

Colorado State University, Fort Collins, CO Weather Station Monthly Summary Report

Month: December
Year: 2022



Temperature:

Mean T_{\max} was 42.9°F which is 1.1° below the 1991-2020 normal for the month. This is the 61st coolest (45th percentile) in the 134-year record (1889-2022) tied with 1930. The last December this cold or colder was 2016 with 39.7°F.

Mean T_{\min} was 15.7°F which is 2.6° below the 1991-2020 normal for the month. This is the 55th coolest (41st percentile) in the 134-year record (1889-2022), tied with 1903. The last December this cold or colder was 2016 with 14.9°F.

Mean T_{mean} was 29.3°F which is 1.8° below the 1991-2020 normal for the month. This is the 58th coolest (43rd percentile) in the 134-year record (1889-2022), tied with 2000. The last December this cold or colder was 2016 with 27.3°F.

The maximum daily temperature for the month was 57°F and occurred on December 11, 2022.

The minimum daily temperature for the month was -17°F and occurred on December 22, 2022.

Calendar year mean temperature was 50.7°F which is the normal for the year. This is the 23rd warmest (83rd percentile) year on record, tied with 1994 and 2004. The last year warmer than this year was 2021 with 51.6°F and the last year cooler than this was 2014 with 50.5°F

The maximum temperature for 2022 was 99°F on July 9, 2022.
The minimum temperature for 2022 was -17°F on December 22, 2022.

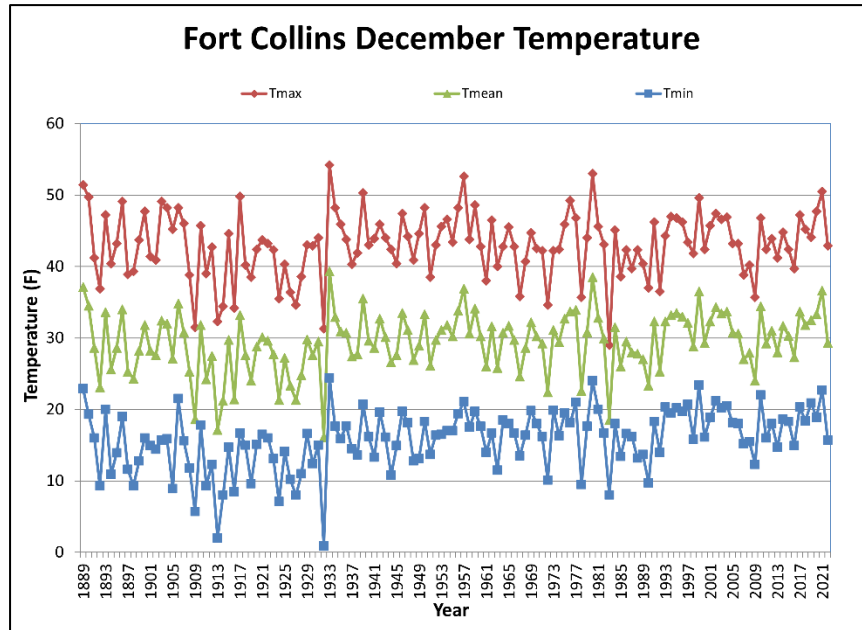


Figure 1: December temperature time series.

Misc. Temperature (record status, thresholds, etc.):

Minimum Daily Temperature Records:

December 23, 2022: The minimum temperature for the day of -16°F tied the record for the day set in 1990.

Additional Icy Statistics!

The minimum temperature of -17F this month (and calendar year) was the coldest temperature the weather station has seen since January 6, 2017, when we hit -16°F. The last time the temperature was colder was on February 3, 1996, when we saw -18°F on at the weather station!

The maximum temperature on December 22 only rose to -0.4°F (officially rounded to 0F). This is the coldest we've seen since Valentines Day 2021 (February 14) when the mercury only got up to $+2^{\circ}\text{F}$. The last time the thermometer at the weather station failed to get above 0 was January 12, 1997 with a maximum temperature of the day only hitting -3°F . Brrr!

Precipitation and Snowfall:

Total monthly precipitation was 0.32" which is 0.15" below the 1991-2020 normal for the month (68% of normal). This ranks as the 66th driest (49th percentile) in the 134-year record (1889-2022). The last December this dry or drier was 2018 with 0.03" of precipitation.

Calendar year 2022 precipitation totaled 13.23" which is 2.65" below the 1991-2020 normal for the year (83% of normal). This ranks as the 48th driest (35th percentile) year on record. The last year this dry or drier was 2020 with 11.87" of precipitation.

Total monthly snowfall was 4.0" which is 3.5" below the 1991-2020 normal for the month (53% of normal). This ranks as the 58th least snowy month (43rd percentile) in the 134-year record (1889-2022). The last December with this little snowfall was 2018 with 1.4" of snowfall.

Seasonal snowfall for the start of the 2023 snow season totaled 13.4" through December. This is 6.5" below the 1991-2020 normal (67% of normal). This ranks as the 64th least snowy (47th percentile) start to a snow season in the 133-year record (1890-2022), tied with the 1960 and 2018 season. The last season to start with this little snowfall was the 2022 season (last year) with a 7.2" of snowfall.

December had 5 days with measurable precipitation (≥ 0.01 "") and 4 days with measurable snowfall (≥ 0.1 "").

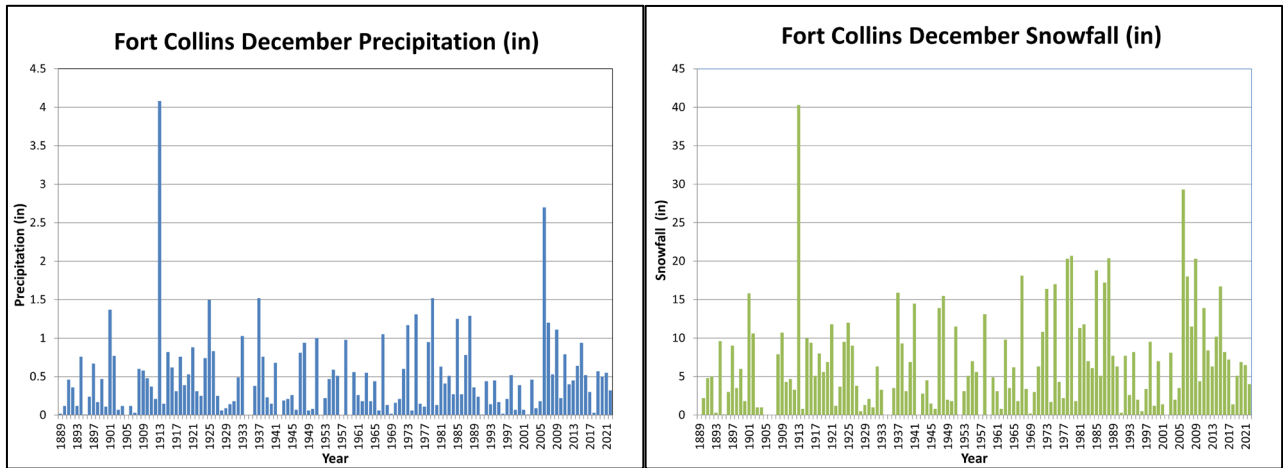


Figure 2: December precipitation (left) and snowfall (right) time series.

Misc. Precipitation (predominant type, record status, etc.):

No precipitation records for December 2022.

The highest one-day precipitation and snowfall total for December 2022 was 0.10” precipitation and 2.1” snowfall on December 22.

Days with Snow Depth ≥ 1 inch

December had 6 days with at least 1” of snow on the ground. This compares to a normal of 11 days for December.

This winter has had 13 days with at least 1” of snow on the ground which compares to a normal of 15 days.

The highest one-day precipitation total for the year was 1.97” of rain on July 28th.

The highest on-day snowfall total for the year was 7.8” on February 2.

The lowest one-day precipitation and snowfall was any day that didn’t receive precipitation!

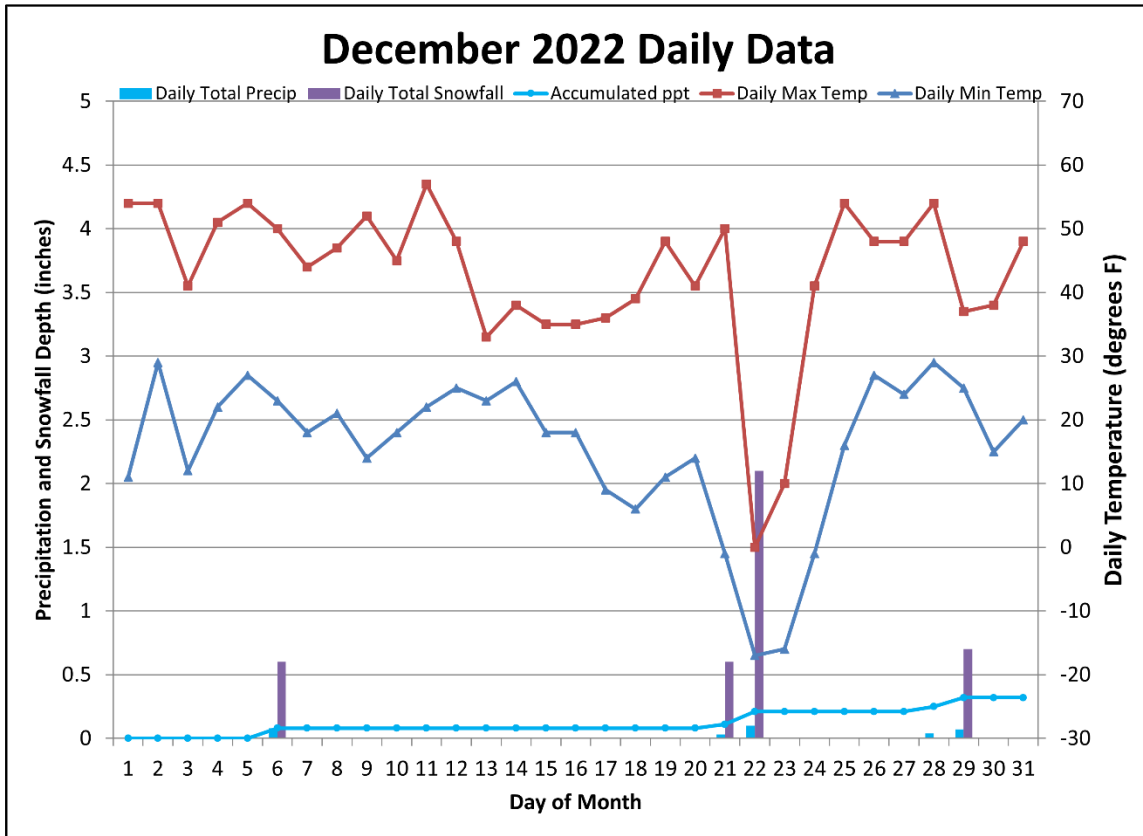


Figure 3: Daily Data for December 2022. Precipitation and temperature both show up on this graph. The y-axis on the left is for precipitation and snowfall. The y-axis on the right is for temperature.

Wind:

In December 2022 there were 13 days with maximum wind gusts ≥ 20 mph, 4 days ≥ 30 mph and 1 day ≥ 40 mph.

The maximum daily wind gust for the month was 48 mph and occurred on December 2, 2022, at 6:03AM MST from 250° (WSW).

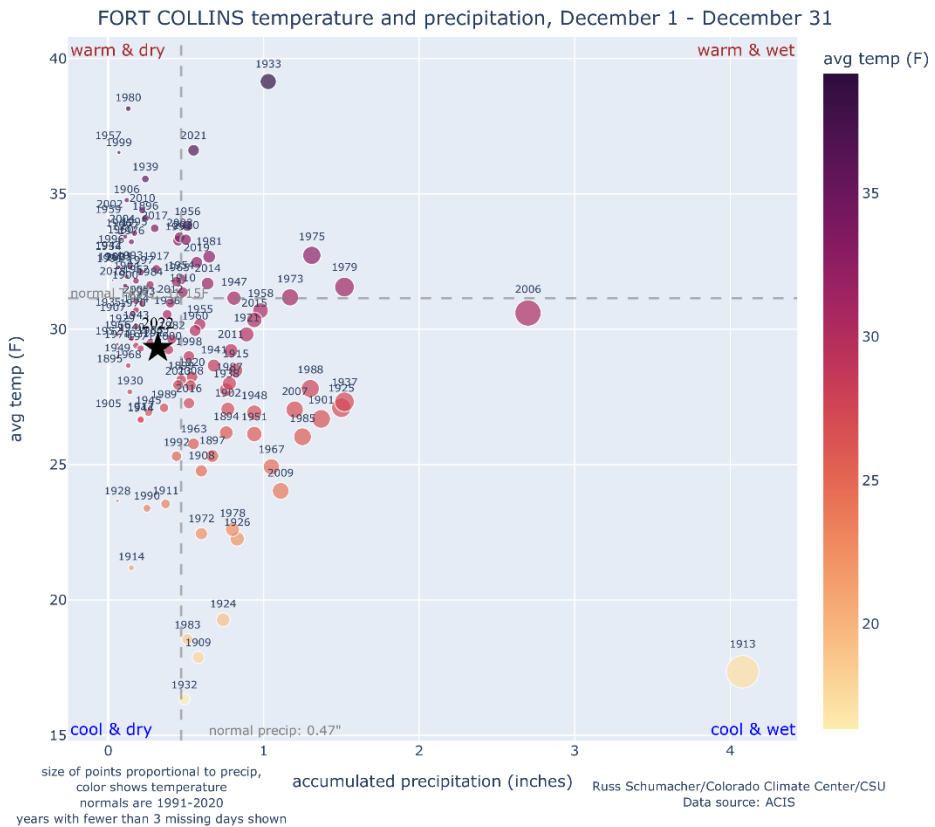
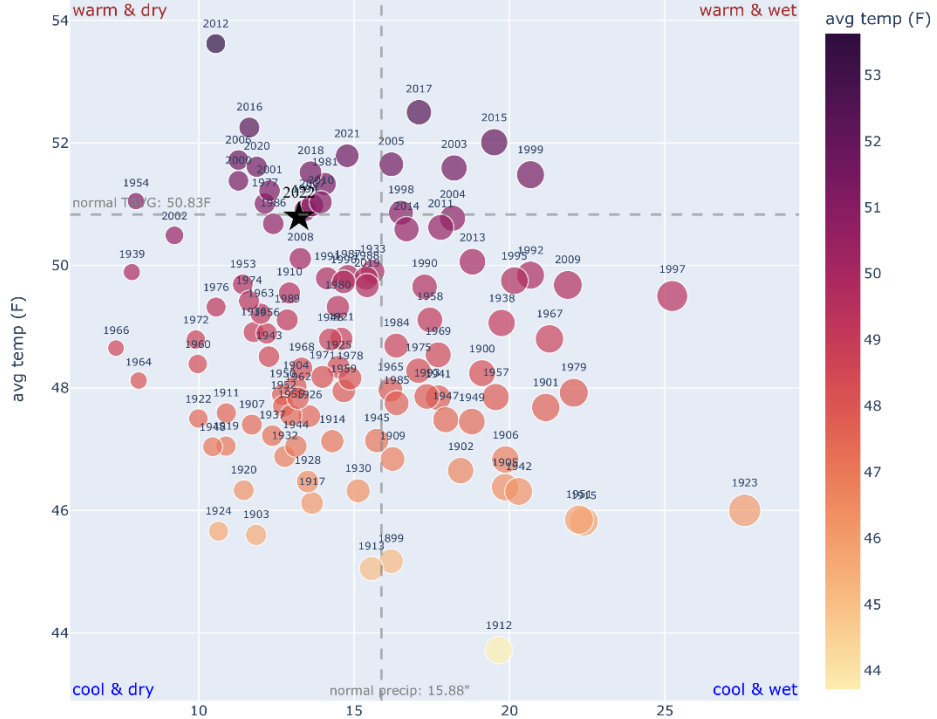


Figure 4: December (top) and calendar year 2022 (next page) precipitation and temperature data plot. Each dot plots monthly average temperature and precipitation at Fort Collins for the period of record. From left to right, monthly precipitation is shown on the x-axis, where the wettest years are plotted furthest to the right. Dot sizes are proportional to precipitation amounts. From bottom to top on the y-axis, average monthly temperature is shown, where the warmest years are plotted towards the top. The dots are also color coded with darker colors indicating higher temperatures. The horizontal and vertical dotted lines indicate the 1991-2020 normals. December was drier and cooler than normal and the calendar year ended right on the normal temperature but drier than normal.

FORT COLLINS temperature and precipitation, January 1 - December 31



size of points proportional to precip,
color shows temperature
normals are 1991-2020
years with fewer than 10 missing days shown

accumulated precipitation (inches)

Russ Schumacher/Colorado Climate Center/CSU
Data source: ACIS