

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

Month: May
Year: 2021



Hawk going for a ride on the anemometer. Photo by Noah Newman

Temperature:

Mean T_{\max} was 68.5°F which is 2.4° below the 1991-2020* normal for the month. This is the 52nd coldest in the 133-year record (1889-2021), tied with 1891 and 1952. The last May this cold or colder was 2019 with 64.3°F .

Mean T_{\min} was 44.0°F which is 0.1° below the 1991-2020 normal for the month. This is the 29th warmest in the 133-year record (1889-2021), tied with 1939, 1989, 1997 and 2007. The last May this warm or warmer was 2020 with 45.7°F .

Mean T_{mean} was 56.2°F which is 1.3° below the 1991-2020 normal for the month. This is the 75th coolest in the 133-year record (1889-2021), tied with 1986. The last May this cold or colder was 2019 with 51.9°F .

Spring (March, April, May) mean temperature was 47.6°F which is 2.0° below the normal for the season. This is the 81st coolest spring in the 133-year record (1889-2021), tied with 1963. The last spring this cool or cooler was 2019 with 46.2°F .

The maximum daily temperature for the month was 86°F and occurred on May 1, 2021.

The minimum daily temperature for the month was 32°F and occurred on May 10 and 11, 2021.

*See note at the end of document regarding the new 1991-2020 climate normals.

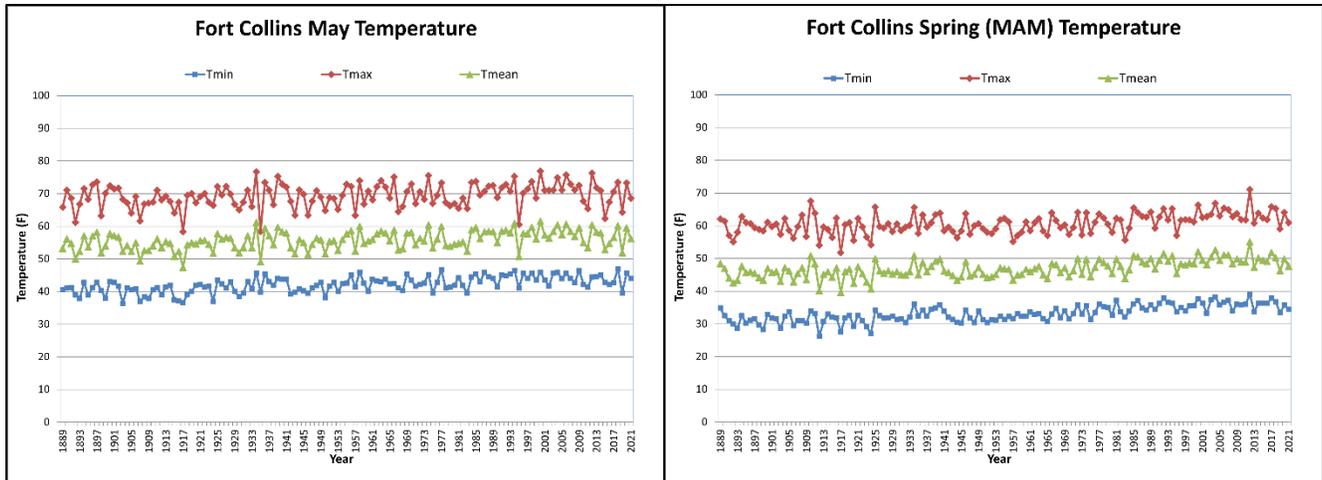


Figure 1: May (left) and spring (right) temperature time series.

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

Maximum Daily Temperature Records:

May 1, 2021: The maximum temperature of 86°F tied the record max temperature for the day set in 1928.

Below freezing season:

The first freezing temperature in the 2020-2021 “cold season” was September 8, 2020, with a temperature of 32F. The last freezing temperature of the season was May 11, 2021. This is 244 days between first freeze and last freeze. This is the 15th longest in the record for the campus weather station. This is assuming there will not be cold snaps in June causing a June freeze. There have only been 6 Junes with a temperature at or below 32F, the last was in 1947 on June 13, with a temperature of 29. The latest freezing temperature on record was June 16 in 1945 with 31F.

Precipitation and Snowfall:

Total monthly precipitation was 5.52” which is 2.80” above the 1991-2020 normal for the month (203% of normal). This ranks as the 11th wettest in the 133-year record (1889-2021). The last May this wet or wetter was 2015 with 6.34” of precipitation.

Spring (March, April, May) precipitation totaled 10.33” which is 4.20” above the 1991-2020 normal for the season (169% of normal). This ranks as the 9th wettest spring in the 133-year record (1889-2020). The last spring this wet or wetter was 2003 with 11.15” of precipitation.

Water Year 2021 precipitation through May totaled 13.72” which is 4.24” above the 1991-2020 normal (145% of normal). This ranks as the 10th wettest start to a water year in the 132-year record (1890-2021). The last water year this wet or wetter through May was 2003 with 13.93” of precipitation.

Total monthly snowfall for May was 2.7” which is 1.1” above the 1991-2020 normal for the month (169% of normal). This ranks as the 21st snowiest May in the 133-year record (1889-2021). The last May with this much snow or more was 2019 with 3.0” of snowfall.

Seasonal Snowfall for the 2021 snow season totaled 78.2” through May. This is 26.8” above the 1991-2020 normal (152% of normal). This ranks as the 9th snowiest snow season. The last season with this much snow or more was the 2013 snow season with 79.2” of snow.

May had 11 days with measurable precipitation (≥ 0.01 ”) and 2 days with measurable snowfall (≥ 0.1 ”).

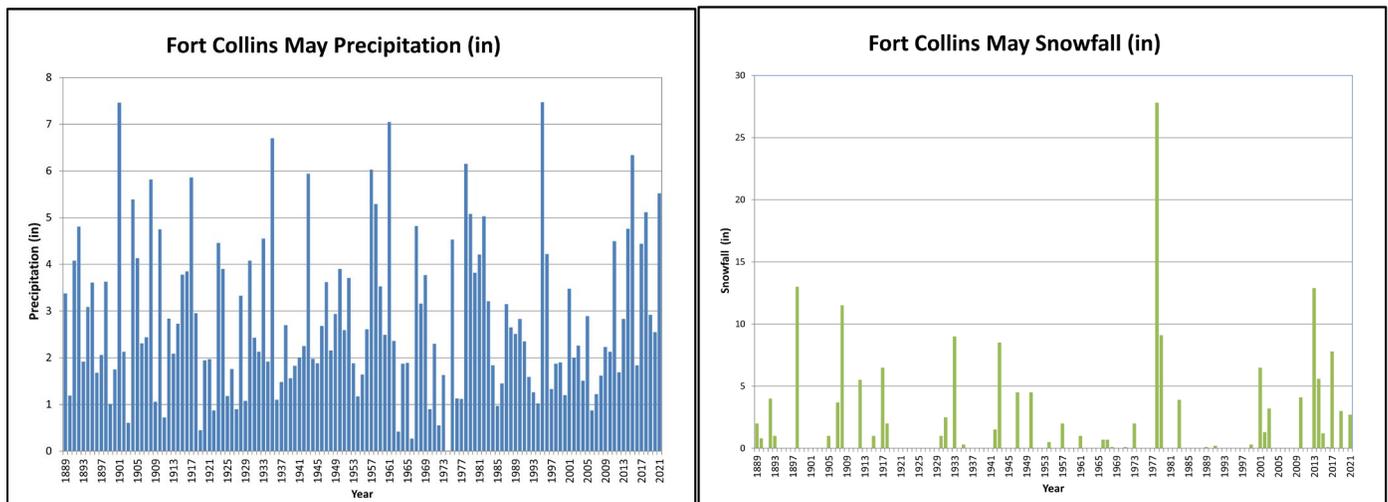


Figure 2: May precipitation (left) and snowfall (right) time series.

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

No precipitation or snowfall records for May 2021.

Days with Snow Depth ≥ 1 inch

May had 1 day with 1” of snow or greater on the ground. This compares to a normal of 0 days in May.

This season has seen 54 days with 1” of snow or greater on the ground through the end of May. This compares to a normal of 46 days.

The highest one-day precipitation total for May 2021 was 1.45” falling on May 10. The highest one-day snowfall total for the month was 1.9” on May 10.

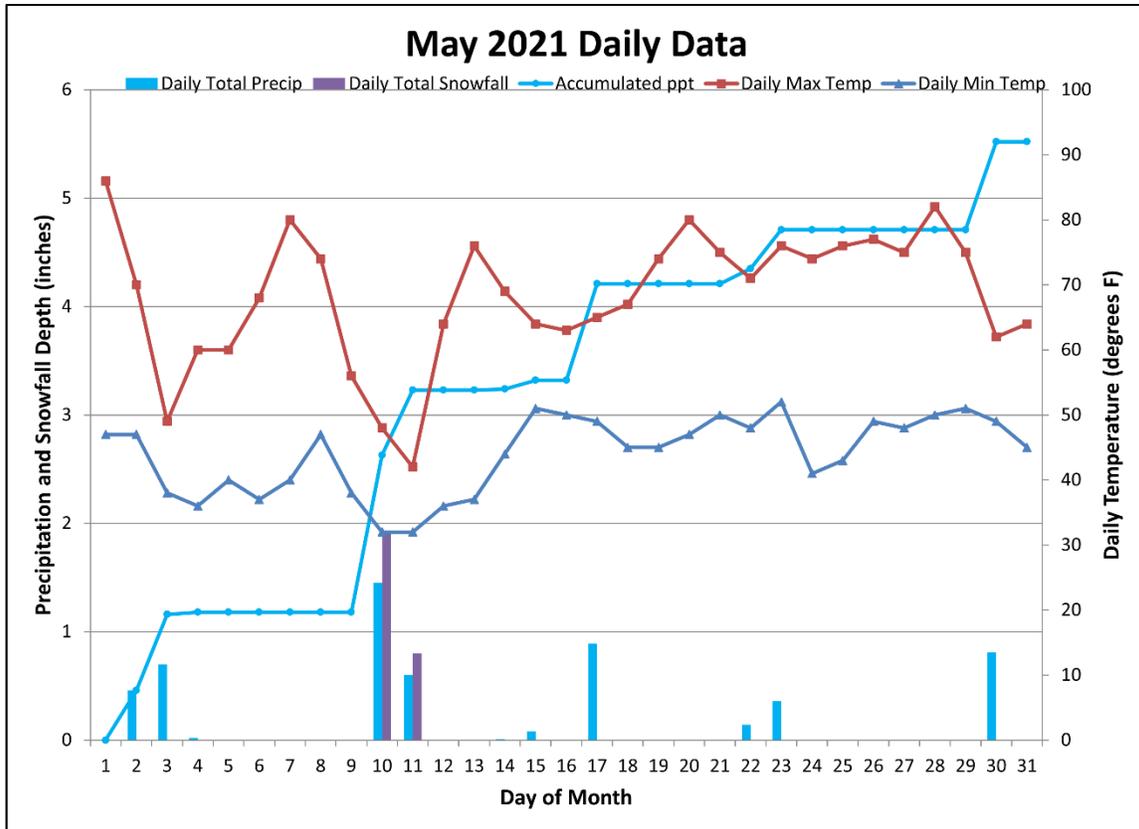


Figure 3: Daily Data for May 2021. Precipitation and temperature both show up on this graph. The y-axis on the left is for precipitation and snowfall. The y-axis on the right is for temperature.

Wind:

In May 2021 there were 8 days with maximum wind gusts ≥ 20 mph, 1 day ≥ 30 mph and 1 day ≥ 40 mph.

The maximum daily wind gust for the month was 40 mph and occurred on May 7, 2021, at 3:26 PM MST from 190° (SSW).

Evaporation:

Pan evaporation for May 2021 totaled 5.35” which is 0.57” below the normal (90% of normal).

Additional graphs on next page!

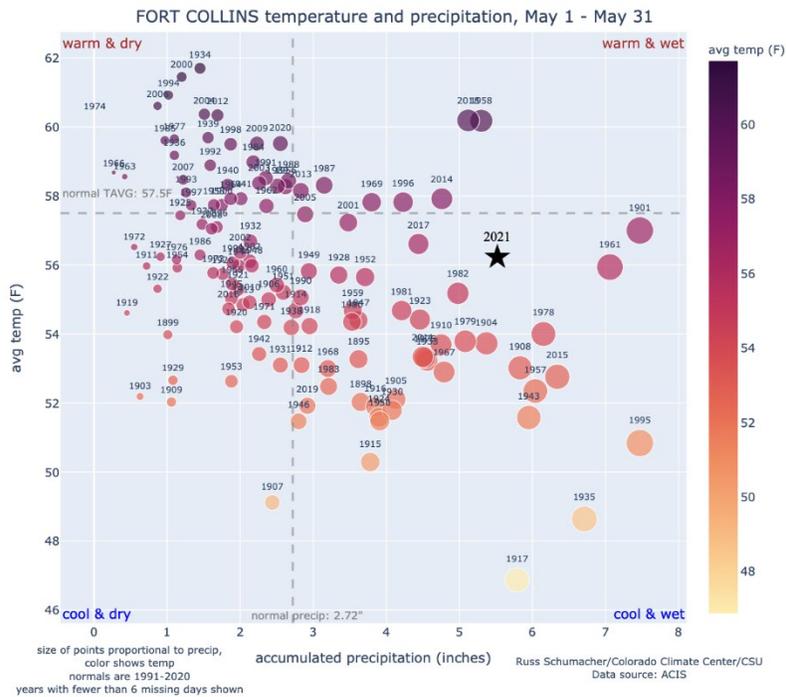
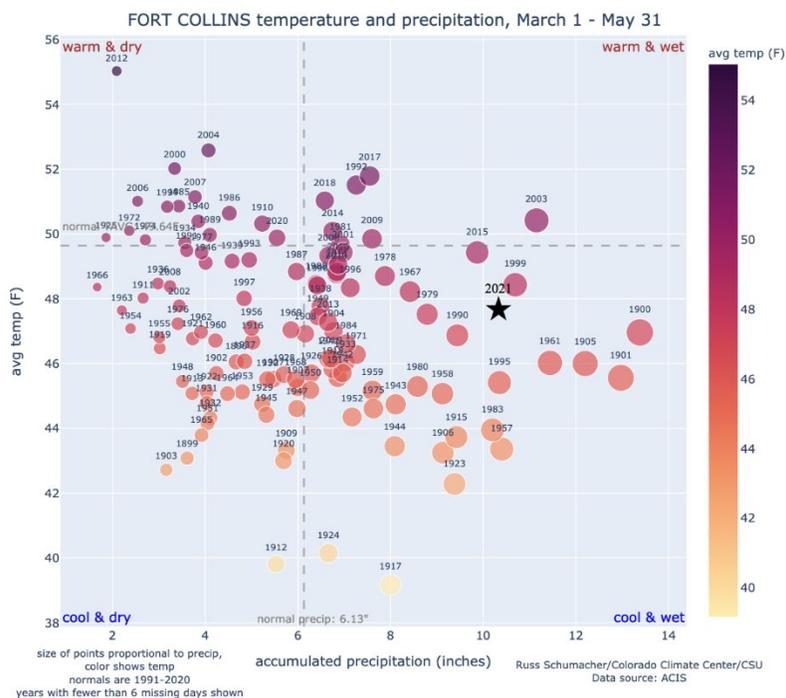


Figure 4: May (top) and spring season (bottom) precipitation and temperature data plot. Each dot plots monthly average temperature and precipitation at Fort Collins for the period of record. From left to right, monthly precipitation is shown on the x-axis, where the wettest years are plotted furthest 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. Both May and spring show up cooler and wetter than normal.



New Climate Normals

Every 10 years NOAA's National Centers for Environmental Information releases updated "climate normals". Normals for the period 1991-2020 were released May 4, 2021 and were used in this month's summary for the Fort Collins Weather Station.

Take a read through this great article written by Colorado State Climatologist Russ Schumacher and Assistant State Climatologist Becky Bolinger explaining what are normals, why they are updated every 10 years and the differences we are seeing between the 1981-2010 and 1991-2020 periods: <https://theconversation.com/warming-is-clearly-visible-in-new-us-climate-normal-datasets-159684>