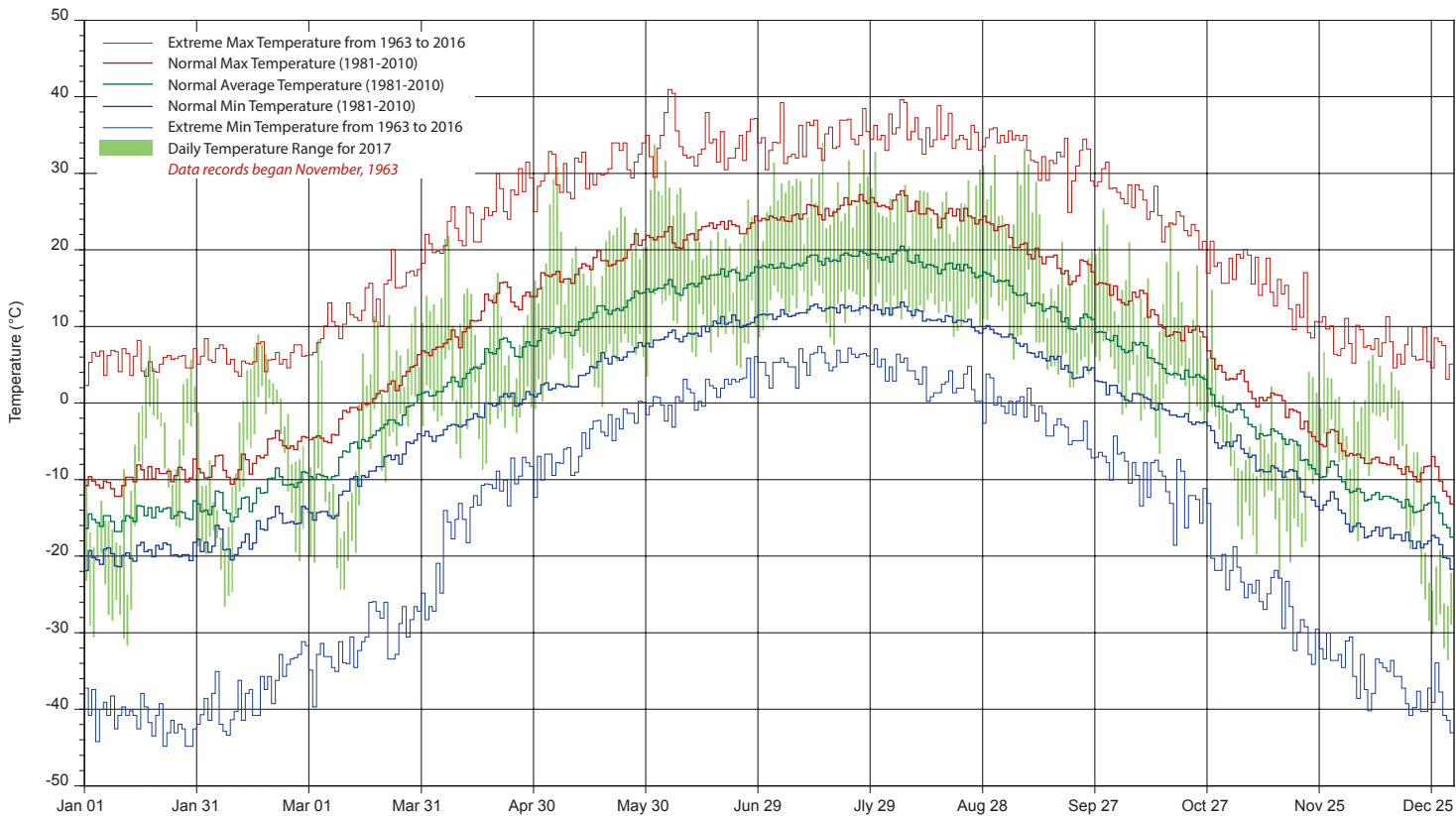
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2017 TEMPERATURES AND NORMALS



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