

March 2023 Climate Summary for Denver Cooler & Drier Than Normal



Low clouds in Boulder dissipating
on the morning of March 30th
Taken by Paul Schlatter, NWS Boulder, CO

A series of Pacific storm systems moving across the Rocky Mountain Region resulted in cool unsettled weather across North Central and Northeastern Colorado during the month. Outside a couple of late March storms, the plains stayed mostly dry with breezy to windy conditions. However, the mountains received periods of moderate to heavy snow throughout the month, thanks to the Atmospheric River. As for temperatures, March 2023 was the 5th consecutive month with below normal temperatures at Denver International Airport. The last period in which Denver had 5 consecutive months , with below normal temperatures, was June through October of 2009.

TEMPERATURES :

The average temperature at Denver International Airport for the month of March was 35.9 degrees F, which is 5.7 degrees below the normal of 41.6 degrees. Temperatures ranged from a high of 71 degrees on the 15th to a low of 13 degrees on the morning of the 18th and 28th

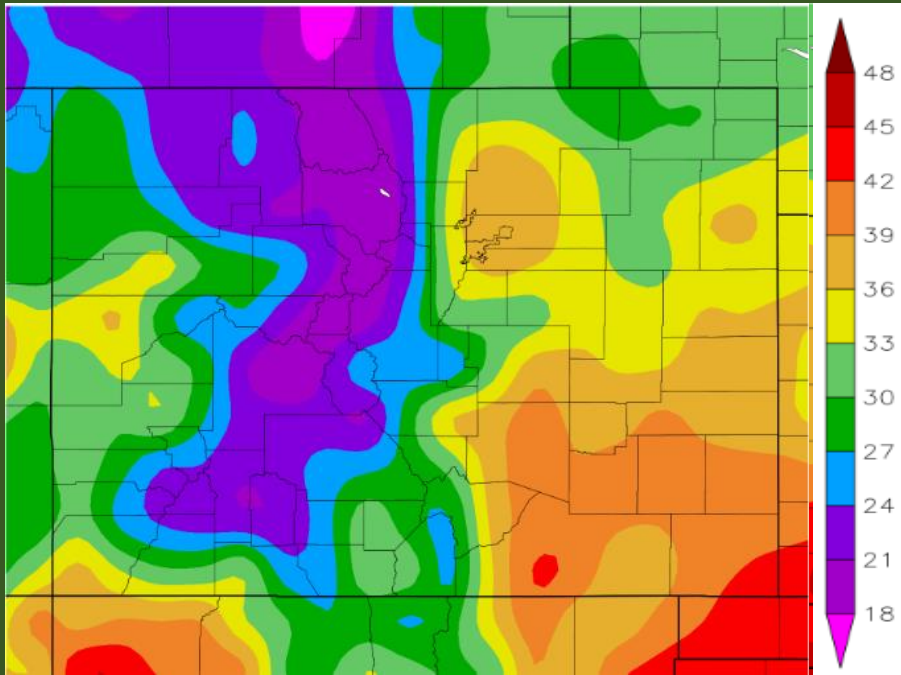
ELEVEN WARMEST MARCH AVERAGE TEMPERATURES IN DENVER WEATHER HISTORY SINCE 1872: DEGREES F

50.4 - 1910
49.2 - 2012
47.9 - 2017
47.2 - 1907
47.1 - 1986
47.0 - 1918
46.5 - 1879
46.4 - 2004, 1946
46.0 - 2007, 1887

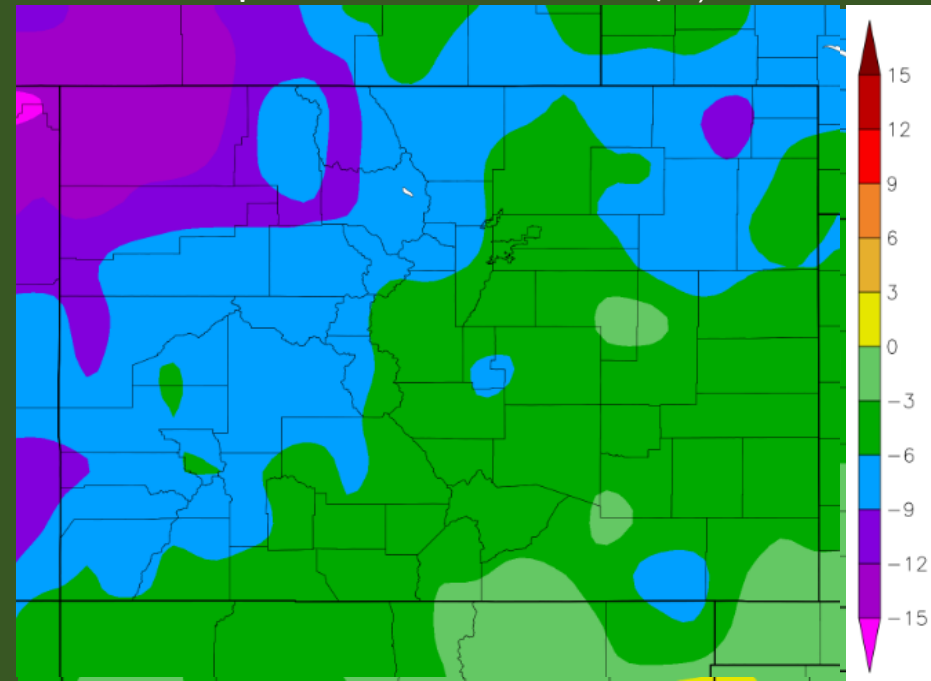
TEN COLDEST MARCH AVERAGE TEMPERATURES IN DENVER WEATHER HISTORY SINCE 1872: DEGREES F

26.4 - 1912
28.0 - 1924
29.0 - 1965
29.7 - 1906
32.1 - 1969
32.2 - 1891
32.8 - 1958
33.0 - 1964
33.1 - 1899
33.2 - 1917

Average Temperature
March 2023 (°F)



March 2023 Temperature
Departure from Normal (°F)

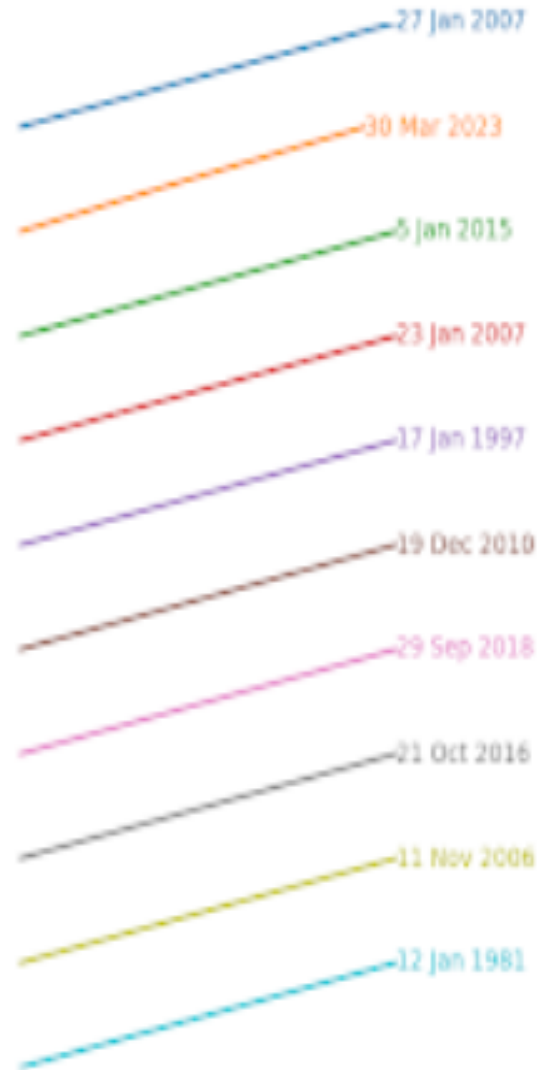
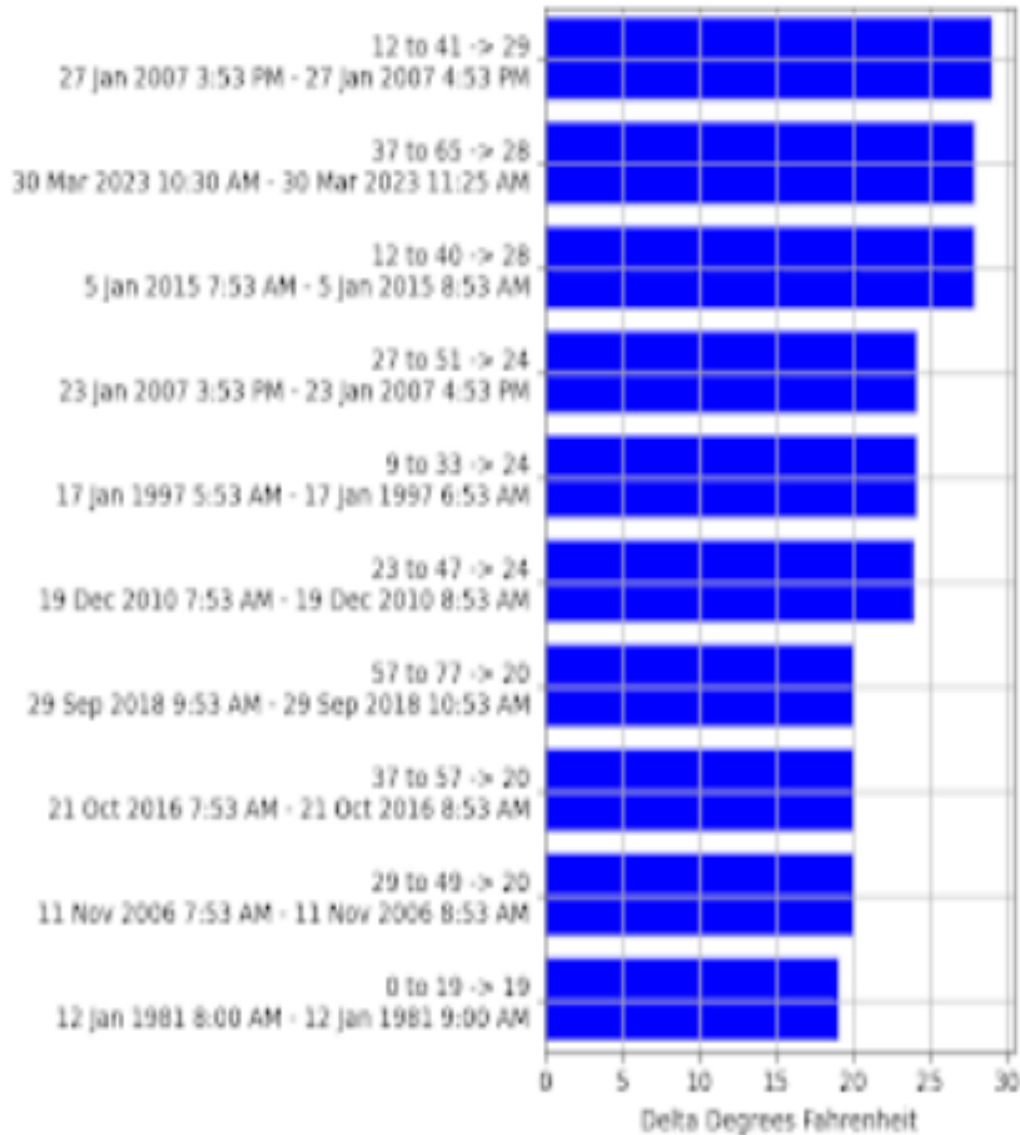


Graphics generated by HPRCC using provisional data

On the afternoon of March 30th, southwest winds spread warm air over the Denver metro area, moving out the cold air. At DIA, the temperature rose 28 degrees in an hour (37 to 65). That's the second biggest one-hour rise since 1974. It's DEN data, both airports.



[DEN] DENVER INTNL ARPT.: Top 10 Air Temperature Rise Within 1 Hour Period (1974-2023) [No Month/Time Limit]



PRECIPITATION:

Denver received 0.49 inches of precipitation during March of 2023.
This is 0.37 inches below the monthly average of 0.86 inches.
The greatest daily precipitation amount of 0.15 occurred on the 25th.

TEN WETTEST March TOTALS IN DENVER WEATHER HISTORY SINCE 1872:

INCHES

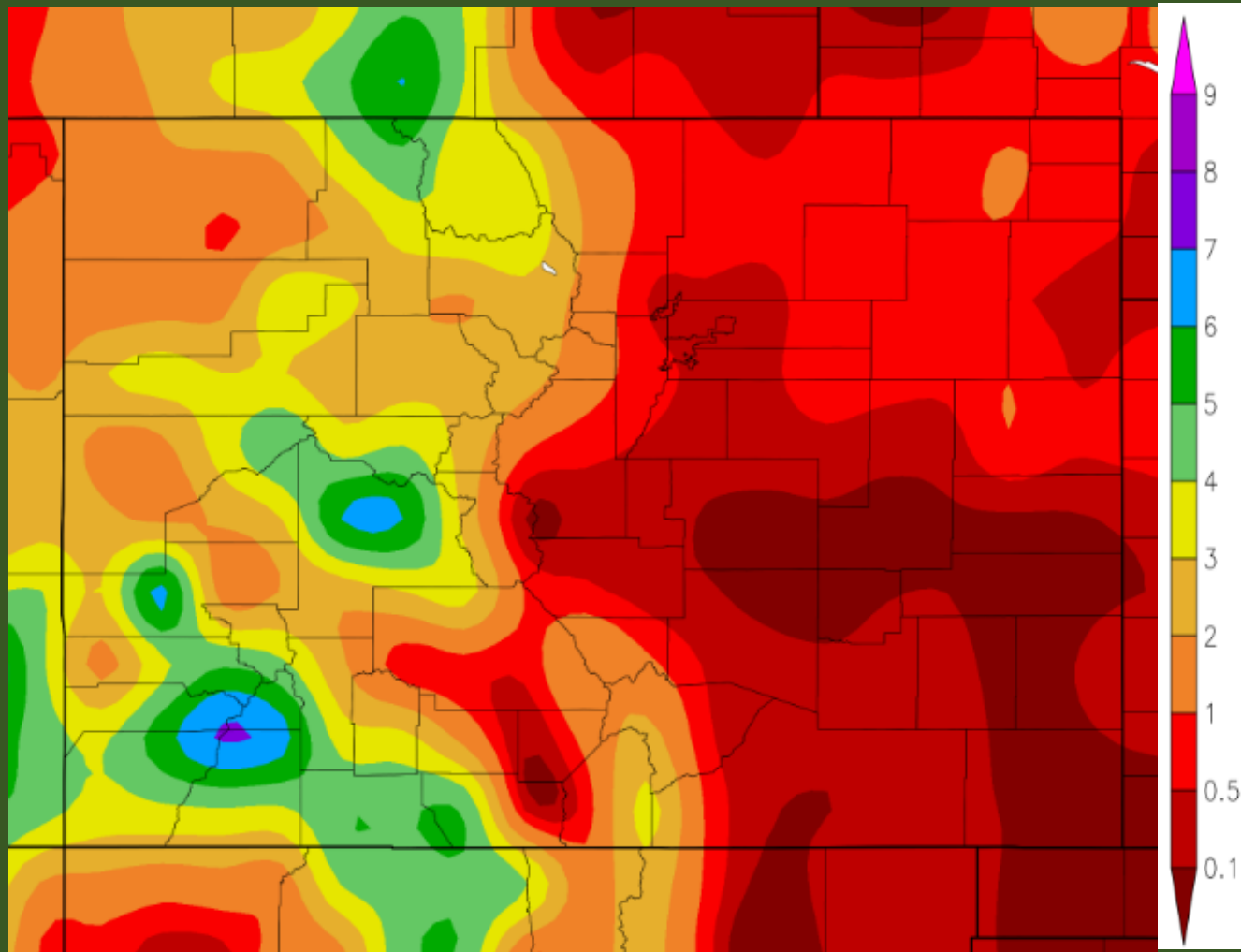
4.56 - 1983
3.80 - 2021
3.50 - 1992
3.10 - 1990, 1891
3.07 - 1905
3.05 - 2003
3.03 - 1909
2.85 - 1959
2.75 - 1944

ELEVEN DRIEST March TOTALS IN DENVER WEATHER HISTORY SINCE 1872:

INCHES

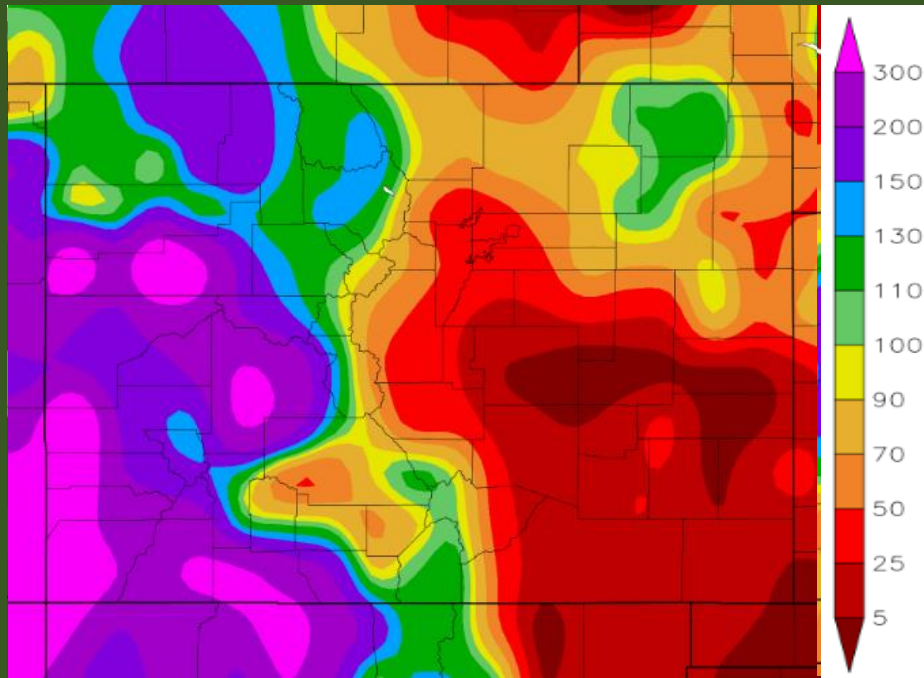
0.03 - 2012
0.11 - 1908
0.14 - 2008, 2004
0.18 - 1982
0.19 - 1999
0.20 - 1882
0.21 - 1883, 1880
0.22 - 1945, 1873

March 2023 Precipitation (Inches)

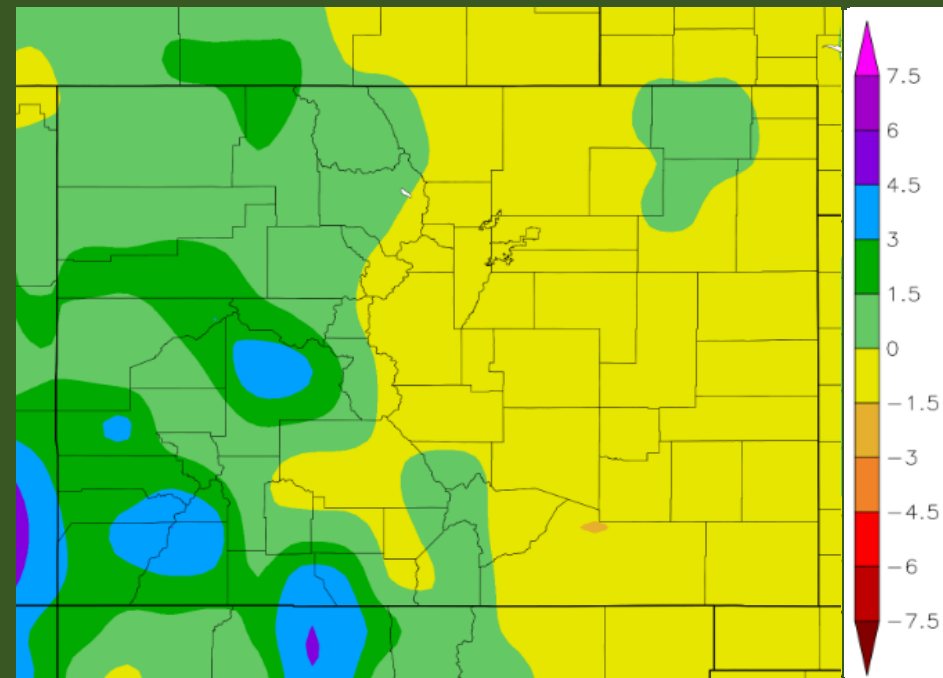


Graphic generated by HPRCC using provisional data

Percent of normal Precipitation (%)
March 2023



Departure from Normal Precipitation
March 2023 (Inches)



Graphics generated by HPRCC using provisional data

SNOWFALL

March is Denver's snowiest month with a monthly average of 8.8 inches during the 1991-2020 period at the Stapleton location. During the period of record (1882-2022) the March average is 11.5 inches. March of 2023 ended up with 5.1 inches of snow which was 3.7 inches below normal. The greatest snowfall amount occurred from the 25th when 2.2 inches was measured.

TEN HIGHEST SNOW TOTALS FOR APRIL IN DENVER WEATHER HISTORY

INCHES

35.2 - 2003
34.0 - 2021
32.5 - 1944
31.3 - 1891
30.5 - 1983
29.2 - 1961
26.8 - 1959
25.7 - 1923
25.2 - 1952
24.8 - 1929

THE Eleven LEAST SNOWIEST APRIL IN DENVER WEATHER HISTORY

INCHES

TRACE - 2017, 2012, 1995
0.3 - 1883
0.4 - 1911
0.5 - 1885
1.1 - 1887
1.8 - 2004
2.0 - 1882
2.1 - 1982, 1908

US 34 MP 096.40 WB at NB I-25 Ramp

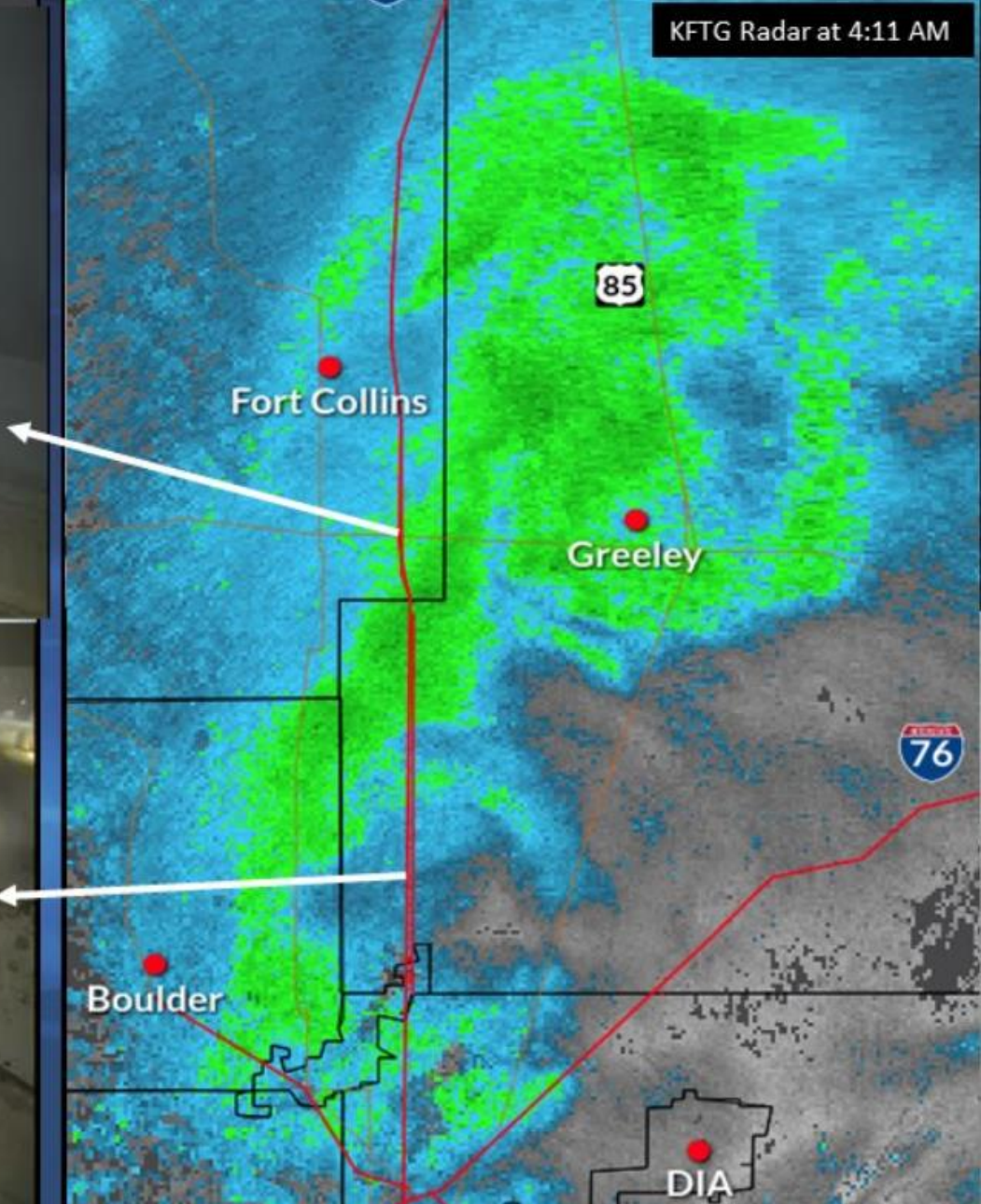


US 34 and I-25 at 4:05 am

I-25 MP 240.15 SB at CO 119



I-25 & CO 119 at 4:02 am



KFTG Radar at 4:11 AM

Fort Collins

Greeley

Boulder

DIA

A potent storm system produced heavy snow across portions of North Central and Northeastern Colorado on March 27th. Much of Metro Denver only measured 1 to 2 inches of snow with this storm. However, the plains north and east of Denver had higher amounts ranging from 4 inches to 11 inches with 13.5 inches in Pierce.

PRELIMINARY LOCAL STORM [REPORT](#)...SUMMARY
NATIONAL WEATHER SERVICE DENVER CO
848 AM MDT TUE MAR 28 2023

| ..TIME... | ...EVENT... | ...CITY LOCATION... | ...LAT.LON... |
|-----------------------|--|--|-----------------------------------|
| ..DATE... | ...MAG.... | ..COUNTY LOCATION..ST.. | ...SOURCE.... |
| | ..REMARKS.. | | |
| 1030 AM 03/27/2023 | SNOW M13.5 INCH | PIERCE WELD CO | 40.63N 104.75W PUBLIC |
| | DELAYED REPORT FROM SOCIAL MEDIA. | | |
| 0856 AM 03/27/2023 | SNOW M11.0 INCH | 1 S WINDSOR WELD CO | 40.48N 104.91W PUBLIC |
| 0325 PM 03/27/2023 | SNOW E11.0 INCH | 1 S STERLING LOGAN CO | 40.61N 103.21W STORM CHASER |
| 1129 AM 03/27/2023 | SNOW M10.5 INCH | 1 ENE WINDSOR WELD CO | 40.49N 104.88W TRAINED SPOTTER |
| 0700 AM 03/28/2023 | SNOW M10.2 INCH | 4 NNE TIMNATH LARIMER CO | 40.59N 104.96W COCORAHS |
| | COCORAHS STATION CO-LR-36 TIMNATH 4.1 NNE. | | |
| 0132 PM 03/27/2023 | SNOW M10.0 INCH | 4 NNW KELIM LARIMER CO | 40.46N 104.97W PUBLIC |
| 0448 PM 03/27/2023 | SNOW E10.0 INCH | SEVERANCE WELD CO | 40.53N 104.86W PUBLIC |
| | DELAYED REPORT FROM SOCIAL MEDIA. STORM TOTAL SNOWFALL WAS ESTIMATED. | | |
| 0700 AM 03/28/2023 | SNOW M9.6 INCH | 3 NW FORT COLLINS LARIMER CO | 40.58N 105.10W COCORAHS |
| | COCORAHS STATION CO-LR-1196 FORT COLLINS 2.5 NW. | | |
| 0700 AM 03/28/2023 | SNOW M9.5 INCH | 4 WSW EATON WELD CO | 40.51N 104.77W COCORAHS |
| | COCORAHS STATION CO-WE-124 EATON 3.6 WSW . | | |
| 1004 AM 03/27/2023 | SNOW M8.7 INCH | 1 WNW MILLIKEN WELD CO | 40.32N 104.87W TRAINED SPOTTER |
| 0700 AM 03/28/2023 | SNOW M8.5 INCH | 1 W WINDSOR WELD CO | 40.49N 104.93W COCORAHS |
| | COCORAHS STATION CO-WE-588 WINDSOR 1.5 WNW. | | |

| | | | |
|-----------------------|---|--|--|
| 0700 AM 03/28/2023 | SNOW M8.5 INCH | STERLING LOGAN CO | 40.63N 103.21W COCORAHS |
| | COCORAHS STATION CO-LG-49 STERLING 1.5 S. | | |
| 0700 AM 03/28/2023 | SNOW M8.4 INCH | 1 SSE BRUSH MORGAN CO | 40.25N 103.62W COCORAHS |
| | COCORAHS STATION CO-MR-1 BRUSH 0.8 S. | | |
| 0700 AM 03/28/2023 | SNOW M8.3 INCH | 2 N TIMNATH LARIMER CO | 40.57N 104.98W COCORAHS |
| | COCORAHS STATION CO-LR-393 FCL 5.6 E. | | |
| 0700 AM 03/28/2023 | SNOW M8.2 INCH | 3 ENE LAPORTE LARIMER CO | 40.64N 105.08W COCORAHS |
| | COCORAHS STATION CO-LR-797 FORT COLLINS 5.4 N. | | |
| 0955 AM 03/27/2023 | SNOW M8.1 INCH | 1 NW WELLINGTON LARIMER CO | 40.71N 105.01W TRAINED SPOTTER |
| 1119 AM 03/27/2023 | SNOW M8.0 INCH | 2 WNW FORT COLLINS LARIMER CO | 40.57N 105.10W PUBLIC |
| 0335 PM 03/27/2023 | SNOW E8.0 INCH | STERLING LOGAN CO | 40.63N 103.22W STORM CHASER |
| 0700 AM 03/28/2023 | SNOW M7.9 INCH | 3 WSW FORT COLLINS LARIMER CO | 40.54N 105.11W COCORAHS |
| | COCORAHS STATION CO-LR-1228 FORT COLLINS 2.5 WSW . | | |
| 0700 AM 03/28/2023 | SNOW M7.5 INCH | 6 NE NUNN WELD CO | 40.77N 104.69W COCORAHS |
| | COCORAHS STATION CO-WE-409 NUNN 6.5 NE. | | |
| 0700 AM 03/28/2023 | SNOW M7.5 INCH | 3 E LOVELAND LARIMER CO | 40.43N 105.02W COCORAHS |
| | COCORAHS STATION CO-LR-687 LOVELAND 2.7 E. | | |
| 0445 PM 03/27/2023 | SNOW M7.4 INCH | 1 S GREELEY WELD CO | 40.40N 104.75W NWS EMPLOYEE |
| | STORM TOTAL SNOWFALL. 0.62 INCHES OF LIQUID. | | |
| 0700 AM 03/28/2023 | SNOW M7.4 INCH | 1 S GREELEY WELD CO | 40.40N 104.75W COCORAHS |
| | COCORAHS STATION CO-WE-171 GREELEY 2.6 W. | | |
| 0700 AM 03/28/2023 | SNOW M7.4 INCH | 4 WSW WINDSOR LARIMER CO | 40.47N 104.98W COCORAHS |

An upper level storm system moving across the Rocky Mountain Region combined with a deep surface low over Nebraska produced strong winds across the foothills, plains and Palmer Divide on the afternoon of March 31st. Ahead of the storm system, a significant tornado outbreak occurred from the Midwest into the Southern Plains State with critical fire weather conditions across the Southern Rockies.



3HR Peak Winds (mph)

March 31st

Rocky Flats Hwy 93 and 72

Jefferson County 6233ft

90

| | | | |
|---------------------------|----|------------------------------------|----|
| 1 NE Crisman | 86 | Rocky Flats NREL | 85 |
| Arvada | 82 | Sunshine | 80 |
| Coal Creek Canyon | 80 | Broomfield Rocky Mtn Metro Airport | 79 |
| Boulder NCAR Mesa Lab | 79 | Wondervu | 78 |
| I-70 Floyd Hill | 75 | Dakota Hill | 75 |
| Buckeye | 75 | 2 NW Pawnee Buttes | 69 |
| Cheesman | 69 | I-70 Dumont | 68 |
| Virginia Dale | 67 | I-70 at C470 | 67 |
| 4.9 N Nunn (UPR) | 66 | Akron | 64 |
| Greenland | 63 | US 85 Wyoming Border | 63 |
| Longmont Airport | 62 | Fort Morgan | 61 |
| Louisville | 61 | Briggsdale | 61 |
| Sterling 15 WNW | 60 | Aurora I-70/Airport Blvd | 60 |
| Denver I-70/Colorado Blvd | 59 | Limon | 58 |
| Elizabeth | 58 | Longmont | 57 |
| Denver I-25/6th Avenue | 56 | I-25 at Wyoming Border | 56 |
| Loveland | 55 | Centennial Airport | 54 |
| I-25 Wellington | 54 | Boulder US 36/Baseline Rd | 54 |
| Thornton I-25/84th Ave | 53 | I-76 Sterling | 53 |