

Rochester Weather - 2024 December

by Richard Bernatz

Weather data available online at <http://faculty.luther.edu/~bernatzr/RocWx/>

1. DECEMBER 2024 TEMPERATURES

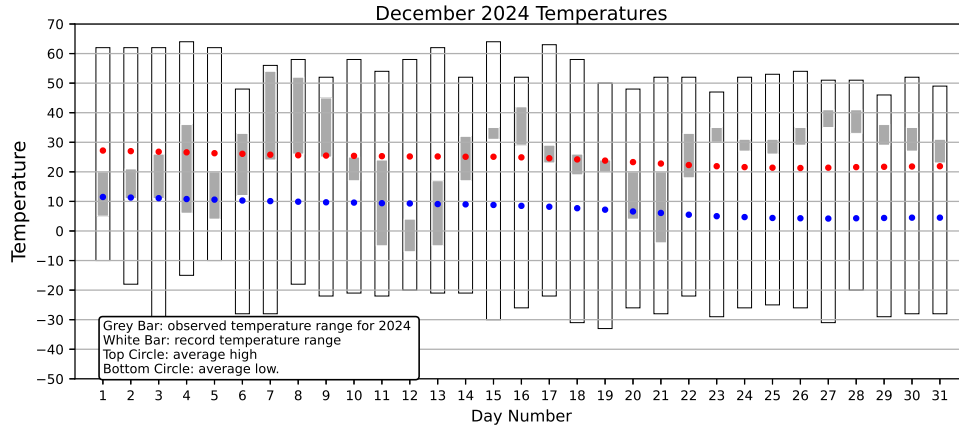


Figure 1: **Grey Bar:** Observed temperature range for 2024, **White Bar:** Record temperature range, **Circles:** Average temperature range, top (red) circle for average high, lower (blue) circle for average low.

Temperature (° F)	December 2024	Historical	Deviation
Average High	30.8	27.3	+3.5
Average Low	17.4	11.4	+6.0
Daily Average	24.1	19.3	+4.8

Table 1: December 2024 average temperatures compared to December averages.

- DECEMBER 2024
 - One record temperature. A maximum minimum of 33° F on the 28th, ties with the year 2006.
 - Nineteen days with an above average maximum temperature
 - Twenty-one days with an above average minimum temperature
 - Average temperature : 24.1° F (4.8° F warmer than average)
 - Warmest temperature : 54° F on the 7th
 - Coldest temperature : -7° F on the 12th
 - Heating degree days : 1268.0, 131.7 less than the average of 1399.7
- ALL DECEMBERS SINCE 1887 (112 years, data for missing for 1889-1891, 1893-1907, 1921-1928)
 - Compared with December 2024, 24 Decembers were warmer and 87 were colder
 - Warmest average : 31.7° F in 2023
 - Coldest average : 2.9° F in 1983
 - Warmest December temperature: 64° F on the 4th of 2017 and the 15th of 2021
 - Coldest December temperature: -33° F on the 19th of 1983

2. DECEMBER 2024 PRECIPITATION

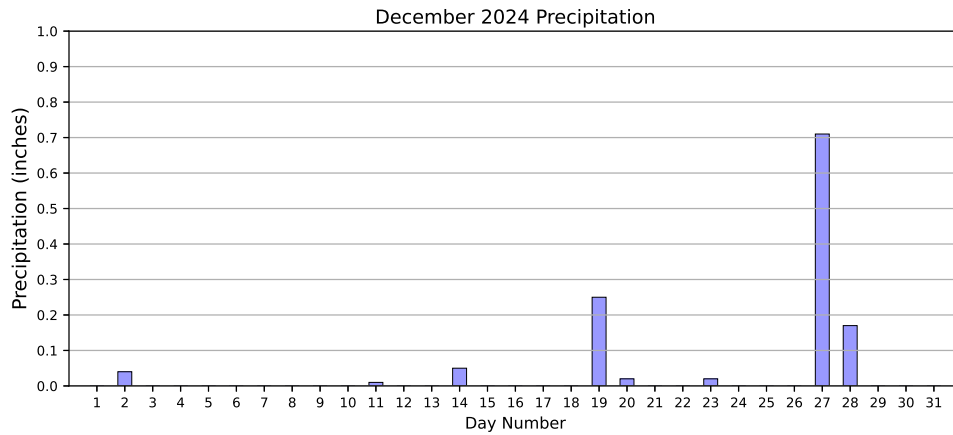


Figure 2: December precipitation for Rochester.

- DECEMBER 2024
 - Total precipitation for December 2024: 1.27 inches, 0.20 inches more than the average precipitation of 1.07 inches
 - Eight days with measurable precipitation, the average is 7 days
 - Greatest 24-hour total : 0.71 inches on the 27th.
 - Total snowfall for December 2024: 6.8 inches, 2.8 inches less than the average of 9.6 inches
 - Five days with measurable snowfall. The average is seven.
 - Greatest 24-hour snowfall: 5.9 inches on the 19th.
- ALL DECEMBERS: 1887 - 2024 (112 years, data missing for 1888-1907, 1920-1928)
 - Compared with December 2024, 36 Decembers were wetter, one was the same, and 74 Decembers were drier
 - Wettest December : 3.68 inches in 1909
 - Driest December : 0.07 inches in 1929

3. WEATHER IN REVIEW: DECEMBER 2024

December 2024 in Rochester was a month of above-average temperatures and slightly above-average precipitation. Compared to historical Decembers, December 2024 ranked as the 24th warmest on record.

Temperature

The average temperature for December 2024 was 24.1 degrees Fahrenheit (dF), which was 4.8 degrees Fahrenheit warmer than the historical average of 19.3 degrees Fahrenheit. Nineteen days in December had above-average maximum temperatures, and twenty-one days had above-average minimum temperatures. The warmest temperature recorded in December 2024 was 54 degrees Fahrenheit on the 7th, while the coldest temperature was -7 degrees Fahrenheit on the 12th.

One record-breaking temperature tie was recorded in December 2024. The maximum temperature of 33 degrees Fahrenheit on the 28th tied the record for the highest minimum temperature in December, which was also set in 2006.

Looking at heating degree days, a metric used to estimate the demand for heating, December 2024 saw a total of 1268.0 degree days. This is 131.7 fewer degree days than the historical average of 1399.7, indicating a less demanding heating season compared to usual.

Precipitation

The total precipitation for December 2024 was 1.27 inches, which was 0.20 inches more than the historical average of 1.07 inches. There were eight days with measurable precipitation throughout the month, which is slightly more than the average of seven days. The greatest 24-hour precipitation total occurred on the 27th, with 0.71 inches of rain.

Snowfall for December 2024 was below average, with a total of 6.8 inches recorded. This is 2.8 inches less than the historical average of 9.6 inches. There were five days with measurable snowfall in December 2024, which is two fewer than the average. The greatest 24-hour snowfall amount was 5.9 inches, which fell on the 19th.

Conclusion

Overall, December 2024 in Rochester was a warmer and slightly wetter month than usual. While there was some snowfall, the total amount was below average. The record-tying warm minimum temperature on the 28th highlights the overall warmer trend observed throughout the month.

Rochester Weather - Year 2024 Summary

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1. 2024 TABLE RESULTS

Month	Year	Ave Temp (°F)	Deviation (°F)	Rank† (#/Total)	Precip (inches)	Deviation (inches)	Rank‡ (#/Total)
January	2024	19.3	+6.3	21/113	0.66	-0.24	66/109
February	2024	32.7	+15.4	1/112	0.34	-0.50	87/110
March	2024	37.3	+7.3	11/113	2.35	+0.57	33/111
April	2024	46.8	+1.9	34/112	3.92	+1.08	23/107
May	2024	59.5	+2.4	29/112	4.33	+0.48	40/111
June	2024	67.9	+0.9	44/112	9.86	+5.27	3/109
July	2024	70.6	-0.6	70/112	4.76	+0.90	38/112
August	2024	68.5	-0.2	64/113	4.92	+1.09	33/113
September	2024	65.4	+6.0	6/114	0.77	-2.48	104/114
October	2024	67.1	+8.0	5/114	1.22	-1.00	84/114
November	2024	37.2	+4.3	19/114	2.44	+0.84	22/113
December	2024	24.1	+4.1	25/112	1.27	+0.20	37/112

Table 2: Monthly temperature and precipitation data for 2024. †- The smaller the number (#), the warmer the month. ‡- The smaller the number (#), the wetter the month. Boxed entries are within the historical top or bottom ten.

2024 Temperatures:

- There are 100 years of complete, or nearly complete, annual temperature data for Rochester.
- The year of 2024 is the third warmest calendar year on record.
 - The average temperature for 2024 was 48.70° F , 4.19° F warmer than the annual average of 44.51° F .
 - The warmest year is 2012 with an average temperature of 50.3° F , 5.78° F warmer than average.
 - The coldest year is 1996 with an average temperature of 41.00° F , 3.50° F colder than average.
- Ten of the last 12 months were warmer than average.
- February of 2024 is the warmest February on record.
- October of 2024 is the fifth warmest October on record.
- September of 2024 is the sixth warmest September of record.

2024 Precipitation:

- There are 105 years of complete, or nearly complete, precipitation data.
- Precipitation for 2024 totaled 36.75 inches, 5.99 inches more than the average amount of 30.76 inches
- There are 20 years with a greater precipitation total, and 84 years with a lesser precipitation total.
 - The year of 2019 is the wettest on record with a total 55.11 inches, 24.34 inches above average.
 - The year of 1910 is the driest on record with 11.86 inches, 18.90 inches below average.
- There were 115 days in 2024 with measurable precipitation, resulting in an average of 0.32 inches per precipitation day.

- The average number of days per year with measurable precipitation is 111, with an average of 0.28 inch per precipitation day.
- The year with the largest number of precipitation days is 1996 with 152.
- The year with the fewest precipitation days is 1910 with 40.
- Monthly precipitation totals for 2024 resulted in eight months with above average precipitation and four months with below average precipitation. The year of 2024 is marked with periods of excessive precipitation and periods of low precipitation with a number of months ranking either in the top or bottom ten for their respective month.
 - June of 2024 is the third wettest June on record.
 - September of 2024 is the tenth driest September on record.

2. A YEAR OF EXTREMES: ROCHESTER WEATHER IN 2024

The year 2024 in Rochester, Minnesota was a year of climatic extremes, characterized by both record-breaking heat and significant precipitation. While the overall temperature for the year placed 2024 as the third warmest on record, the year saw a notable fluctuation between periods of excessive rainfall and periods of dryness.

Temperatures: A Year of Unprecedented Heat

With an average annual temperature of 48.70 degrees Fahrenheit, 2024 surpassed the long-term average by a substantial 4.19 degrees. This significant departure from the norm solidified 2024 as the third warmest year since record-keeping began, trailing only the record-breaking 2012. This trend of warming temperatures was evident throughout the year, with ten of the twelve months experiencing above-average temperatures. Notably, February 2024 shattered previous records, emerging as the warmest February on record. October and September also ranked among the warmest on record for their respective months, further emphasizing the year's overall warmth.

Precipitation: A Tale of Two Halves

Precipitation patterns in 2024 were marked by significant variability. With a total of 36.75 inches, the year's precipitation exceeded the average by a considerable 5.99 inches. While this places 2024 among the wetter years on record, it also highlights the year's fluctuating precipitation patterns.

The year witnessed periods of excessive rainfall, with June 2024 ranking as the third wettest June on record. Conversely, September 2024 ranked among the driest Septembers on record, showcasing the year's contrasting precipitation regimes.