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2018 Weather in Review: Petersburg National Battlefield

In all, 2018 was warm and extremely wet. In fact, it was a near record setting year for precipitation, with the 4th highest totals ever recorded. Weather data collected since 1895 reveals that annual average temperature and annual total precipitation are increasing. Over this time period, annual mean temperature has increased at a rate of +0.19 °F per decade and annual total precipitation has increased

+0.35 inches every ten years.

Information in this brief represents weather data averaged from all of the counties surrounding the park. These counties include Dinwiddie, Hopewell, Petersburg, and Prince George. More local weather data may vary slightly from what is reported here.

Temperature

In total, 2018 was the 20th warmest year at the park since 1895—spring and summer were much warmer than usual (Figure 1). Seven months had higher than normal temperatures, with February, May, and September all being more than 5 °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 2018 average temperatures to relevant averages from 1895-2017. Data are available at <https://www.ncdc.noaa.gov/cag/county/time-series>.

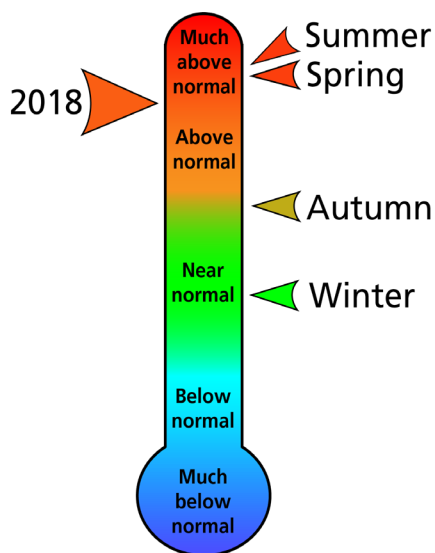


Figure 1. Seasonal and annual temperature rankings. An arrow at the top of the figure would represent the warmest year/season on record (since 1895); at the bottom, the coldest year/season on record. Data are available at <https://www.ncdc.noaa.gov/cag/county/rankings>.

Month/ Year	Average temperature (°F)	Departure from average (°F)
January	35.0	-3.3
February	48.1	+8.0
March	43.1	-5.1
April	55.1	-2.3
May	72.6	+6.1
June	76.3	+1.9
July	77.5	-0.9
August	78.6	+1.9
September	75.9	+5.3
October	61.8	+2.5
November	47.0	-2.1
December	42.5	+2.1
2018	59.5	+1.2

Precipitation

In total, 2018 was a near record setting year at the park — it was the 4th wettest year since 1895 (Figure 2). By the end of the year, 58.9 inches of precipitation had fallen which is 15 inches more than long-term averages (Table 2).

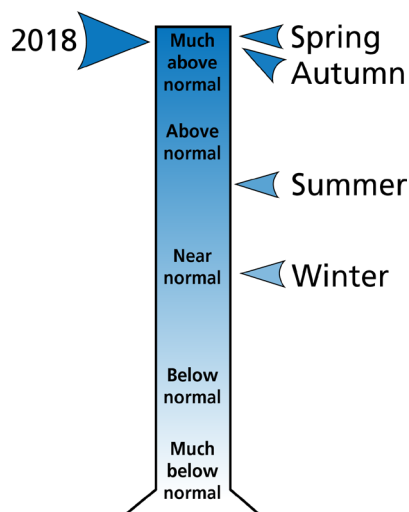


Figure 2. Seasonal and annual precipitation rankings. An arrow at the top of the figure would represent the wettest year/season on record (since 1895); at the bottom, the driest year/season on record. Data are available at <https://www.ncdc.noaa.gov/cag/county/rankings>.

Table 2. Monthly and annual total precipitation and departure from long-term averages. Departures from average are based on a comparison of 2018 precipitation to relevant averages from 1895–2017. Data are available at <https://www.ncdc.noaa.gov/cag/county/time-series>.

Month/Year	Total precipitation (in.)	Departure from average (in.)
January	4.3	+1.0
February	2.5	-0.5
March	2.7	-1.0
April	3.8	+0.5
May	7.3	+3.3
June	7.8	+3.7
July	6.6	+1.6
August	4.7	+0.1
September	3.4	-0.5
October	6.0	+2.9
November	6.2	+3.5
December	3.5	+0.3
2018	58.9	+15.0

Temperature and Precipitation Trends (1895–2018)

Data collected in surrounding counties since the late 1800s shows statistically significant increasing trends in temperature and precipitation (Figure 3). Annual average temperature is increasing at a rate of +0.09 °F per decade ($p < 0.05$, linear regression). Annual total precipitation is increasing at a rate of +0.40 inches per decade ($p < 0.05$, linear regression).

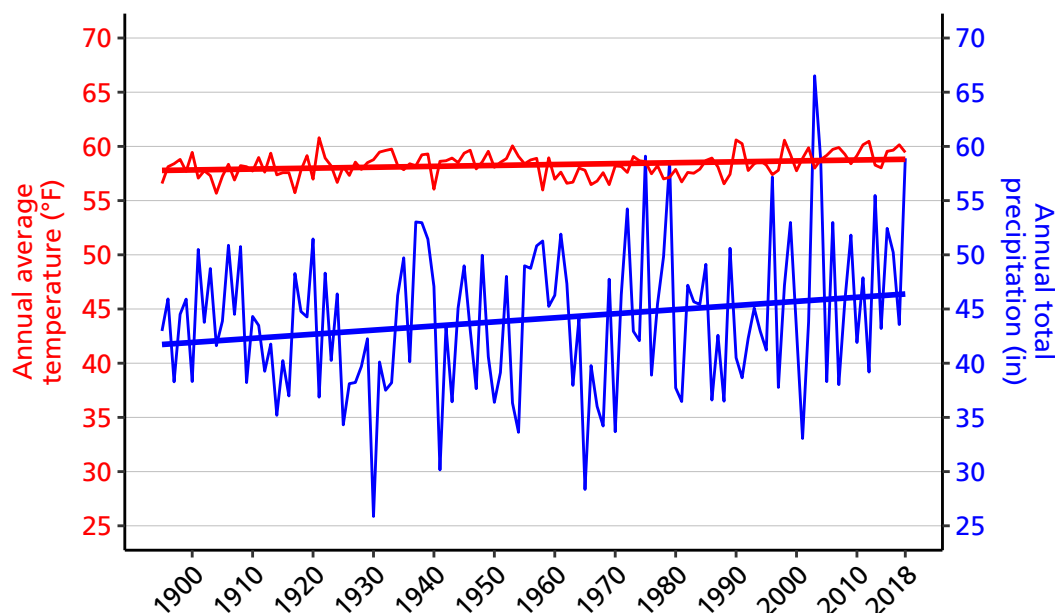


Figure 3. Annual average temperature (°F) and annual total precipitation (in.) for the counties surrounding Petersburg National Battlefield from 1895–2018. Solid lines represent statistically significant trends ($p < 0.05$). Data are available at <https://www.ncdc.noaa.gov/cag/county/time-series>.

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