



SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

**SASKATOON STATION 4057180**

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

Preliminary **MARCH 2018**

| 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            | -6.7        | -4.8       | -17.5 | -14.3      | -12.1 | -9.6        | 0.0              | 30.1      | 0.0       | 0.1            |               | 9                    | 89                | 70             | 1024                         | 1013           |
| 2            | -6.8        | -4.5       | -19.4 | -15.3      | -13.1 | -10.0       | 0.0              | 31.1      | 0.0       | 0.0            |               | 9                    | 84                | 73             | 1025                         | 1023           |
| 3            | -5.0        | -4.3       | -10.9 | -14.3      | -8.0  | -9.3        | 0.0              | 26.0      | 0.0       | 1.6            | snow          | 9                    | 93                | 80             | 1024                         | 1020           |
| 4            | -4.8        | -4.6       | -11.5 | -14.2      | -8.2  | -9.5        | 0.0              | 26.2      | 0.0       | 3.9            | snow          | 9                    | 93                | 84             | 1022                         | 1018           |
| 5            | -8.9        | -5.0       | -11.4 | -14.2      | -10.2 | -9.6        | 0.0              | 28.2      | 0.0       | 2.6            | snow          | 13                   | 90                | 78             | 1021                         | 1016           |
| 6            | -5.4        | -5.2       | -14.7 | -14.7      | -10.1 | -10.0       | 0.0              | 28.1      | 0.0       | 1.2            | snow          | 14                   | 89                | 67             | 1026                         | 1021           |
| 7            | -7.0        | -4.1       | -20.8 | -15.1      | -13.9 | -9.6        | 0.0              | 31.9      | 0.0       | 0.0            |               | 14                   | 88                | 63             | 1025                         | 1018           |
| 8            | -6.5        | -4.2       | -20.5 | -14.7      | -13.5 | -9.5        | 0.0              | 31.5      | 0.0       | 0.0            |               | 13                   | 87                | 60             | 1018                         | 1010           |
| 9            | -5.4        | -2.1       | -15.4 | -12.0      | -10.4 | -7.1        | 0.0              | 28.4      | 0.0       | 0.0            |               | 13                   | 88                | 75             | 1010                         | 1001           |
| 10           | 0.5         | -1.0       | -11.5 | -11.5      | -5.5  | -6.3        | 0.0              | 23.5      | 0.0       | 0.0            |               | 13                   | 90                | 52             | 1021                         | 1008           |
| 11           | 3.3         | -1.2       | -12.3 | -11.5      | -4.5  | -6.4        | 0.0              | 22.5      | 0.0       | 0.0            |               | 12                   | 88                | 51             | 1027                         | 1021           |
| 12           | 0.7         | -0.6       | -13.6 | -9.9       | -6.5  | -5.3        | 0.0              | 24.5      | 0.0       | 0.0            |               | 11                   | 92                | 58             | 1028                         | 1025           |
| 13           | 2.3         | -0.6       | -13.3 | -9.6       | -5.5  | -5.1        | 0.0              | 23.5      | 0.0       | 0.0            |               | 12                   | 92                | 53             | 1024                         | 1016           |
| 14           | 1.1         | -0.9       | -16.5 | -10.9      | -7.7  | -5.9        | 0.0              | 25.7      | 0.0       | 0.0            |               | 12                   | 91                | 65             | 1016                         | 1013           |
| 15           | -4.0        | 0.0        | -11.7 | -9.5       | -7.9  | -4.8        | 0.0              | 25.9      | 0.0       | 0.0            |               | 12                   | 82                | 68             | 1013                         | 1011           |
| 16           | 1.2         | -0.2       | -7.6  | -9.7       | -3.2  | -5.0        | 0.0              | 21.2      | 0.0       | 0.0            |               | 12                   | 87                | 73             | 1013                         | 1011           |
| 17           | 0.0         | 0.0        | -2.4  | -8.9       | -1.2  | -4.5        | 0.0              | 19.2      | 0.0       | 0.9            | light mist    | 12                   | 95                | 77             | 1014                         | 1011           |
| 18           | -1.6        | 0.6        | -7.9  | -8.9       | -4.8  | -4.2        | 0.0              | 22.8      | 0.0       | 0.0            |               | 13                   | 97                | 75             | 1021                         | 1014           |
| 19           | -2.2        | 1.2        | -8.1  | -8.3       | -5.2  | -3.6        | 0.0              | 23.2      | 0.0       | 0.0            | light snow    | 12                   | 89                | 74             | 1021                         | 1015           |
| 20           | 2.1         | 1.6        | -3.7  | -8.3       | -0.8  | -3.3        | 0.0              | 18.8      | 0.0       | 0.0            |               | 12                   | 92                | 62             | 1015                         | 1010           |
| 21           | 1.8         | 1.5        | -9.7  | -7.0       | -4.0  | -2.8        | 0.0              | 22.0      | 0.0       | 0.0            | heavy fog     | 10                   | 95                | 71             | 1019                         | 1011           |
| 22           | 0.9         | 2.5        | -11.2 | -6.8       | -5.2  | -2.2        | 0.0              | 23.2      | 0.0       | 0.0            |               | 9                    | 94                | 75             | 1023                         | 1019           |
| 23           | -0.4        | 2.9        | -2.5  | -7.4       | -1.5  | -2.2        | 0.0              | 19.5      | 0.0       | 1.4            | snow          | 9                    | 97                | 80             | 1020                         | 1011           |
| 24           | 3.5         | 1.6        | -4.7  | -6.8       | -0.6  | -2.6        | 0.0              | 18.6      | 0.0       | 0.0            |               | 9                    | 97                | 61             | 1011                         | 1004           |
| 25           | 1.8         | 2.3        | -4.1  | -8.0       | -1.2  | -2.9        | 0.0              | 19.2      | 0.0       | 0.6            | snow          | 10                   | 96                | 59             | 1013                         | 1001           |
| 26           | 3.6         | 3.5        | -6.2  | -6.7       | -1.3  | -1.6        | 0.0              | 19.3      | 0.0       | 0.0            |               | 9                    | 93                | 53             | 1013                         | 1007           |
| 27           | -3.4        | 4.1        | -11.2 | -5.1       | -7.3  | -0.5        | 0.0              | 25.3      | 0.0       | 1.1            | snow          | 8                    | 89                | 73             | 1011                         | 1002           |
| 28           | -5.1        | 4.7        | -15.2 | -5.3       | -10.2 | -0.3        | 0.0              | 28.2      | 0.0       | 0.0            |               | 7                    | 87                | 62             | 1017                         | 1012           |
| 29           | -7.9        | 4.9        | -18.4 | -4.9       | -13.2 | 0.0         | 0.0              | 31.2      | 0.0       | 0.1            |               | 7                    | 90                | 42             | 1027                         | 1017           |
| 30           | -10.8       | 6.3        | -20.8 | -4.0       | -15.8 | 1.1         | 0.0              | 33.8      | 0.0       | 0.0            |               | 7                    | 73                | 38             | 1026                         | 1020           |
| 31           | -7.1        | 6.8        | -18.5 | -4.3       | -12.8 | 1.3         | 0.0              | 30.8      | 0.0       | 0.0            |               | 7                    | 67                | 50             | 1028                         | 1020           |
| Total        |             |            |       |            |       |             | 0.0              | 783.4     | 0.0       | 13.5           |               |                      | Extreme / Date    | Extreme / Date | Extreme / Date               | Extreme / Date |
| Avg          | -2.5        | 0.0        | -12.0 | -9.7       | -7.3  | -4.9        | 1981-2010 Normal |           |           | 13.8           | Normal        |                      |                   |                |                              |                |
| Extreme Date | 3.6         |            | -20.8 |            |       |             | 3.0              | 708.8     | 0.0       | 28.4           | Cumulative    |                      | 97                | 38             | 1028                         | 1001           |
|              | 26          |            | 7     |            |       |             |                  |           |           | 38.6           | Cumulative No |                      | 18                | 30             | 12                           | 9              |

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

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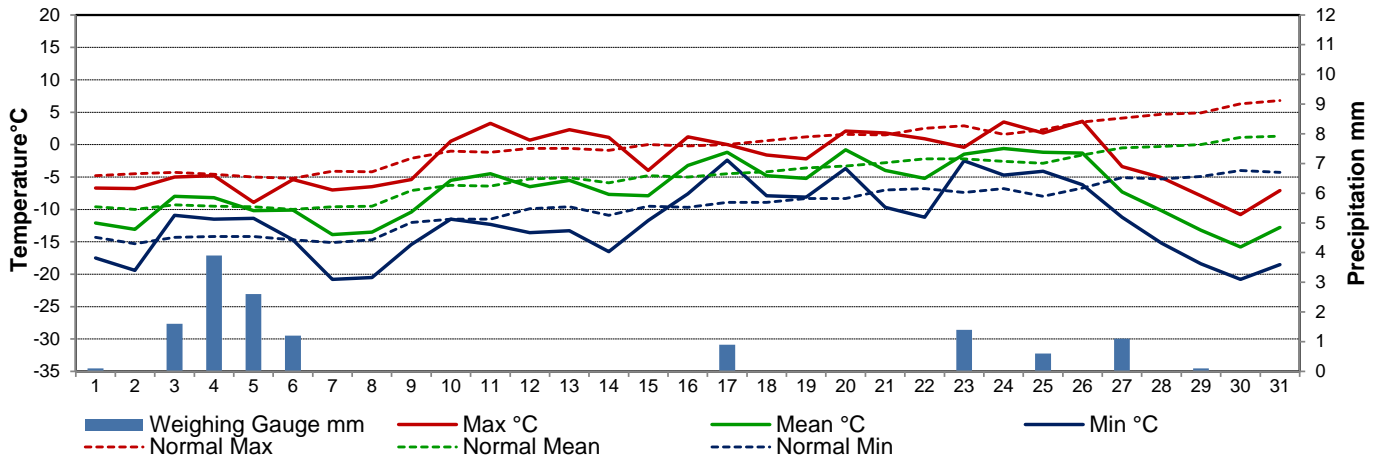


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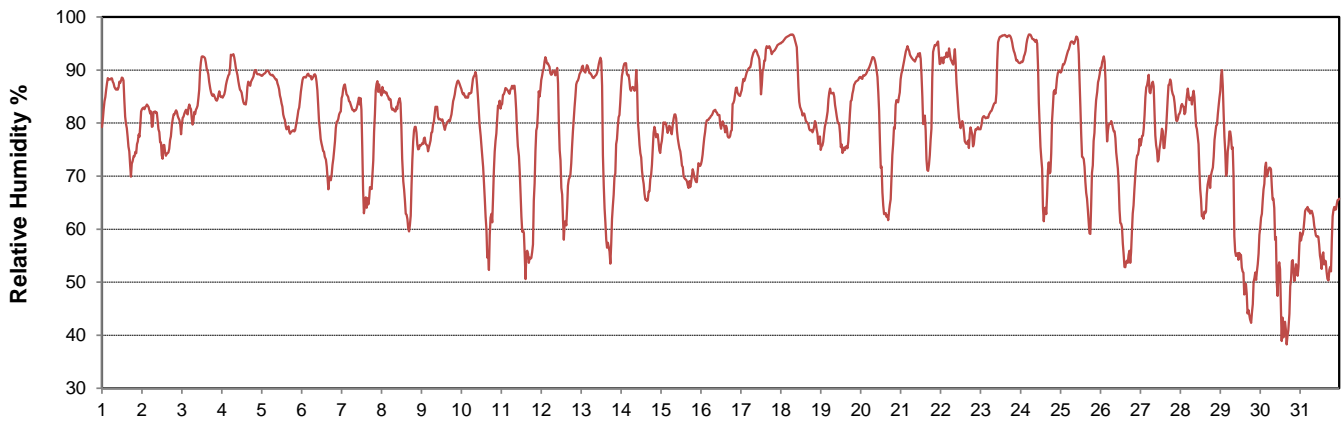
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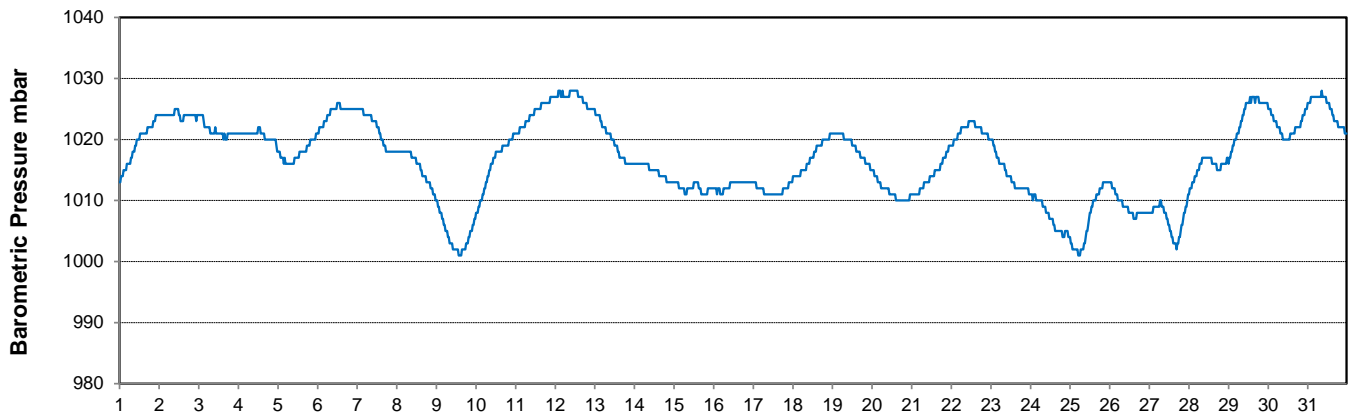
### Temperature and Precipitation for March 2018



### Relative Humidity for March 2018



### Barometric Pressure Corrected to Sea Level for March 2018





# SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

**SASKATOON STATION 4057180**

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

Preliminary **MARCH 2018**

| Day     | Wind Gust |           |       | Soil Temperatures at 0900hrs            |      |       |       |       |        |        |        | Soil Moisture<br>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       | 32.0      | NE        | 16:49 | -16.0                                   | -8.0 | -7.5  | -7.0  | -4.5  | -1.0   | 0.5    | 3.5    | 7                      | 8.6                              | 10.9            | 78.8     | 11.7              | 2.4               |
| 2       | 51.6      | E         | 23:45 | -18.0                                   | -8.5 | -8.0  | -7.0  | -4.5  | -1.0   | 0.5    | 3.5    | 7                      | 8.5                              | 11.0            | 77.4     | 13.3              | 3.3               |
| 3       | 53.6      | ESE       | 10:26 | -7.0                                    | -8.0 | -7.5  | -7.0  | -4.5  | -1.0   | 0.5    | 3.5    | 7                      | 0.0                              | 11.0            | 0.0      | 3.5               | 2.9               |
| 4       | 38.6      | NNE       | 15:52 | -7.5                                    | -7.0 | -6.5  | -6.5  | -4.5  | -1.0   | 0.5    | 3.0    | 7                      | 0.0                              | 11.1            | 0.0      | 3.9               | 3.2               |
| 5       | 34.6      | NNE       | 0:04  | -10.5                                   | -6.5 | -6.0  | -6.0  | -4.0  | -1.0   | 0.5    | 3.0    | 7                      | 1.5                              | 11.2            | 13.4     | 8.5               | 6.4               |
| 6       | 29.2      | W         | 11:17 | -10.0                                   | -6.0 | -5.5  | -5.5  | -4.0  | -1.0   | 0.5    | 3.0    | 8                      | 6.4                              | 11.2            | 56.9     | 10.6              | 6.9               |
| 7       | 16.7      | SE        | 15:59 | -18.0                                   | -6.0 | -5.5  | -5.5  | -3.5  | -1.0   | 0.5    | 3.0    | 8                      | 10.6                             | 11.3            | 93.7     | 13.7              | 3.3               |
| 8       | 23.1      | SE        | 23:42 | -19.0                                   | -6.5 | -6.0  | -5.5  | -3.5  | -1.0   | 0.5    | 3.0    | 7                      | 9.9                              | 11.4            | 87.0     | 14.0              | 2.3               |
| 9       | 41.1      | ESE       | 10:24 | -10.5                                   | -6.5 | -6.0  | -5.5  | -3.5  | -1.0   | 0.5    | 3.0    | 7                      | 8.9                              | 11.5            | 77.7     | 12.8              | 3.8               |
| 10      | 27.4      | W         | 13:29 | -11.0                                   | -6.0 | -5.5  | -5.5  | -3.5  | -1.0   | 0.5    | 3.0    | 8                      | 10.8                             | 11.5            | 93.8     | 15.2              | 2.9               |
| 11      | 16.3      | WNW       | 16:02 | -12.5                                   | -5.5 | -5.5  | -5.0  | -3.5  | -1.0   | 0.5    | 3.0    | 8                      | 11.2                             | 11.6            | 96.7     | 15.1              | 2.1               |
| 12      | 17.8      | SSE       | 12:39 | -12.5                                   | -5.5 | -5.5  | -5.0  | -3.5  | -1.0   | 0.5    | 3.0    | 8                      | 10.7                             | 11.7            | 91.8     | 16.0              | 2.3               |
| 13      | 19.5      | WSW       | 17:35 | -12.5                                   | -5.5 | -5.5  | -5.0  | -3.0  | -1.0   | 0.5    | 3.0    | 8                      | 9.9                              | 11.7            | 84.5     | 14.8              | 3.6               |
| 14      | 39.7      | ESE       | 13:09 | -13.0                                   | -5.5 | -5.0  | -5.0  | -3.0  | -1.0   | 0.5    | 3.0    | 8                      | 11.2                             | 11.8            | 95.1     | 16.5              | 2.2               |
| 15      | 46.0      | SE        | 5:50  | -11.5                                   | -5.5 | -5.0  | -5.0  | -3.0  | -1.0   | 0.5    | 3.0    | 8                      | 11.3                             | 11.9            | 95.4     | 15.7              | 2.5               |
| 16      | 33.7      | ESE       | 1:33  | -6.0                                    | -5.0 | -5.0  | -4.5  | -3.0  | -1.0   | 0.5    | 3.0    | 8                      | 0.0                              | 11.9            | 0.0      | 5.5               | 4.4               |
| 17      | 18.1      | ESE       | 13:22 | -2.0                                    | -4.5 | -4.5  | -4.5  | -3.0  | -1.0   | 0.5    | 3.0    | 8                      | 0.0                              | 12.0            | 0.0      | 3.1               | 2.5               |
| 18      | 29.7      | NE        | 16:30 | -2.0                                    | -4.0 | -4.0  | -4.0  | -3.0  | -1.0   | 0.5    | 3.0    | 8                      | 0.0                              | 12.1            | 0.0      | 6.6               | 5.4               |
| 19      | 21.0      | SE        | 19:59 | -7.5                                    | -4.0 | -3.5  | -3.5  | -2.5  | -1.0   | 0.5    | 3.0    | 8                      | 0.1                              | 12.1            | 0.8      | 9.0               | 7.2               |
| 20      | 25.9      | S         | 15:29 | -3.5                                    | -3.5 | -3.5  | -3.5  | -2.5  | -1.0   | 0.5    | 2.5    | 8                      | 6.8                              | 12.2            | 55.8     | 12.8              | 7.3               |
| 21      | 16.8      | ESE       | 18:37 | -9.0                                    | -3.0 | -3.0  | -3.0  | -2.5  | -1.0   | 0.5    | 2.5    | 9                      | 10.0                             | 12.3            | 81.6     | 15.9              | 3.7               |
| 22      | 60.8      | ESE       | 21:37 | -6.0                                    | -3.0 | -3.0  | -3.0  | -2.0  | -1.0   | 0.5    | 2.5    | 9                      | 10.8                             | 12.3            | 87.6     | 18.4              | 3.4               |
| 23      | 61.3      | SE        | 13:22 | -2.0                                    | -2.5 | -2.5  | -2.5  | -2.0  | -0.5   | 0.5    | 2.5    | 9                      | 0.0                              | 12.4            | 0.0      | 4.7               | 3.8               |
| 24      | 37.2      | S         | 13:10 | -4.0                                    | -2.5 | -2.5  | -2.5  | -2.0  | -0.5   | 0.5    | 2.5    | 9                      | 6.6                              | 12.5            | 53.0     | 10.7              | 8.2               |
| 25      | 50.0      | N         | 9:18  | -1.0                                    | -2.5 | -2.0  | -2.5  | -2.0  | -0.5   | 0.5    | 2.5    | 10                     | 7.6                              | 12.5            | 60.7     | 14.1              | 5.0               |
| 26      | 39.0      | SSW       | 11:06 | -2.5                                    | -2.0 | -2.0  | -2.0  | -1.5  | -0.5   | 0.5    | 2.5    | 10                     | 11.2                             | 12.6            | 88.9     | 17.9              | 2.5               |
| 27      | 42.8      | NNE       | 18:01 | -9.0                                    | -2.5 | -2.0  | -2.0  | -1.5  | -0.5   | 0.5    | 2.5    | 10                     | 2.8                              | 12.7            | 22.1     | 9.8               | 7.2               |
| 28      | 32.3      | WNW       | 15:10 | -14.0                                   | -3.0 | -2.5  | -2.5  | -1.5  | -0.5   | 0.5    | 2.5    | 9                      | 9.3                              | 12.7            | 73.1     | 17.4              | 4.3               |
| 29      | 36.3      | NE        | 7:49  | -17.5                                   | -3.5 | -3.0  | -2.5  | -1.5  | -0.5   | 0.5    | 2.5    | 9                      | 11.2                             | 12.8            | 87.5     | 18.9              | 3.3               |
| 30      | 36.9      | WNW       | 18:05 | -16.5                                   | -4.0 | -3.5  | -3.0  | -1.5  | -0.5   | 0.5    | 2.5    | 9                      | 10.8                             | 12.9            | 83.9     | 17.3              | 6.4               |
| 31      | 57.0      | W         | 17:14 | -17.0                                   | -4.5 | -4.0  | -3.5  | -1.5  | -0.5   | 0.5    | 2.5    | 8                      | 12.5                             | 12.9            | 96.7     | 19.8              | 3.1               |
| Total   |           |           |       |   |      |       |       |       |        |        |        |                        | 219.2                            | 369.53          | 59.3     | 387.2             | 127.8             |
| Mean    |           |           |       | -10.0                                   | -4.9 | -4.5  | -4.4  | -2.9  | -0.9   | 0.5    | 2.9    | 8                      | 1981-2010 Normal for Radiation   |                 |          |                   |                   |
| Extreme | 61.3      | SE        | 13:22 | 1971- 2000 Normal for Soil Temperatures |      |       |       |       |        |        |        |                        | 182.0                            | 369.4           | 49.3     | 371.9             | 162.6             |
| Date    | 23        |           |       |   | -3.1 | -2.8  | -2.4  | -1.5  | -0.4   | 0.6    | 2.7    |                        | No. of Bright Sunshine days = 25 |                 |          |                   |                   |

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

## SRC proudly recognizes the following CRS supporters:

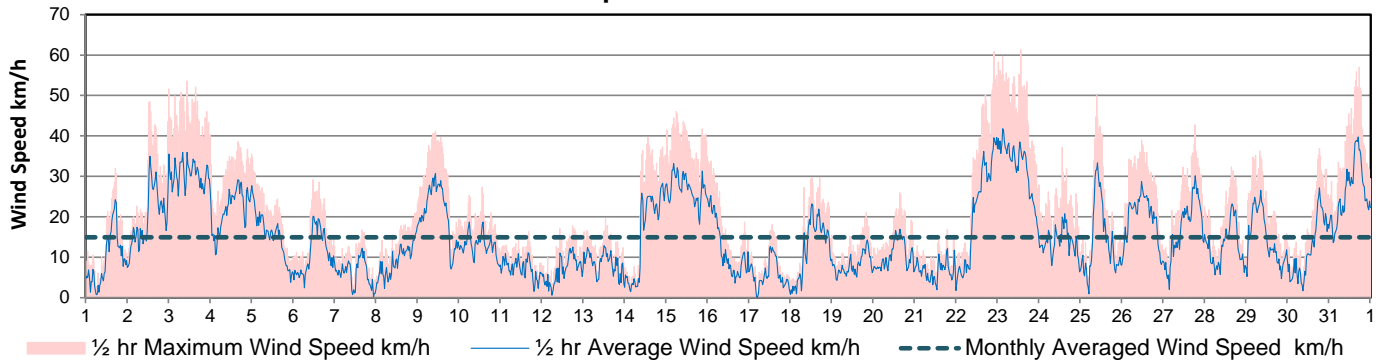


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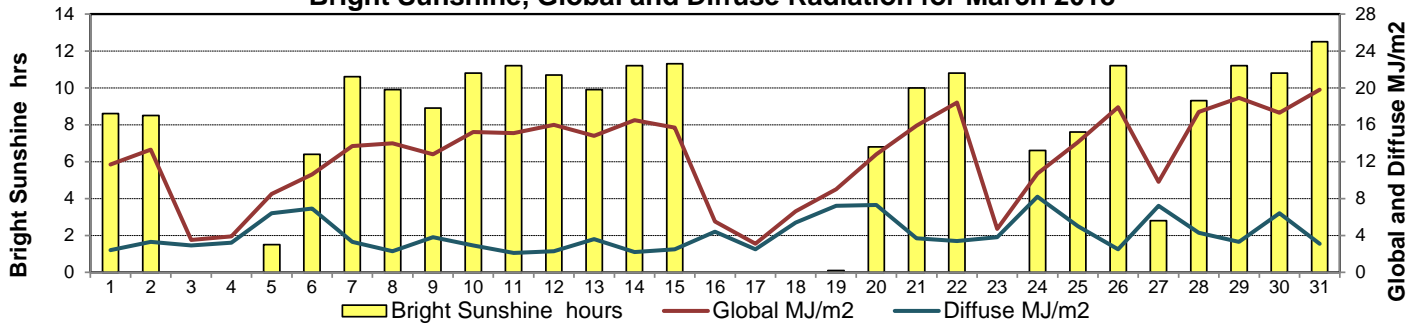
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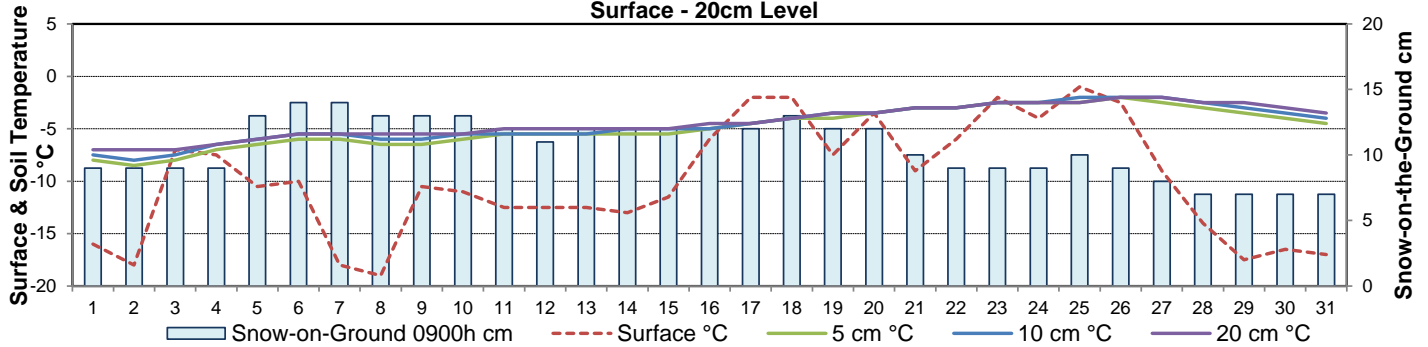
### Wind Speed for March 2018



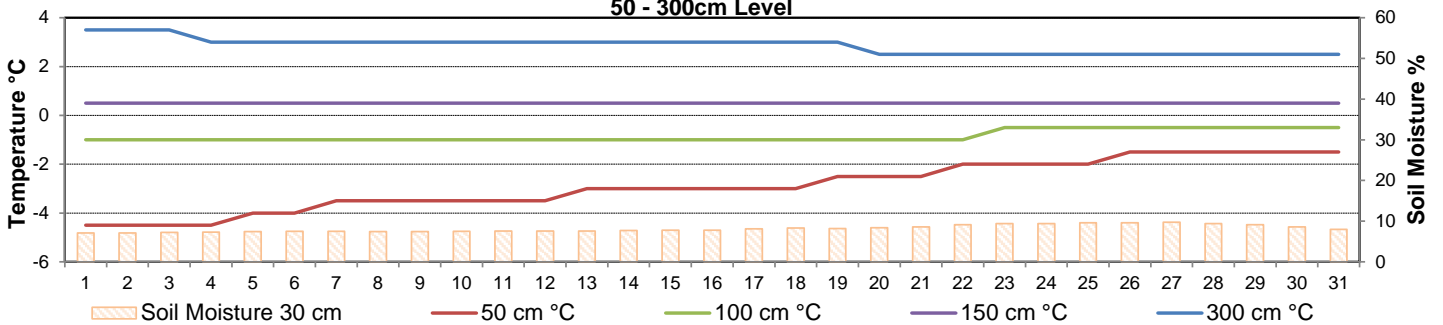
### Bright Sunshine, Global and Diffuse Radiation for March 2018



### Soil Temperatures for March 2018 Surface - 20cm Level



### Soil Temperatures for March 2018 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 **MARCH 2018**

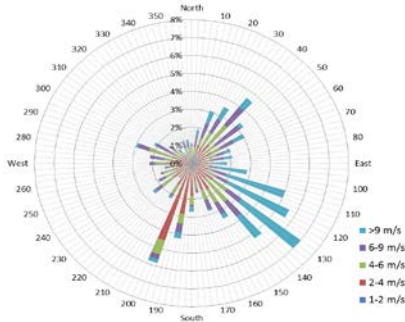
**Extreme Records for March**

| 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  |
| 22.8                   | 23/1910 | SE   | 20.0 23/1993    | 59.0                       | 1927  | SE   | 57.1 1967       | 93 <sup>W</sup>   | 18/1959 | 89 <sup>W</sup> | 08/1977 | 248.7                         | 2013 | 31          | 1996* |
| -43.3                  | 14/1897 | SM   | -38.9 02/1972   | 0.0                        | 1915* | SE*  | 0.8 2010        |                   |         |                 |         | 102.8                         | 1983 | 21          | 1983* |

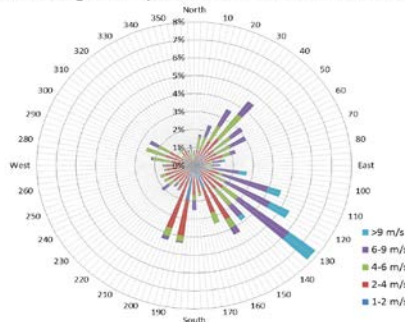
\*\*1975 forward \* more than one

| Notable Events for CRS Saskatoon - March |      |     |            |            |      | Saskatoon Area Stations |                              |              | Glossary           |   |
|--|------|-----|------------|------------|------|-------------------------|------------------------------|--------------|--------------------|---|
| Element                                  | Type | Day | New Record | Old Record | Year | Station                 | Location                     | Period       | Code               | Description                               |
|  |      |     |            |            |      | 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    |                    |   |

1/2 hr Maximum Wind Speed and Direction Saskatoon Mar 2018



10 minute Average Wind Speed and Direction Saskatoon Mar 2018



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