



SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

SASKATOON STATION 4057180

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

Preliminary **DECEMBER 2023**

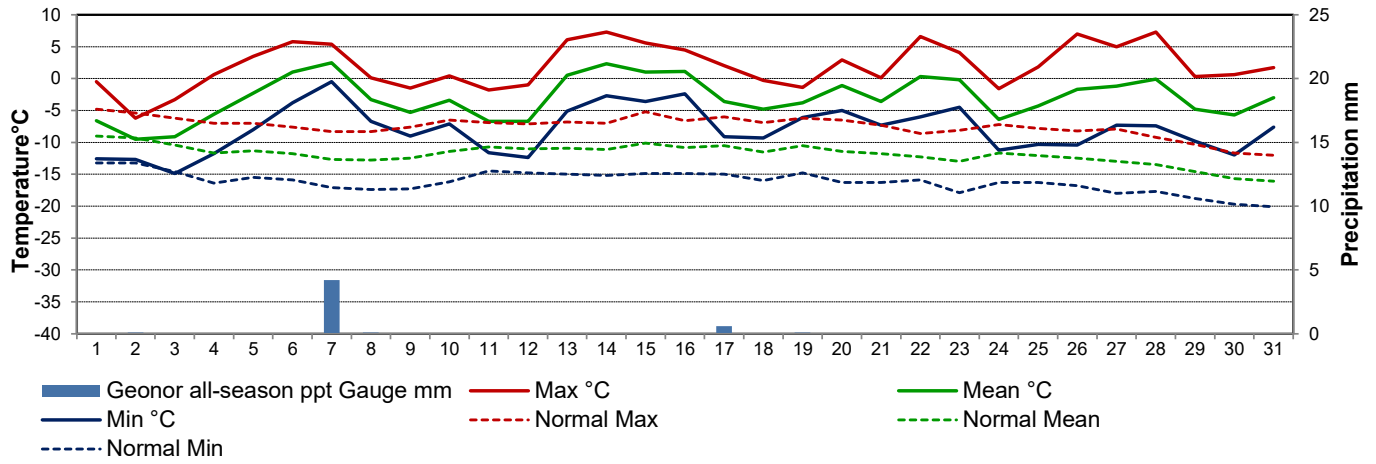
Day	Temperature						Degree-days			Precipitation			Relative Humidity		Station Pressure (sea level)	
	Max	Normal Max	Min	Normal Min	Mean	Normal Mean	Growing	Heating	Cooling	Geonor all-season ppt Gauge	Comments	Snow-on-Ground 0900h	Max ½ hr Avg	Min ½ hr Avg	Max ½ hr Avg	Min ½ hr Avg
	°C	1991-2020	°C	1991-2020	°C	1991-2020	5°C base	18°C base	18°C base	mm		cm	%	%	mbar	mbar
1	-0.5	-4.8	-12.6	-13.2	-6.6	-9.0	0.0	24.6	0.0	0.0		-	87	57	1010	1001
2	-6.2	-5.4	-12.7	-13.2	-9.5	-9.3	0.0	27.5	0.0	0.1	heavy frost	-	92	84	1000	996
3	-3.3	-6.2	-14.9	-14.6	-9.1	-10.4	0.0	27.1	0.0	0.0		-	90	78	1006	998
4	0.6	-7.0	-11.8	-16.4	-5.6	-11.7	0.0	23.6	0.0	0.0		-	90	67	1012	1001
5	3.5	-7.0	-8.0	-15.5	-2.3	-11.3	0.0	20.3	0.0	0.0		-	89	66	1012	1003
6	5.8	-7.6	-3.8	-15.9	1.0	-11.8	0.0	17.0	0.0	0.0		-	91	64	1009	1001
7	5.4	-8.3	-0.5	-17.1	2.5	-12.7	0.0	15.5	0.0	4.2	light rain	-	93	69	1005	997
8	0.1	-8.3	-6.7	-17.4	-3.3	-12.8	0.0	21.3	0.0	0.1		-	90	69	1019	1005
9	-1.5	-7.6	-9.0	-17.3	-5.3	-12.5	0.0	23.3	0.0	0.0		0	87	65	1022	1014
10	0.4	-6.5	-7.1	-16.2	-3.4	-11.4	0.0	21.4	0.0	0.0		-	86	66	1013	1008
11	-1.8	-6.9	-11.6	-14.5	-6.7	-10.7	0.0	24.7	0.0	0.0		-	77	34	1023	1010
12	-1.0	-7.1	-12.4	-14.8	-6.7	-11.0	0.0	24.7	0.0	0.0		0	79	55	1023	1017
13	6.1	-6.8	-5.1	-15.0	0.5	-10.9	0.0	17.5	0.0	0.0		-	81	39	1018	1009
14	7.3	-7.0	-2.7	-15.2	2.3	-11.1	0.0	15.7	0.0	0.0		-	73	39	1025	1010
15	5.6	-5.2	-3.6	-14.9	1.0	-10.1	0.0	17.0	0.0	0.0		-	83	33	1029	1017
16	4.5	-6.6	-2.4	-14.9	1.1	-10.8	0.0	16.9	0.0	0.0		-	84	56	1016	1006
17	2.0	-6.0	-9.1	-15.0	-3.6	-10.5	0.0	21.6	0.0	0.6	freezing rain	-	91	59	1022	1007
18	-0.3	-6.9	-9.3	-16.0	-4.8	-11.5	0.0	22.8	0.0	0.0		1	82	65	1018	1005
19	-1.4	-6.2	-6.1	-14.8	-3.8	-10.5	0.0	21.8	0.0	0.1	light snow	1	85	65	1014	1008
20	2.9	-6.5	-5.0	-16.3	-1.1	-11.4	0.0	19.1	0.0	0.0		0	89	66	1013	1007
21	0.1	-7.3	-7.3	-16.3	-3.6	-11.8	0.0	21.6	0.0	0.0		0	92	78	1015	1008
22	6.6	-8.6	-6.0	-15.9	0.3	-12.3	0.0	17.7	0.0	0.0		-	90	63	1012	1001
23	4.1	-8.1	-4.5	-17.9	-0.2	-13.0	0.0	18.2	0.0	0.0		-	88	60	1018	1001
24	-1.6	-7.2	-11.2	-16.3	-6.4	-11.7	0.0	24.4	0.0	0.0		0	83	55	1021	1018
25	1.8	-7.8	-10.3	-16.3	-4.3	-12.1	0.0	22.3	0.0	0.0		0	81	43	1020	1018
26	7.0	-8.2	-10.4	-16.8	-1.7	-12.5	0.0	19.7	0.0	0.0		-	80	23	1018	1013
27	5.0	-7.9	-7.3	-18.0	-1.2	-13.0	0.0	19.2	0.0	0.0		-	86	45	1020	1014
28	7.3	-9.2	-7.4	-17.7	-0.1	-13.5	0.0	18.1	0.0	0.0		-	83	46	1017	1012
29	0.3	-10.3	-9.8	-18.8	-4.8	-14.6	0.0	22.8	0.0	0.0		-	86	56	1021	1015
30	0.6	-11.7	-12.0	-19.7	-5.7	-15.7	0.0	23.7	0.0	0.0		-	88	60	1022	1020
31	1.7	-12.0	-7.6	-20.1	-3.0	-16.1	0.0	21.0	0.0	0.0		0	84	56	1020	1010
Total							0.0	652.1	0.0	5.1			Extreme / Date	Extreme / Date	Extreme / Date	Extreme / Date
Avg	2.0	-7.5	-8.0	-16.2	-3.0	-11.9	1991-2020 Normal			9.9	1991-2020 Normal					
Extreme Date	7.3		-14.9				0.0	925.7	0.0	244.6	Year to date 2023 Cumulative		93	23	1029	996
	14		3							352.3	Year to date Cumulative Normal		7	26	15	2

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

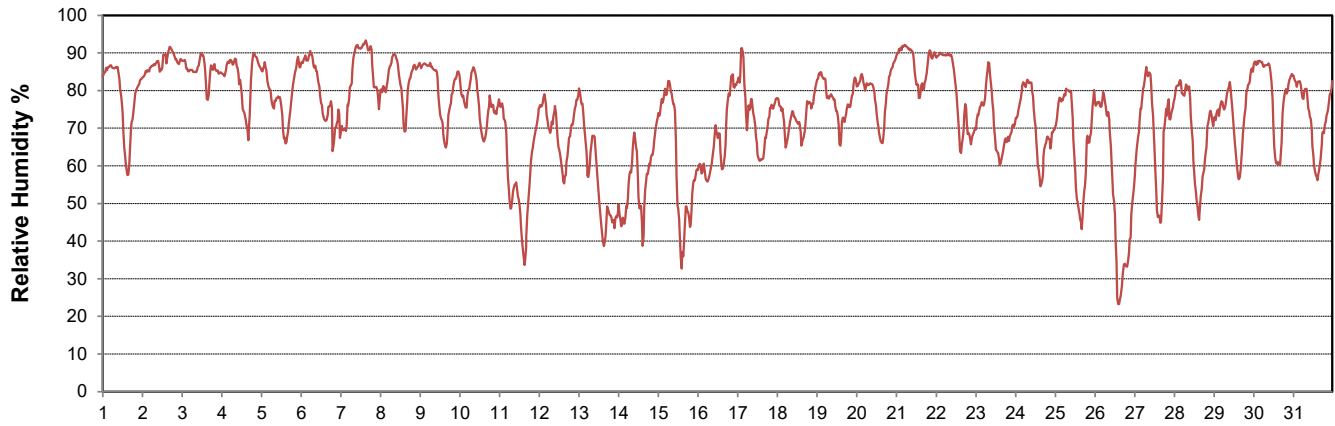
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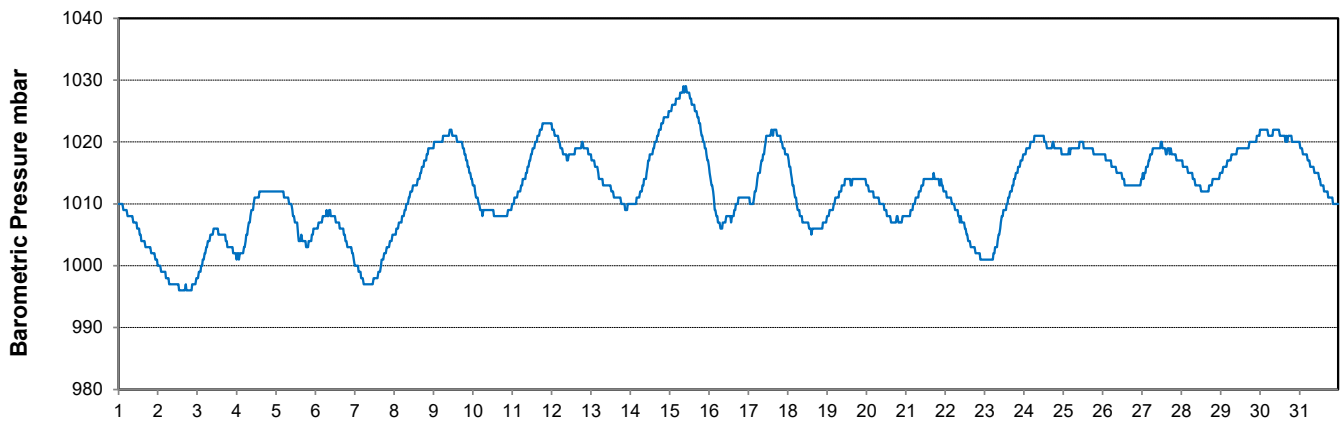
Temperature and Precipitation for December 2023



Relative Humidity for December 2023



Barometric Pressure Corrected to Sea Level for December 2023





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SASKATOON STATION 4057180

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

Preliminary **DECEMBER 2023**

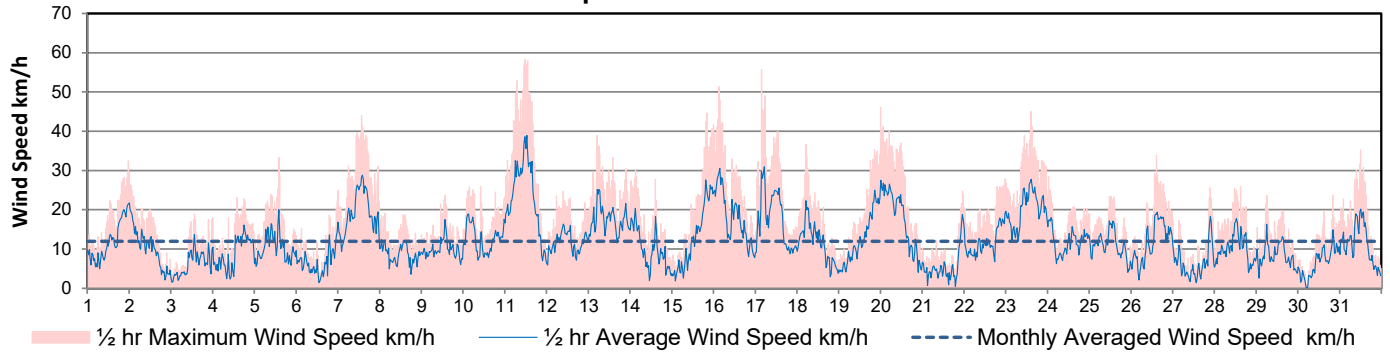
Day	Wind Gust (10 meter)			Wind Speed (10 meters) Daily Average	Soil Temperatures at 0900hrs								Radiation				
	Max	Direction	Time		Surface	5 cm	10 cm	20 cm	50 cm	100 cm	150 cm	300 cm	Bright Sunshine	Possible	% Possible	Global	Diffuse
	km/h			km/h	°C	°C	°C	°C	°C	°C	°C	°C	hours	hours		MJ/m ²	MJ/m ²
1	32.4	SE	23:44	11.7	-12.5	-5.5	-4.0	-2.0	1.5	5.5	7.0	9.0	7.2	8.1	89.0	5.3	1.2
2	29.4	SE	0:23	10.4	-9.5	-5.5	-4.5	-3.0	1.0	5.0	7.0	9.0	2.5	8.1	31.1	2.9	2.0
3	18.9	SSW	13:54	6.1	-15.5	-7.0	-6.0	-4.0	0.5	5.0	6.5	9.0	4.9	8.0	61.1	4.2	1.3
4	23.1	WSW	14:22	8.9	-15.5	-7.0	-6.0	-4.5	0.0	5.0	6.5	8.5	5.3	8.0	66.3	4.5	1.4
5	33.3	SSE	14:13	10.3	-5.5	-6.0	-5.5	-4.5	0.0	5.0	6.5	8.5	0.8	8.0	10.1	1.6	1.4
6	22.2	E	23:30	6.6	-2.0	-4.5	-4.0	-3.5	0.0	4.5	6.5	8.5	0.1	7.9	1.3	1.1	1.1
7	44.0	NNE	13:57	19.2	2.5	-1.5	-1.5	-2.0	0.0	4.5	6.5	8.5	0.0	7.9	0.0	0.6	0.6
8	19.1	NNW	3:24	8.6	-7.0	-1.5	-1.0	-1.0	0.5	4.5	6.0	8.5	4.0	7.9	50.8	3.9	1.5
9	23.7	W	13:42	9.8	-9.0	-4.5	-3.5	-2.0	1.0	4.5	6.0	8.5	6.8	7.9	86.5	5.3	0.9
10	25.9	ESE	10:19	12.5	-7.5	-5.0	-4.5	-3.0	0.5	4.5	6.0	8.5	6.7	7.8	85.6	3.7	0.8
11	58.3	NW	11:31	23.6	-5.5	-5.0	-4.0	-3.0	0.5	4.5	6.0	8.0	7.4	7.8	94.6	3.6	0.8
12	24.7	SSW	5:27	11.6	-8.0	-7.0	-6.0	-4.5	0.0	4.0	6.0	8.0	6.3	7.8	80.8	3.3	0.8
13	38.9	S	9:42	17.4	-2.5	-6.0	-5.5	-5.5	-0.5	4.0	6.0	8.0	7.3	7.8	93.8	3.5	0.7
14	30.2	SSW	3:09	10.0	-3.0	-5.0	-4.5	-3.5	-0.5	4.0	5.5	8.0	2.6	7.8	33.5	2.4	1.8
15	44.6	S	20:15	12.5	-2.5	-4.0	-3.5	-3.0	-0.5	4.0	5.5	8.0	6.0	7.8	77.4	3.3	0.8
16	51.3	SSW	3:29	18.1	1.0	-3.0	-3.0	-2.5	0.0	4.0	5.5	8.0	3.7	7.7	47.8	2.2	0.9
17	55.7	WNW	3:52	17.7	-5.5	-3.0	-2.5	-2.0	0.0	3.5	5.5	8.0	7.0	7.7	90.6	3.5	0.8
18	36.6	S	5:04	11.6	-7.5	-5.5	-4.5	-3.0	0.0	3.5	5.5	8.0	3.4	7.7	44.0	2.2	1.6
19	35.4	ESE	20:51	12.4	-4.5	-4.5	-4.0	-3.5	0.0	3.5	5.5	7.5	0.6	7.7	7.8	1.8	1.6
20	46.1	ESE	0:24	17.5	-4.0	-3.5	-3.5	-3.0	0.0	3.5	5.0	7.5	6.8	7.7	88.1	3.3	1.1
21	24.7	SSE	23:24	5.4	-7.0	-4.5	-4.0	-3.0	0.0	3.5	5.0	7.5	1.4	7.7	18.1	2.1	1.4
22	27.8	SSW	23:44	11.6	-6.0	-5.0	-4.5	-3.5	0.0	3.5	5.0	7.5	6.9	7.7	89.4	4.3	1.0
23	45.0	NW	14:40	20.2	-4.0	-3.5	-3.0	-2.5	0.0	3.5	5.0	7.5	3.0	7.7	38.9	2.3	1.4
24	28.5	NW	0:41	11.9	-13.0	-5.5	-4.5	-3.5	0.0	3.5	5.0	7.5	7.3	7.7	94.6	4.1	0.9
25	23.4	SSW	12:33	11.0	-10.5	-7.0	-6.0	-4.5	-0.5	3.5	5.0	7.5	7.3	7.7	94.4	3.6	0.7
26	33.7	SSE	14:37	11.8	-10.0	-8.5	-7.0	-5.5	-1.0	3.5	5.0	7.5	7.3	7.7	94.3	3.6	0.8
27	25.5	SSE	21:34	6.4	-11.0	-7.0	-6.0	-5.0	-1.0	3.0	5.0	7.0	7.3	7.8	94.2	3.5	0.7
28	25.9	SW	15:25	10.0	-7.5	-7.0	-6.5	-5.0	-1.5	3.0	4.5	7.0	7.0	7.8	90.2	3.3	0.7
29	23.6	WNW	6:14	8.3	-7.0	-6.5	-6.0	-5.0	-1.5	3.0	4.5	7.0	7.3	7.8	94.0	3.4	0.7
30	23.6	SSE	20:25	6.5	-13.0	-9.0	-7.5	-5.5	-1.5	3.0	4.5	7.0	7.3	7.8	93.7	4.7	0.8
31	35.1	S	12:09	11.3	-5.5	-8.0	-7.0	-6.0	-2.0	2.5	4.5	7.0	6.5	7.8	83.3	3.5	1.3
Total													158.0	242.3	65.2	100.6	33.5
Mean				12.0	-7.0	-5.4	-4.6	-3.6	-0.2	3.9	5.6	7.9	1991-2020 Normal				
Extreme	58.3	NW	11:31		1971- 2000 Normal for Soil Temperatures								85.7	242.3	35.4	92.1	47.6
Date	11					-7.1	-6.6	-5.6	-1.7	2.0	3.8	6.4	No. of Bright Sunshine days = 30				

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

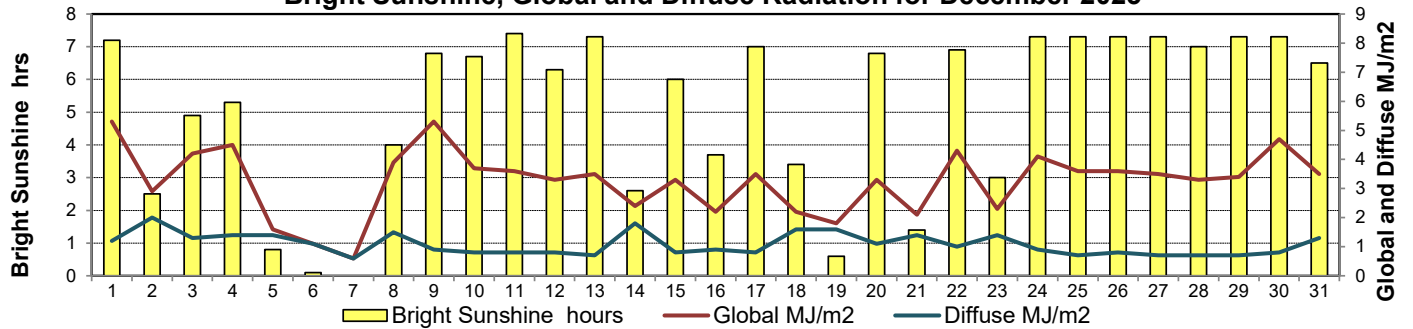
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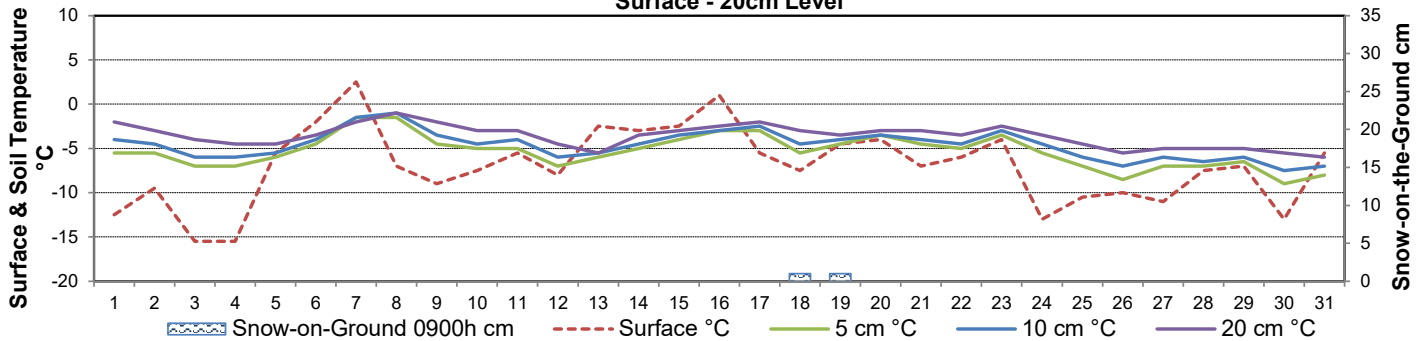
Wind Speed for December 2023



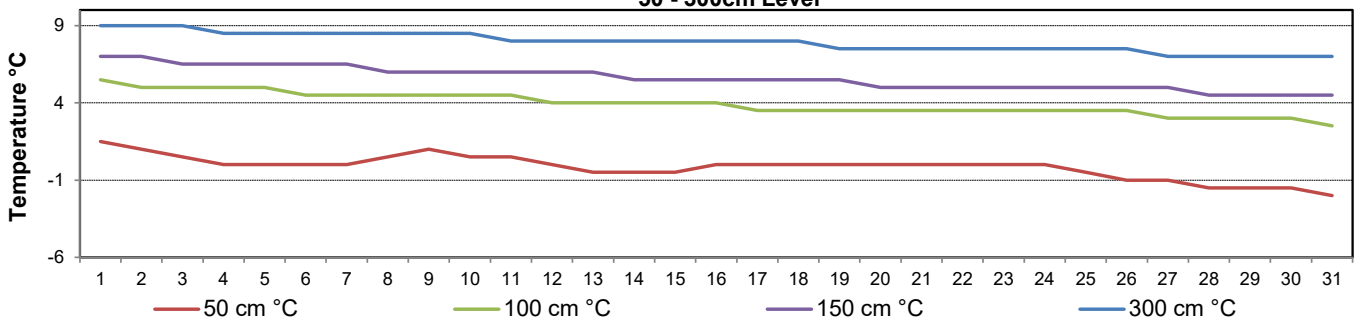
Bright Sunshine, Global and Diffuse Radiation for December 2023



Soil Temperatures for December 2023
Surface - 20cm Level



Soil Temperatures for December 2023
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	43.0	1977	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	1.2	1997					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	Operational Period	Element	Description	
Temperature	Highest Maximum Daily	16	4.5	4.5	1980	SM	NWMP c. 1892-1901	T	Trace of precipitation	
		22	6.6	5.5	1994	SE	Eby 1901-1941	Normal	30 year average beginning with the decade	
	Highest Maximum Monthly	26	7.0	4.5	1989	US	Univ. of Sask. 1915-1964	SOG	Depth of snow-on-the-ground in cm	
			2.0	0.8	2011	S	Saskatoon 1941-1942	na	not available	
	Highest Minimum Monthly		-8.0	-9.1	1997	SA	Saskatoon A 1942 -	Degree-days		
	Highest Mean Monthly		-3.0	-4.5	1997	NRC	Nat. Res. Council 1952-1966	Tm	Mean Temperature	
	No. of days > 0°C			22	18	1997	SRC	Sask. Res. Council 1963-	Growing	(Tm-5°C); if Tm ≤ 5°C then GDD = 0
No. of days ≤ -10°C			10	12	1999	SWT	S'toon Water Treatment Plant 1974 -	Heating	(18°C-Tm); if Tm ≤ 18°C then HDD = 0	
Heating Degree-days	Lowest Monthly		652.1	697.9	1997	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	
Precipitation	Highest Daily Maximum	7	4.2	3	1977	S2	Saskatoon 2 1977-1990	The last time there was no measureable snow on the ground on 31 Dec was 2009.		
			-10th driest December (1963-2023)			K	S'toon Kernan Farm 1993-2004			
			-2023 was fifth driest year (1964-2023)			KCS	S'toon Kernan Farm CS 1996-			
						RCS	Environment Canada 2008-			
					SF	Sutherland Forestry 1943-1970				

Element	Type	Day	New Record	Old Record	Year	Day
Temperature	Highest Extreme Monthly Minimum Temperature	3	-14.9	-18.5	1997	4
	Highest Lowest Maximum Monthly Temperature	2	-6.2	-7.8	1974	7

Element	Type	New Record	Old Record	Year
Bright Sunshine	Greatest Monthly Bright Sunshine Hours	158.0	123.3	2006
	No. of days with measurable bright Sunshine	30	27	1994
	No. of days ≥ 1 hour	27	27	2006
	No. of days ≥ 5 hours	19	16	1975, 1979
	% of Bright Sunshine hours vs Possible Daylight Hours	65.2	50.9	2006

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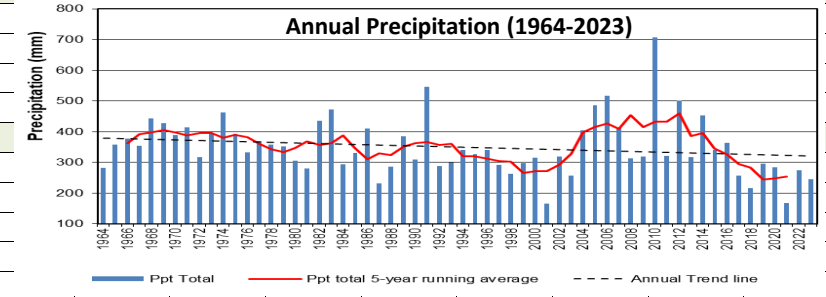
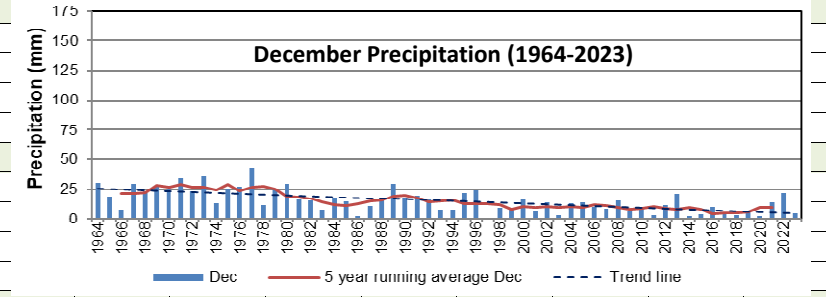
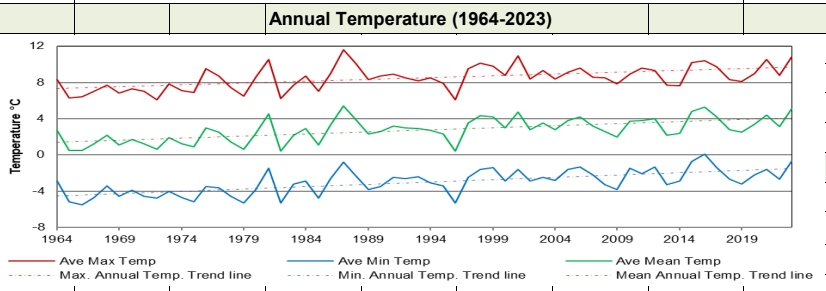
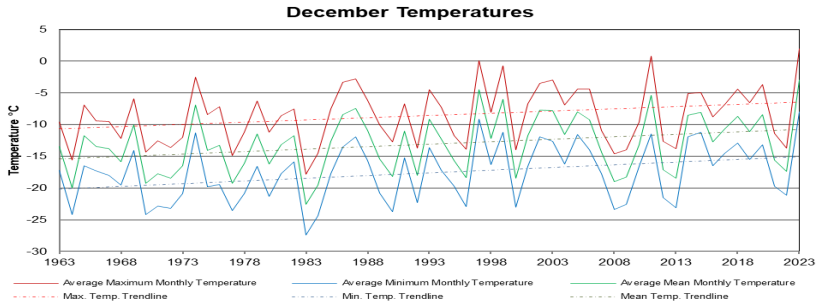
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Preliminary December 2023

Day	2 meter Wind Speed			Soil Moisture at 0900 hrs (rounded to the 0.5%)		
	Daily Average	Max ½ hr Avg	½ hr Extreme Max	10 cm	20 cm	50 cm
	km/h	km/h	km/h	% by volume (soil type is Loam (45.5% Sand, 41.1% Silt, 13.3% Clay))		
1	6.0	15.7	24.1	3.5	6.5	8.0
2	5.0	15.5	24.7	3.0	6.0	8.0
3	2.0	8.8	14.9	3.0	6.0	7.5
4	5.0	11.3	18.3	3.0	5.5	8.0
5	4.0	10.0	21.8	3.5	6.5	8.0
6	2.0	10.2	16.0	3.5	6.0	8.0
7	13.0	18.9	31.6	5.5	6.5	7.5
8	6.0	9.6	16.0	5.0	6.0	8.0
9	7.0	13.4	20.0	4.5	6.5	8.0
10	9.0	14.5	21.8	4.0	6.0	7.5
11	16.0	27.3	44.8	3.5	6.0	7.5
12	8.0	12.5	19.5	3.5	6.5	8.0
13	12.0	18.2	29.8	3.0	5.5	8.0
14	7.0	14.5	24.7	4.0	6.0	8.0
15	8.0	17.6	31.6	4.0	6.0	8.0
16	12.0	20.2	34.4	4.5	6.0	7.5
17	12.0	21.6	40.8	4.5	6.5	7.5
18	8.0	14.1	25.8	4.0	6.5	7.5
19	9.0	19.0	29.8	4.0	6.0	8.0
20	12.0	20.6	35.0	4.5	6.5	8.0
21	3.0	11.8	17.7	4.0	6.5	7.5
22	7.0	12.5	18.9	4.0	6.0	8.0
23	14.0	19.3	32.1	4.5	6.5	8.0
24	8.0	12.4	19.5	3.0	6.5	8.0
25	7.0	13.3	20.0	3.5	6.5	8.0
26	7.0	12.0	23.5	3.0	5.5	8.0
27	5.0	10.9	18.3	3.5	6.5	7.5
28	6.0	13.6	20.0	3.5	6.5	8.0
29	6.0	11.4	20.0	3.5	6.0	8.0
30	4.0	8.6	16.0	2.5	6.0	8.0
31	7.0	25.0	25.0	3.0	6.0	8.0
Total						
Mean				4	6	7.9
Extreme	16.0	27.3	44.8	5.5	6.5	8
Date	11	11	11	7	1	1

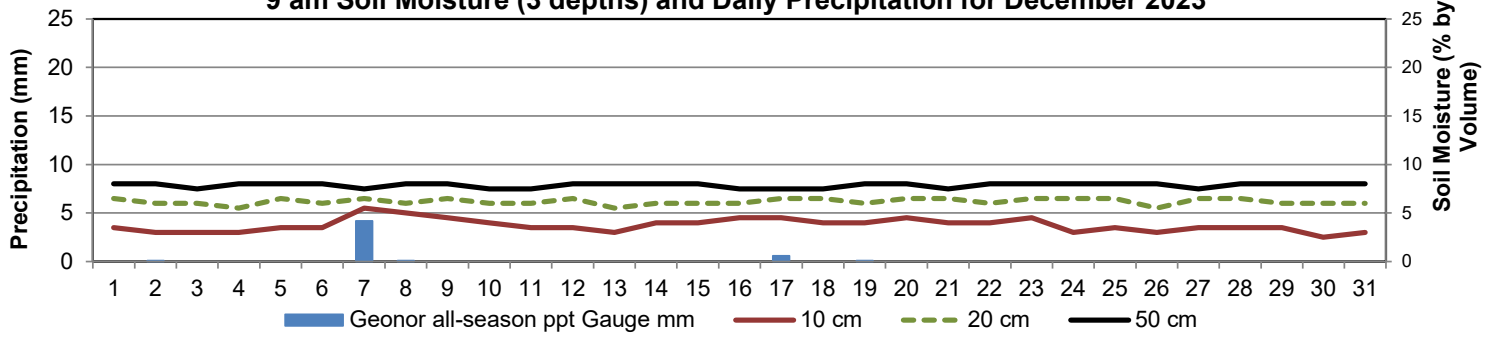


Note: Red numbers indicate manual calculation; Red cell indicate data not available

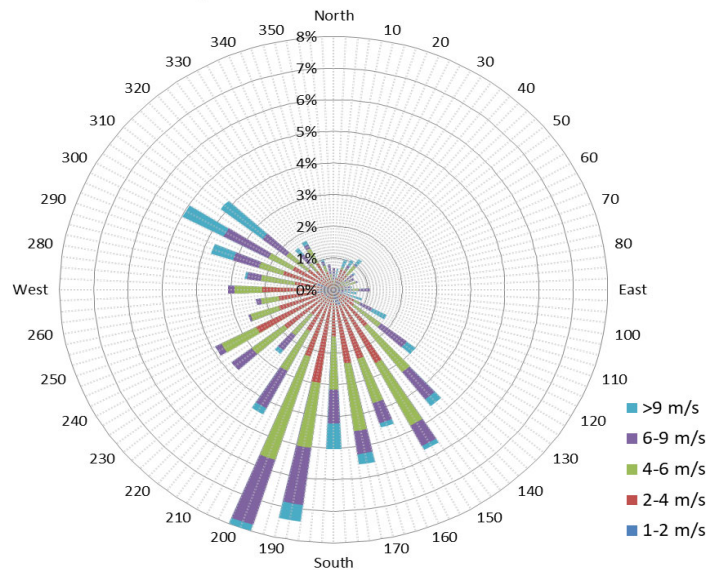
SRC proudly recognizes the following CRS supporters:



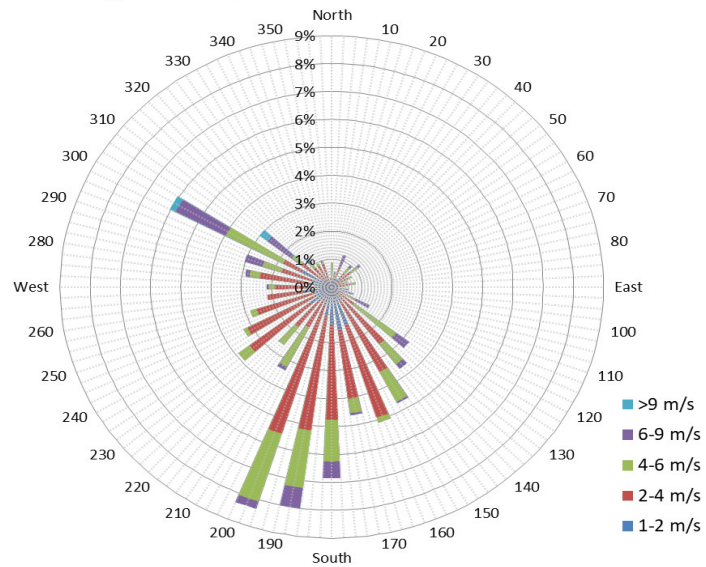
9 am Soil Moisture (3 depths) and Daily Precipitation for December 2023



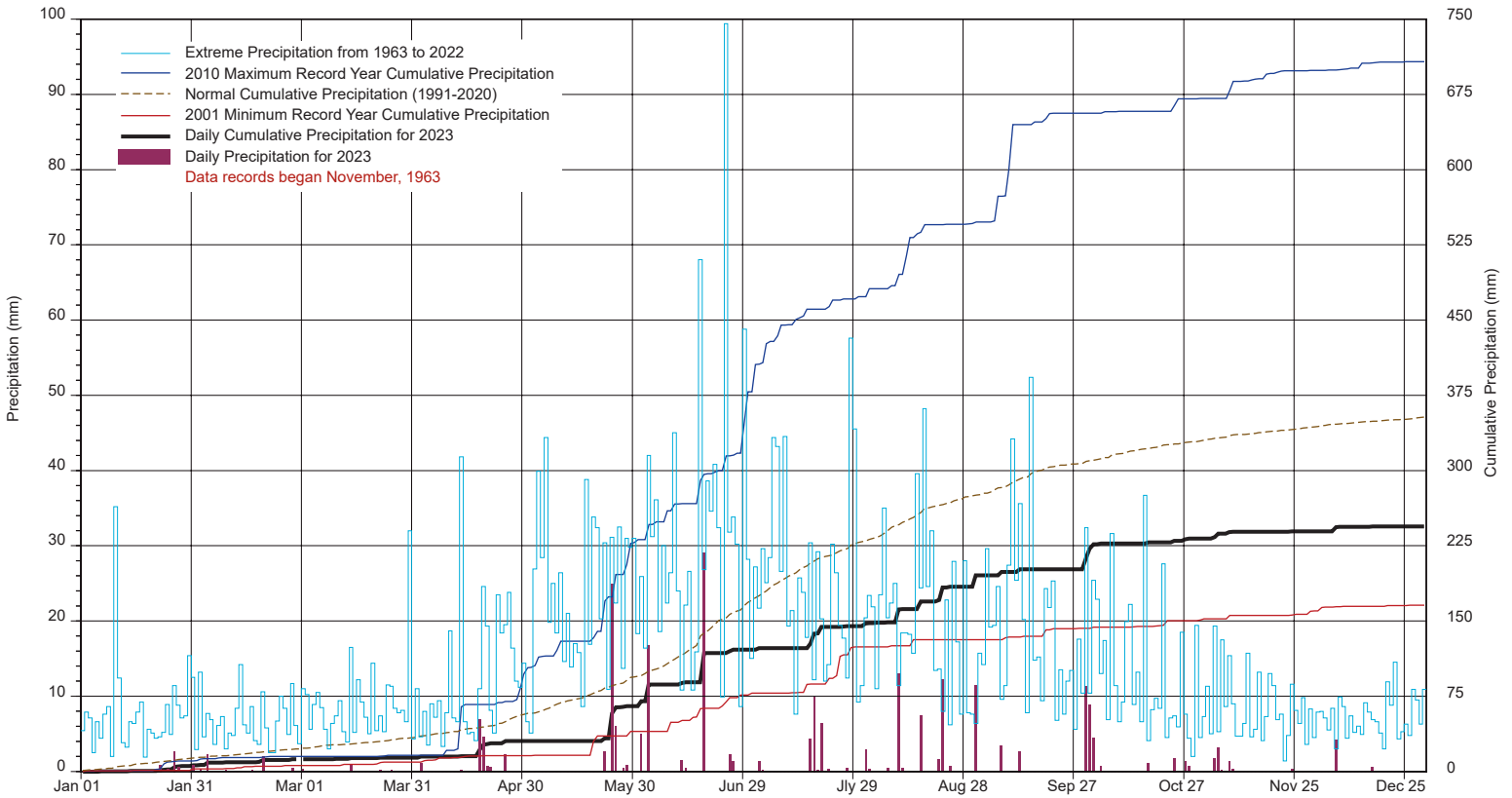
1/2 hr Maximum Wind Speed and Direction Saskatoon December 2023



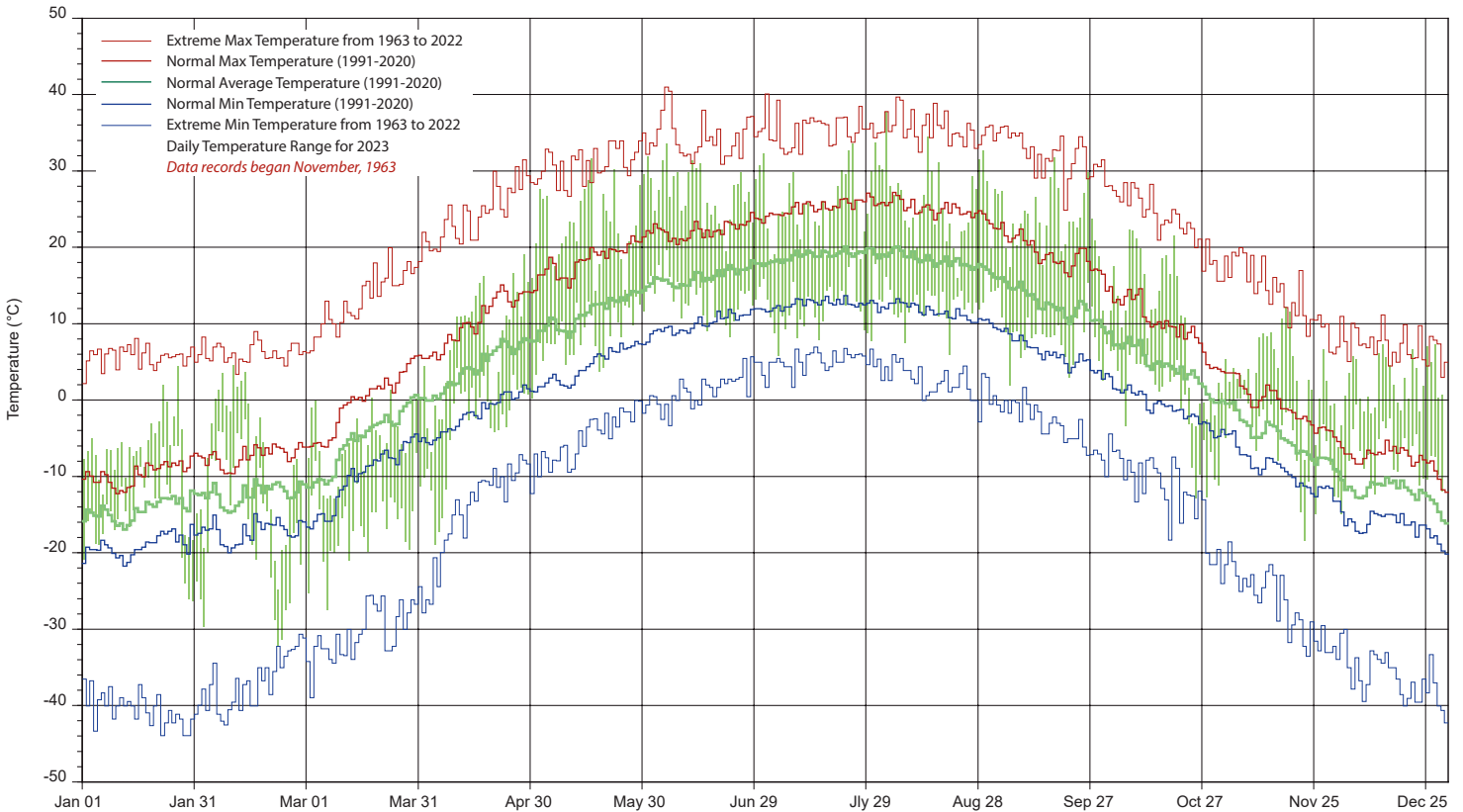
10 minute Average Wind Speed and Direction Saskatoon December 2023



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2023 TEMPERATURES AND NORMALS



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