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2019 Weather in Review: Valley Forge National Historical Park

In all, 2019 was very warm and moderately wet. The year ended as the 9th warmest and 19th wettest year since 1895.

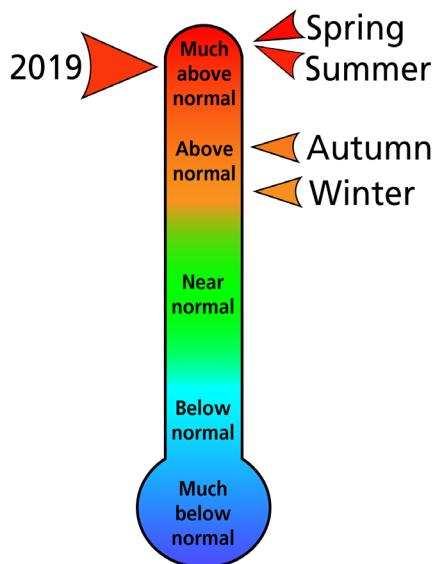
Weather data collected from surrounding areas from 1895–2019 shows increasing trends in annual average temperature (+0.24 °F per decade) and annual total precipitation (+0.32 inches per decade).

Information in this brief represents county-scale weather data averaged from all of the counties surrounding the park. These include Chester and Montgomery counties, PA. Individual weather station data may vary from what is reported here.

Temperature

In total, 2019 was the 9th warmest year at the park since 1895, and all seasons were warmer than long-term averages (Figure 1). Ten months had higher than normal temperatures, with seven of those months being more than 3.0 °F above normal (Table 1).

Table 1. Average monthly, average annual, and departures from long-term average temperatures. Departures from average are based on a comparison of 2019 average temperatures to relevant averages from 1895–2018. Data are available at <https://www.ncdc.noaa.gov/cag/county/time-series>.



Month/ Year	Average temperature (°F)	Departure from average (°F)
January	31.1	+1.8
February	34.0	+3.3
March	39.4	-0.4
April	56.1	+5.8
May	64.2	+3.2
June	70.6	+1.1
July	78.2	+3.8
August	74.8	+2.5
September	69.6	+4.0
October	58.0	+3.9
November	41.2	-1.8
December	36.5	+3.5
2019	54.5	+2.6

Figure 1. Seasonal and annual temperature rankings. An arrow at the top of the figure would represent the warmest year/season on record (since 1895); at the bottom, the coldest year/season on record. Data are available at <https://www.ncdc.noaa.gov/cag/county/rankings>.

Precipitation

In total, 2019 was the 19th wettest year at the park since 1895 (Figure 2). By the end of the year, 51.8 inches of precipitation had fallen, which is 6.5 inches more than the long-term average (Table 2).

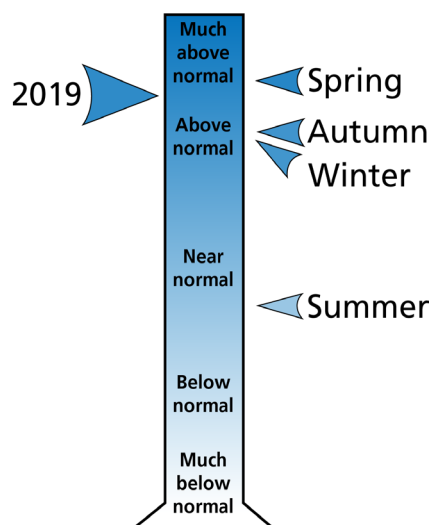


Figure 2. Seasonal and annual precipitation rankings. An arrow at the top of the figure would represent the wettest year/season on record (since 1895); at the bottom, the driest year/season on record. Data are available at <https://www.ncdc.noaa.gov/cag/county/rankings>.

Table 2. Monthly and annual total precipitation and departure from long-term averages. Departures from average are based on a comparison of 2019 precipitation to relevant averages from 1895–2018. Data are available at <https://www.ncdc.noaa.gov/cag/county/time-series>.

Month/Year	Total precipitation (in.)	Departure from average (in.)
January	4.5	+1.0
February	2.8	-0.2
March	4.6	+0.8
April	3.6	-0.1
May	6.3	+2.4
June	5.6	+1.5
July	6.7	+2.2
August	3.6	-0.9
September	1.6	-2.3
October	5.8	+2.4
November	2.1	-1.3
December	4.6	+1.0
2019	51.8	+6.5

Temperature and Precipitation Trends (1895–2019)

Data from 1895–2019 for Chester and Montgomery counties, PA shows increasing trends in annual average temperature (+0.24 °F per decade) and annual total precipitation (+0.32 inches per decade; Figure 3).

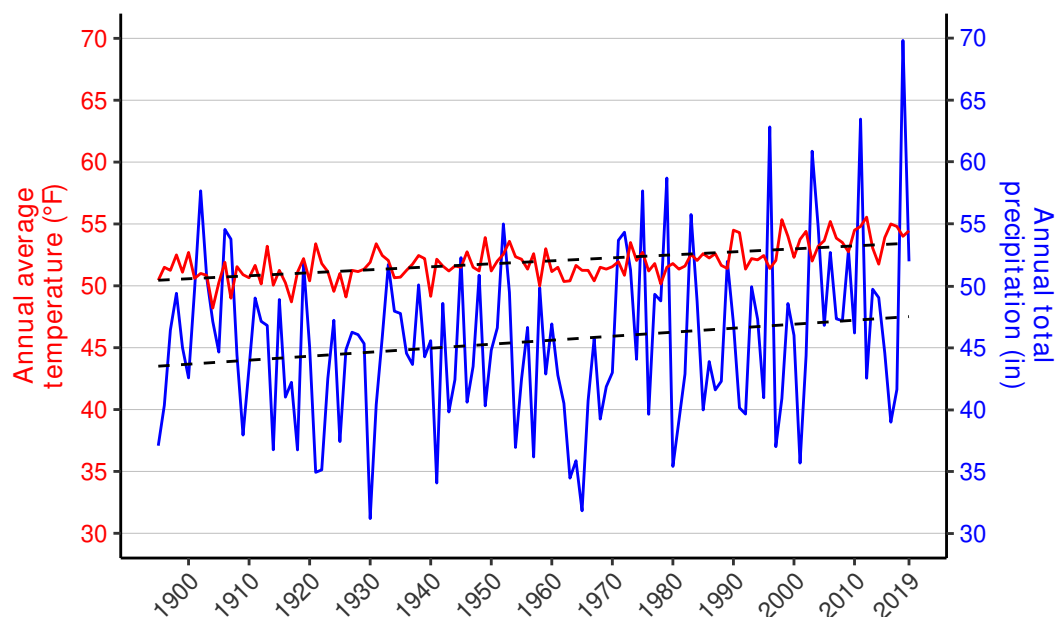


Figure 3. Annual average temperature (°F) and annual total precipitation (in.) for Chester and Montgomery counties, PA from 1895–2019. Dashed lines represent linear trends. Data are available at <https://www.ncdc.noaa.gov/cag/county/time-series>.

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Parks monitored: Appomattox Court House NHP • Booker T. Washington NM • Eisenhower NHS • Fredericksburg & Spotsylvania NMP • Gettysburg NMP • Hopewell Furnace NHS • Petersburg NB • Richmond NBP • Shenandoah NP • Valley Forge NHP