# March 2024 Climate Summary for Denver
## Slightly Cooler & Wetter Than Normal

Heavy snow in Broomfield, CO. This image taken on the evening of March 14th

During the month of March, a series of upper level storm system and associated cold fronts moved across North Central and Northeastern Colorado. The storm track during the first 12 days of the month stayed too far to the north to bring meaningful precipitation to the Front Range Urban Corridor and Northeastern Plains. However, abundant Pacific moisture associated with a strong upper level jet stream did produce periods of heavy wet snow across the North Central Mountains. Towards the middle of the month, the pattern changed with a large and moist storm system tracking across the Central/Southern Rockies and Southwestern States. This storm produced very heavy wet snow from the from the Front Range Mountains/Foothills eastward across the Urban Corridor and Palmer Divide from the 13th through the 15th. The final two weeks of the month were relatively dry

## TEMPERATURES:

The average temperature at Denver International Airport for the month of March was 41.4 degrees F, which is 0.2 degrees below the normal of 41.6 degrees. Temperatures ranged from a high of 69 degrees on the 2nd to a low of 10 degrees on the morning of the 26th

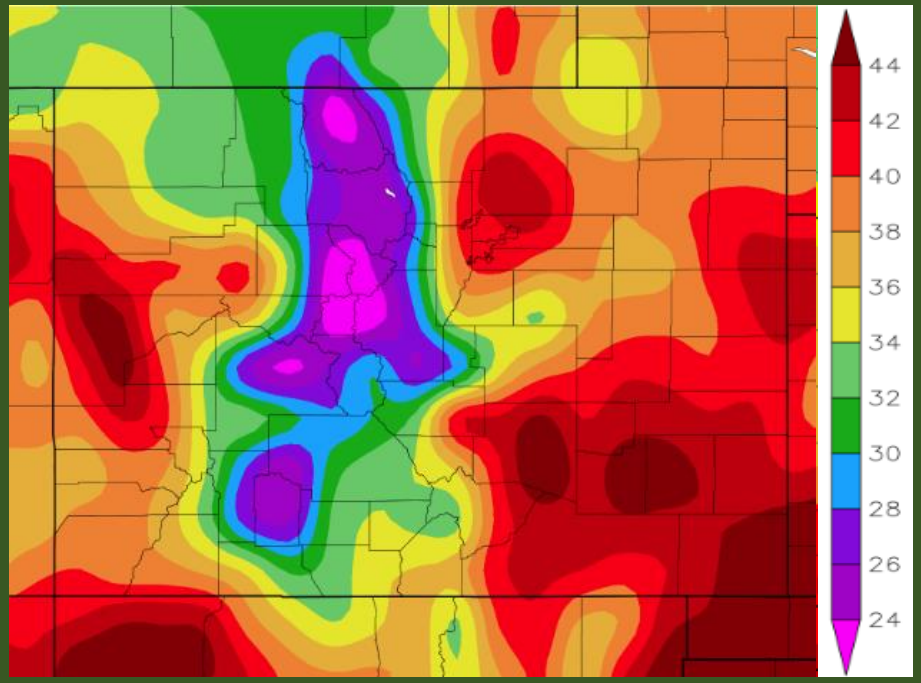
ELEVEN WARMEST MARCH AVERAGE TEMPERATURES IN DENVER WEATHER HISTORY SINCE 1872: DEGREES F

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

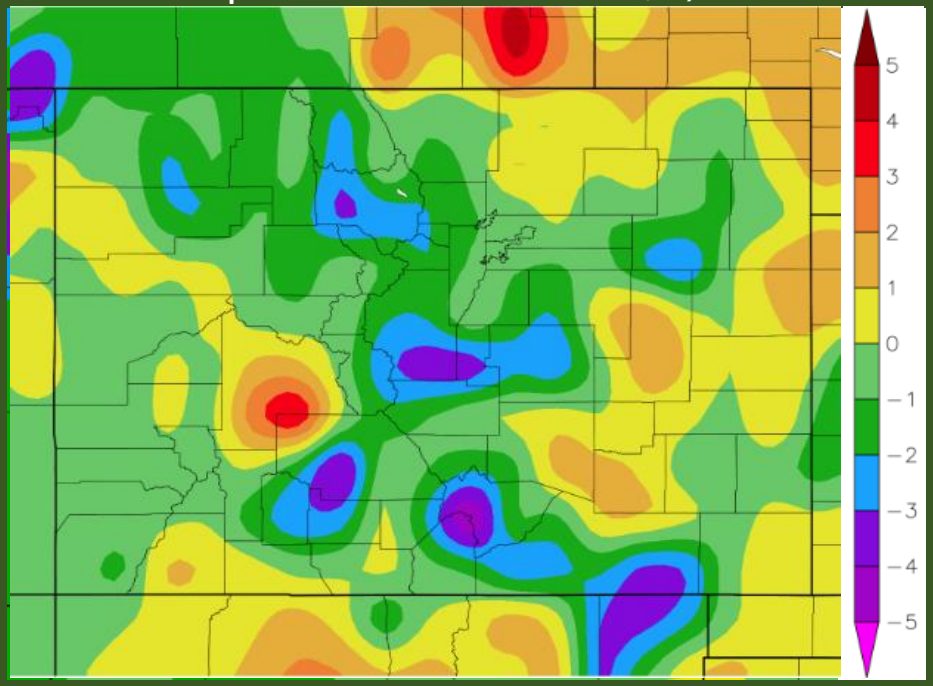
TEN COLDEST MARCH AVERAGE TEMPERATURES IN DENVER WEATHER HISTORY SINCE 1872: DEGREES F

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 2024 (ºF)




March 2024 Temperature
Departure from Normal (ºF)




Graphics generated by HPRCC using provisional data

# PRECIPITATION:

Denver received 1.65 inches of precipitation during March of 2024.
This is 0.79 inches above the monthly average of 0.86 inches.
The greatest daily precipitation amount of 0.80 occurred on the 13th.

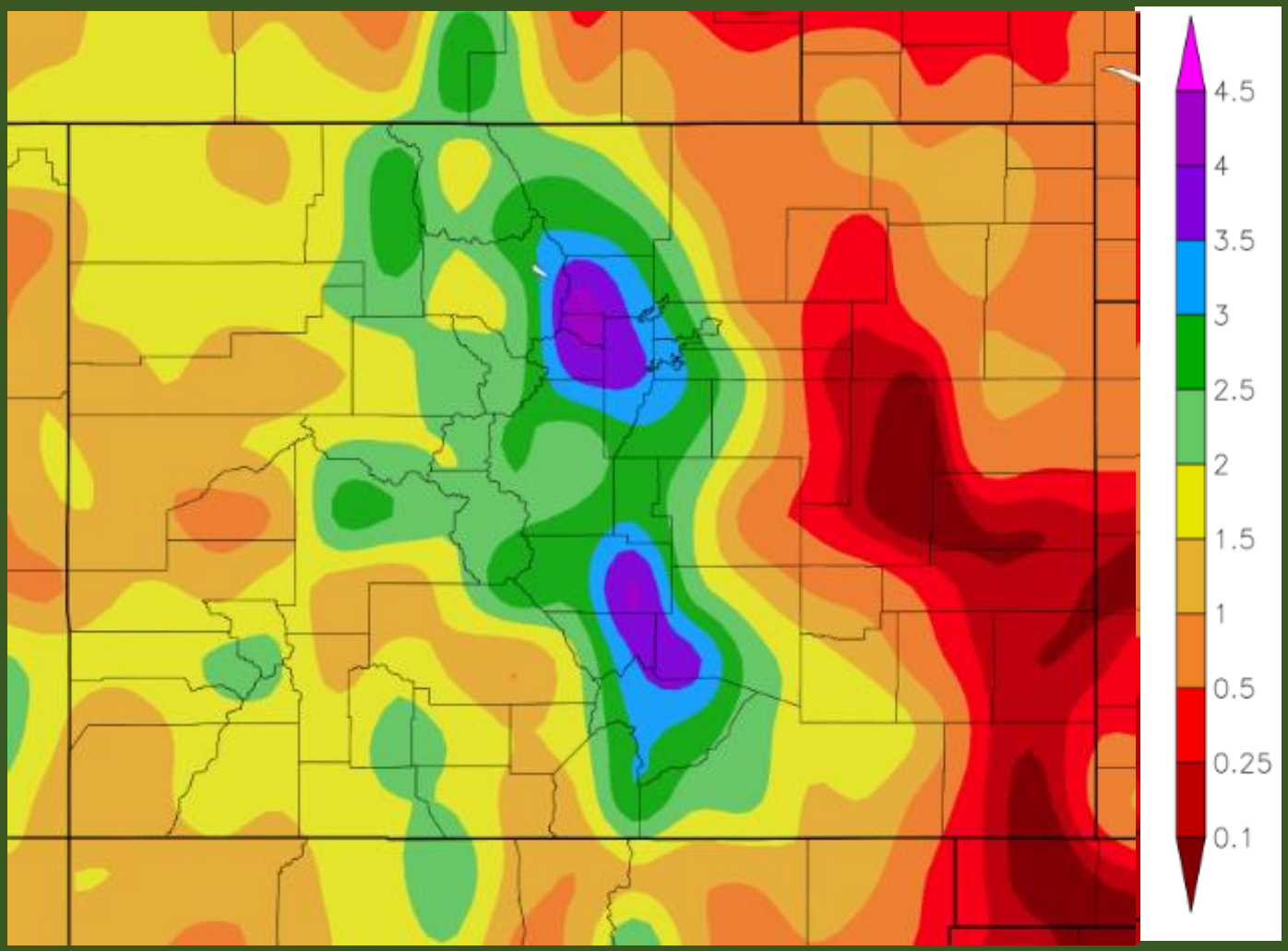
TEN WETTEST March TOTALS IN DENVER WEATHER HISTORY SINCE 1872:

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:

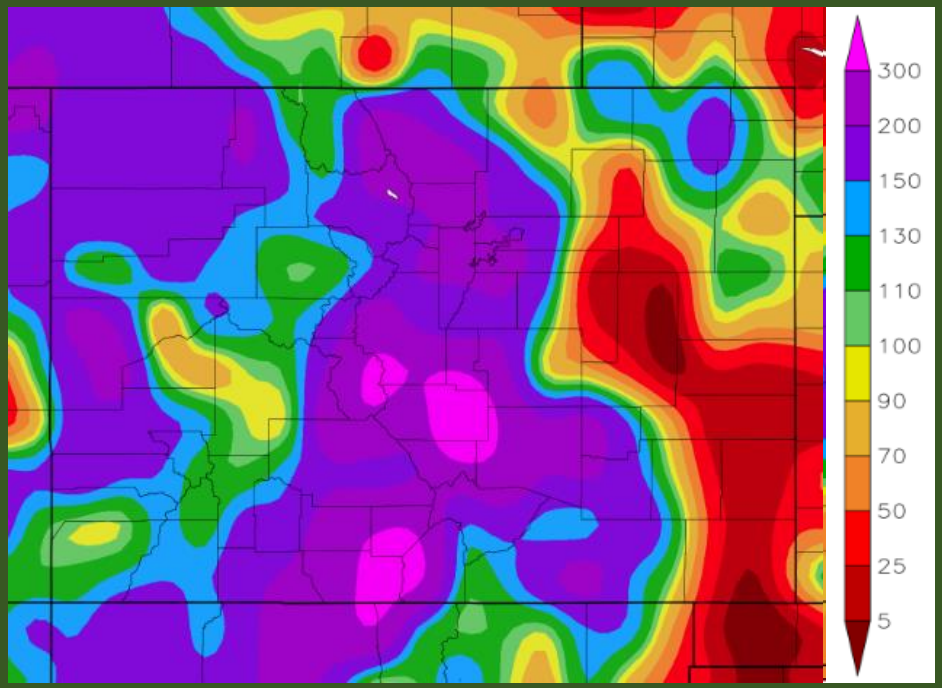
INCHES
0.03 - 2012
0.11 - 1908
0.14 – 2008, 2004
0.18 – 1982
0.19 - 1999
0.20 - 1882
0.21 – 1883, 1880
0.22 – 1945, 1873

# March 2024 Precipitation (Inches)

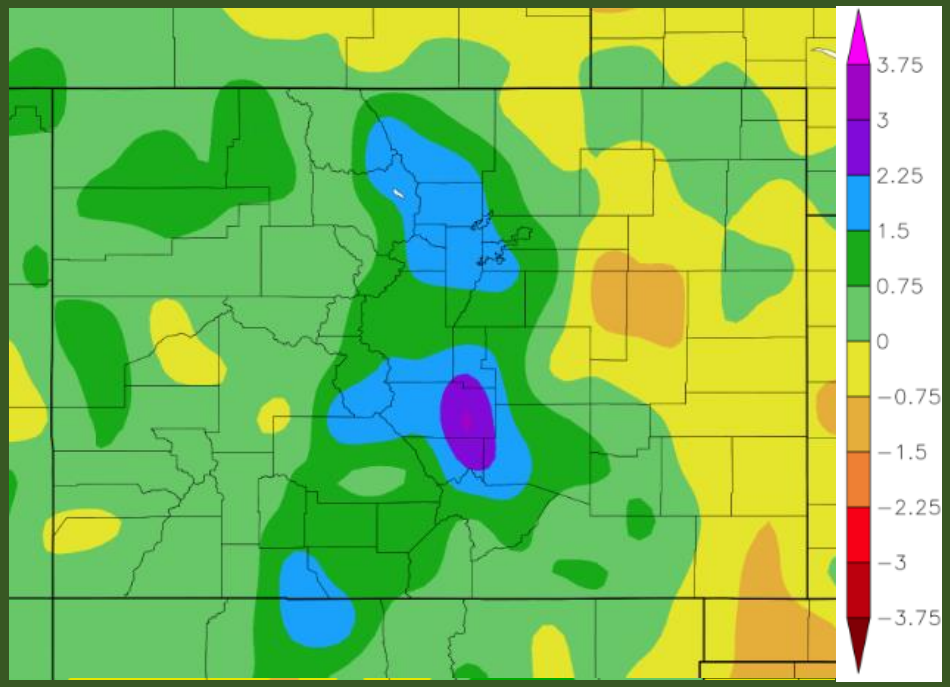



Graphic generated by HPRCC using provisional data

Percent of normal Precipitation (%)
March 2024




Departure from Normal Precipitation
March 2024 (Inches)




Graphics generated by HPRCC using provisional data

# SNOWFALL

March is Denver's snowiest month with a monthly average of 8.8 inches (NCEI 1990-2020). March of 2024 ended up with 9.2 inches of snow which was 0.4 inches above normal. The greatest snowfall amount occurred 14th when 5.7 inches was measured at Denver International Airport.

## 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

# March 13-15 Snowstorm Across the Front Range of Colorado

A powerful winter storm struck the Front Range of Colorado March 13th & 14th, 2024, producing extremely heavy snowfall, difficult if not impossible travel conditions, and scattered power outages. While precipitation started in the form of snow in the mountains and foothills on Wednesday, March 13, it started as rain across the I-25 Corridor & plains. That rain mixed with & changed to a heavy, wet snow across the Denver and Boulder metro areas during the late evening of the 13th. However, areas roughly along and east of a line from Fort Collins to Denver International Airport remained mostly rain or a rain snow mix Until the early morning hours of Thursday, March 14th. Some locations farther east like Greeley, Fort Morgan, and Limon didn't changeover until late on the 14th. Total precipitation amounts in those areas & farther east across the plains were also much lighter.

While there was a slight lull in the storm & snowfall rates Thursday morning, snowfall rates increased again during the afternoon and early evening hours of the 14th. Finally, snow tapered off during the late evening and overnight hours, and ended in the early morning of Friday, March 15th.

Difficult to impossible travel conditions started in the foothills shortly after the onset of heavy snow on the 13th. I-70 was closed, and dozens of vehicles became stuck and/or were abandoned. The depth of snow became so great that travel became impossible on unplowed roads for even high clearance or four-wheel drive vehicles. Some residents in the foothills were trapped for days in their homes. Also, numerous tree limbs snapped under the weight of snow, leading to scattered power outages. An estimated 113,000 customers were without power at some point during the storm, and that was before trees had even begun to leaf out for the spring! An estimated 800 flights were cancelled at DIA leading up to the snow, although fortunately the heaviest accumulations and impacts stayed just west of the airport. Widespread school closures occurred both Thursday and Friday from the Denver metro area Into the foothills. Storm total snow accumulations in the feet were observed across The foothills and east facing slopes of the Front Range mountains. Most areas above 6,000 feet westward to the crest of the Front Range (Medicine Bow Range, Rocky Mountain National Park, Indian Peaks and Mosquito Range) saw at least two feet of snow, while most of the Foothills from Estes Park southward through Boulder, Gilpin, Clear Creek, and Jefferson

**Counties received in excess of three feet! A few spots saw from four to as much as five feet between Ward and Blackhawk, and also southeast of Idaho Springs (Beaver Brook neighborhood). In the Denver metro area and Boulder, accumulations mostly Most areas above 6,000 feet westward to the crest of the Front Range (Medicine Bow Range, Rocky Mountain National Park, Indian Peaks and Mosquito Range) saw at least two feet of snow, while most of the Foothills from Estes Park southward through Boulder, Gilpin, Clear Creek, and Jefferson Counties received in excess of three feet! A few spots saw from four to as much as five feet between Ward and Blackhawk, and also southeast of Idaho Springs (Beaver Brook neighborhood). In the Denver metro area and Boulder, accumulations mostly ranged between 10 and 18 inches, with nearly two feet of snow from the southwestern sections of Boulder into the Golden area, extending southward through the far southern Denver suburbs into Douglas county and Castle Rock. There was a sharp gradient of snowfall to the east, with the far northeast sections of Denver - including DIA - receiving only 5 to 10 inches of snow. The official total at DIA was 5.7 inches. Similar amounts were seen farther north toward Firestone, Longmont, and the northeastern side of Fort Collins. Only an inch or two of snow accumulated around Greeley, Fort Morgan, and Limon.**

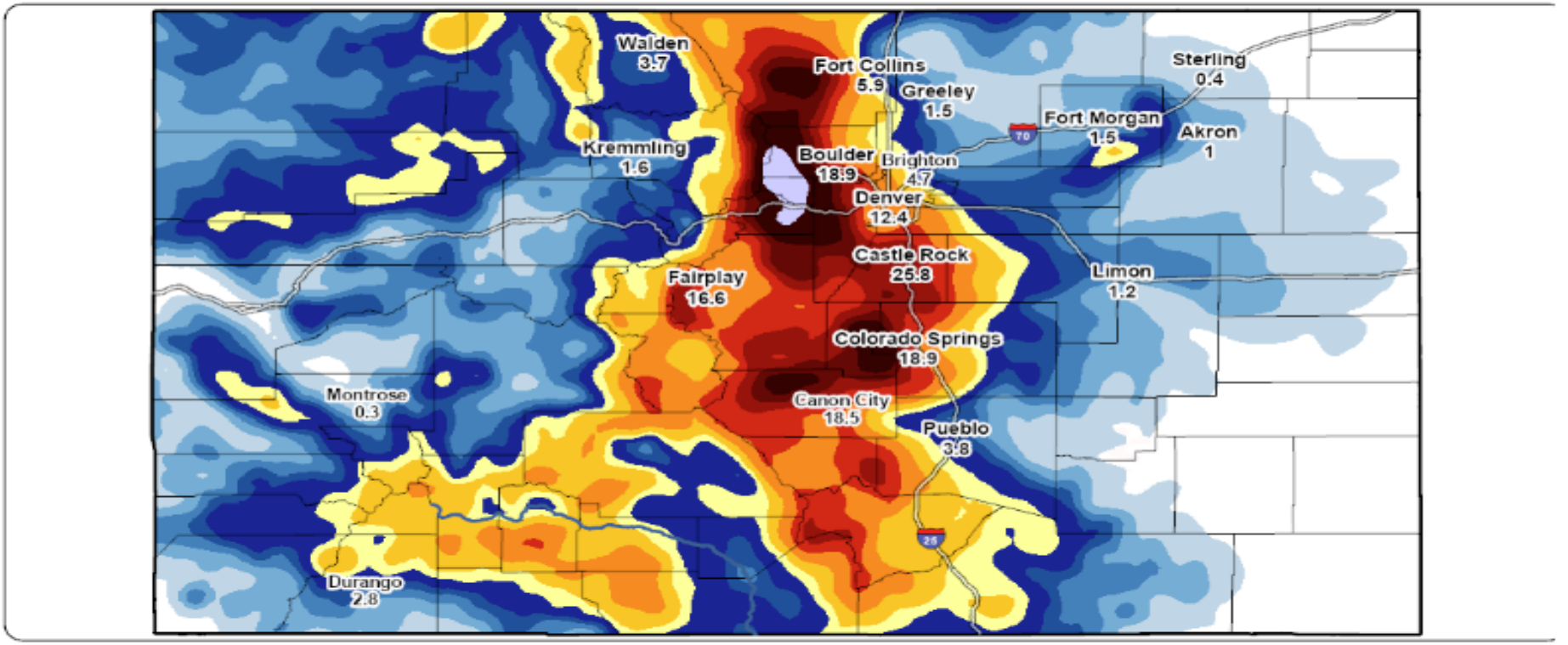
**This was the largest and most impactful storm for most of the Denver metro area since the Pi Day storm that occurred exactly three years earlier in 2021, and the most significant snowfall the foothills of Boulder through Jefferson Counties have seen since the historic March 17-20, 2003 snowstorm.**

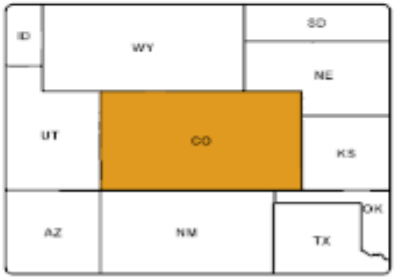
Significant snowfall occurred across the Foothills, Mountains, Palmer Divide and Denver Metro area from Wednesday night through Thursday night. Snowfall amounts ranged from 2 to 4 feet in the Foothills and some Mountain areas, with locally up to 5 feet in isolated areas.

# National Weather Service State of Colorado

**Snowfall Analysis 03/13/2024 06:00PM to 03/15/2024 06:00AM MDT**

**Analysis Data Source: NOHRSC (Values Estimated at Locations)**




N W E S

**Created:**
**03/16/2024 04:57PM**

0 36 72 144 Miles

This is an experimental product of the NWS GAZPACHO software package. Care should be taken in using the data. Unofficial observations may be plotted. Values at interpolated locations may not represent actual reports at that location.

**Snowfall (in)**

- 0.0"
- < 1.0"
- 1.0" - 2.0"
- 2.0" - 3.0"
- 3.0" - 4.0"
- 4.0" - 6.0"
- 6.0" - 8.0"
- 8.0" - 12.0"
- 12.0" - 18.0"
- 18.0" - 24.0"
- 24.0" - 30.0"
- 30.0" - 36.0"
- 36.0" - 48.0"
- 48.0" - 60.0"
- 60.0" - 72.0"
- 72.0" - 96.0"
- 96.0" - 120.0"
- 120.0+"

# List of highest Snowfall Reports (>=36")

| County | Location | Snowfall |
|---|---|---|
| Gilpin | Aspen Springs | 61.5 |
| Clear Creek | Evergreen 5.4 NW | 61.0 |
| Gilpin | 1 W Aspen Springs | 57.0 |
| Gilpin | Rollinsville 1.1 SSW | 54.4 |
| Clear Creek | Idaho Springs 4.7 SSE | 53.7 |
| Boulder | 4 ENE Nederland | 53.0 |
| Gilpin | Rollinsville 0.1 WNW | 50.7 |
| Jefferson | 4 SSE Pinecliffe | 50.7 |
| Boulder | Pinecliffe 2.5 WNW | 48.1 |
| Boulder | Nederland 4.3 ENE | 47.5 |
| Boulder | 1 WSW Eldora | 46.0 |
| Boulder | Ward 4.6 NE | 45.9 |
| Jefferson | 1 NNW Genesee | 45.7 |
| Boulder | 3 W Jamestown | 45.5 |
| Boulder | Nederland 2.8 NE | 45.1 |
| Jefferson | Aspen Park 1.9 ENE | 45.0 |
| Jefferson | Conifer 5.2 WNW | 44.7 |
| Jefferson | 4 W Conifer | 44.0 |
| Jefferson | Evergreen 2.5 SSW | 44.0 |
| Boulder | Nederland 3.7 ENE | 43.6 |
| Boulder | Nederland 4.2 E | 43.1 |
| Jefferson | 3 S Evergreen | 43.0 |
| Clear Creek | Evergreen 6.5 WSW | 42.6 |

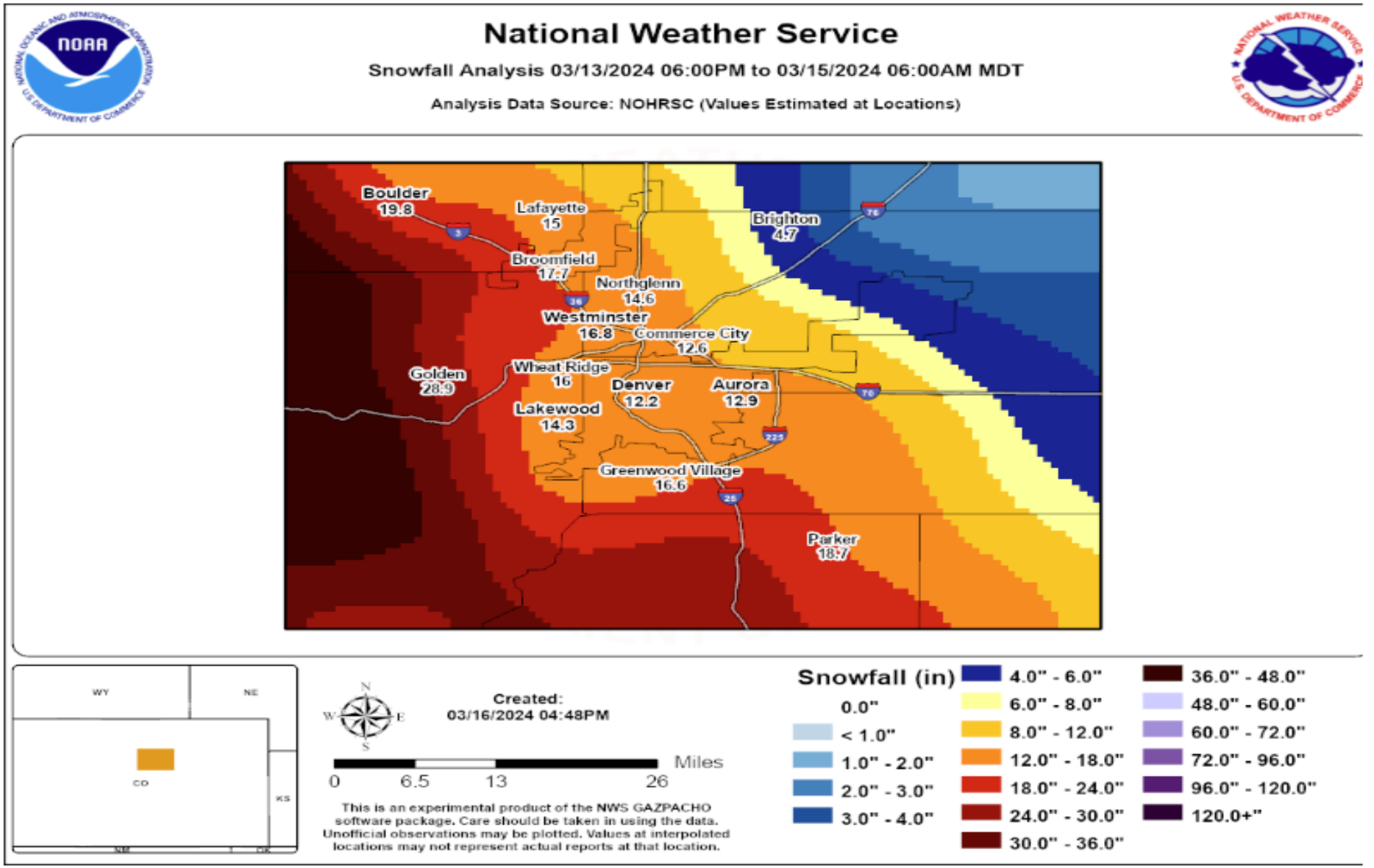
| County | Location | Snowfall |
|---|---|---|
| Jefferson | Kittredge 2.5 SSE | 42.2 |
| Gilpin | Pinecliffe 2.0 ESE | 42.0 |
| Jefferson | 1 SSW Crescent Village | 42.0 |
| Jefferson | Evergreen 4.2 SSE | 42.0 |
| Jefferson | Morrison 5.4 SSW | 42.0 |
| Boulder | Allenspark 0.9 W | 41.9 |
| Jefferson | Conifer 3.2 SW | 41.3 |
| Larimer | Estes Park 1.8 S | 41.1 |
| Clear Creek | 1 SSE St Marys Glacier | 40.5 |
| Boulder | Nederland 5.8 E | 40.1 |
| Gilpin | Floyd Hill 3.7 N | 40.1 |
| Larimer | 2 WNW Pennock Pass | 40.0 |
| Clear Creek | Evergreen 3.4 WNW | 39.9 |
| Jefferson | Golden 1.6 SW | 39.7 |
| Jefferson | Evergreen 2.6 S | 38.0 |
| Clear Creek | Evergreen 5 W | 37.5 |
| Larimer | Glen Haven 1.2 N | 36.9 |
| Jefferson | Evergreen 5.3 S | 36.8 |
| Jefferson | Evergreen 2.0 ESE | 36.7 |
| Park | Guffey 2.7 E | 36.5 |
| Larimer | Drake 4.3 WSW | 36.4 |
| Clear Creek | Evergreen 3.5 W | 36.3 |
| Larimer | 2 S Estes Park | 36.0 |

This image is from Nederland, in the foothills of Boulder County, where nearly 4 feet of snow fell.


Heavy snow near Flatirons Mall in Broomfield.

Across the Denver Metro area, the heaviest snowfall occurred in the western and southern suburbs of Denver where snowfall amounts ranged from 14 to 22 inches. Over the northeastern portions of Denver, including Denver International Airport, snowfall amounts were in the 5 to 10 inch range as rain didn't change to snow until Thursday morning.

**Zoomed in Snowfall Analysis across the Denver Metro area**



In addition, precipitation amounts were also significant with many areas receiving 1.5 to 3 inches of water with up to 4 inches in some areas of the Foothills.