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2020 Weather in Review: Hopewell Furnace National Historic Site

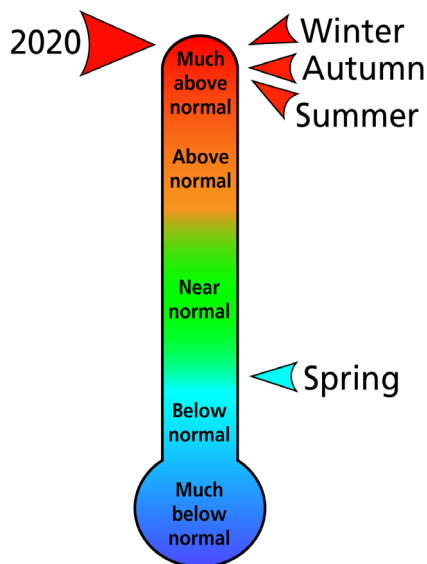
In all, 2020 was extremely warm and precipitation was also above normal. The year ended as the 3rd warmest and 22nd wettest on record for the park. Weather data collected from surrounding areas also indicate that annual average temperature and annual total precipitation have both increased over the last century (+0.21 °F per decade and +0.39 inches per decade, respectively).

This brief provides county-scale weather data averaged from all of the counties surrounding the park, including data from 1895–2020 (i.e. period of record). These counties include Berks and Chester counties, PA. Individual weather station data may vary from what is reported here.

Temperature

In total, 2020 was the 3rd warmest year ever recorded at the parks — all seasons were very warm except for the spring (Figure 1). Ten months had higher than normal temperatures with January, February, and March all being more than 6.0 °F above long-term averages (Table 1).

Table 1. Average monthly, average annual, and departures from long-term average temperatures. Departures from average are based on a comparison of 2020 average temperatures to relevant averages from 1895-2019. Data are available at <https://www.ncdc.noaa.gov/cag/county/time-series>.



Month/ Year	Average temperature (°F)	Departure from average (°F)
January	35.4	+6.7
February	38.3	+8.2
March	45.5	+6.4
April	48.4	-1.6
May	58.9	-1.7
June	70.8	+1.7
July	78.3	+4.5
August	74.9	+3.1
September	65.3	+0.3
October	55.6	+2.1
November	47.9	+5.4
December	35.1	+2.8
2020	54.5	+3.2

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

It all, 2020 was the 22nd wettest year recorded at the park (Figure 2). Over the year, a total of 51.1 inches of precipitation fell, almost 6 inches more than the long-term average (Table 2).

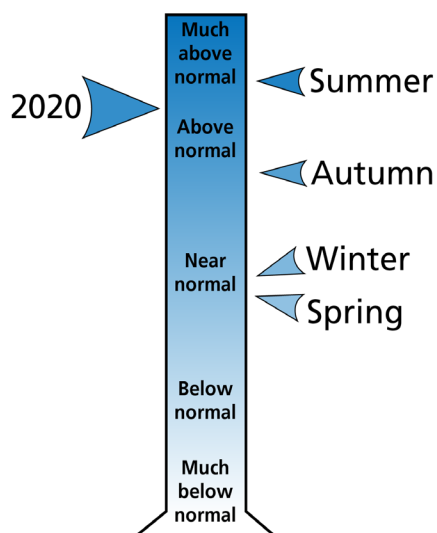


Figure 2. Seasonal and annual precipitation rankings. An arrow at the top of the figure would represent the wettest year/season on record (since 1895); at the bottom, the driest year/season on record. Data are available at <https://www.ncdc.noaa.gov/cag/county/rankings>.

Table 2. Monthly and annual total precipitation and departure from long-term averages. Departures from average are based on a comparison of 2020 precipitation to relevant averages from 1895–2019. Data are available at <https://www.ncdc.noaa.gov/cag/county/time-series>.

Month/ Year	Total precipitation (in.)	Departure from average (in.)
January	3.4	0.0
February	2.7	-0.3
March	3.8	+0.1
April	4.7	+1.0
May	3.2	-0.8
June	3.3	-0.8
July	5.6	+1.1
August	8.7	+4.2
September	3.6	-0.4
October	3.6	+0.1
November	3.4	+0.1
December	5.1	+1.5
2020	51.1	+5.8

Temperature and Precipitation (1895–2020)

Data for Berks and Chester counties, PA indicate that annual average temperature has increased approximately +0.21 °F per decade and annual total precipitation has increased approximately +0.39 inches per decade since 1895 (Figure 3).

National Park Service scientists have forecast future changes in climate too. Models estimate that by 2100, annual average temperature at the park will increase by 3.1–9.0 °F (from a best-case to worst-case scenario, respectively). Annual total precipitation is expected to increase by 7–14% (see [Gonzalez et al., 2018](#) for details).

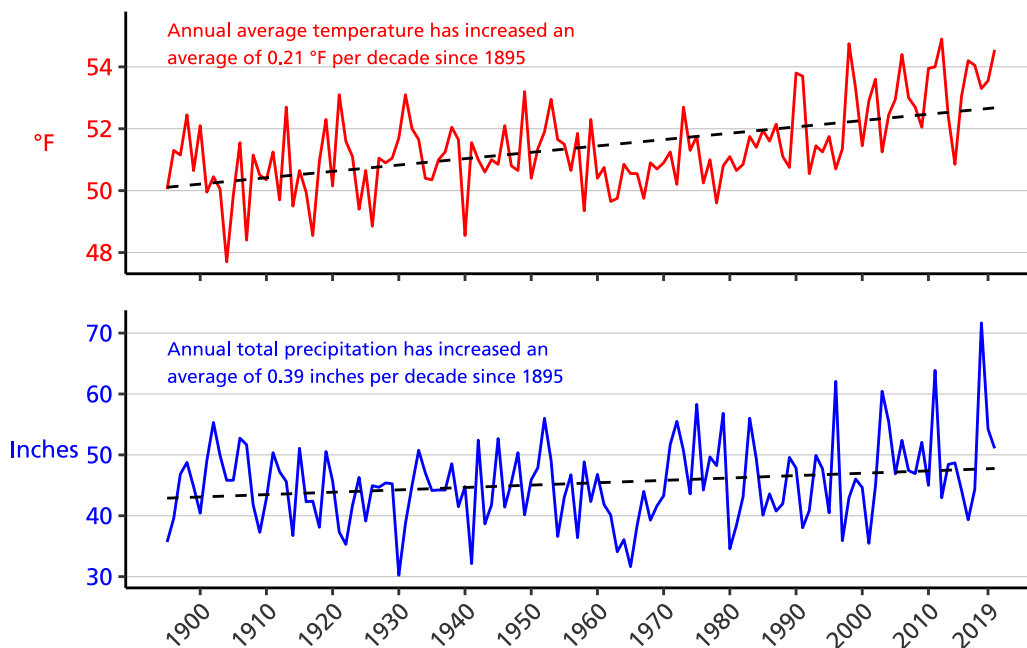


Figure 3. Annual average temperature (°F) and annual total precipitation (in.) from 1895–2020 for Berks and Chester counties, PA. Dashed lines represent linear estimates of change. Data are available at <https://www.ncdc.noaa.gov/cag/county/time-series>.

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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