



July 2018

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Office of the Maryland State Climatologist



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PRECIPITATION

Based on the National Centers for Environmental Information (NCEI), the statewide total July precipitation was 8.73 inches, which was 3.76 inches more than last month, 0.97 inches more than in July 2017, and 4.58 inch more than the 1981-2010 average, making it the 2nd wettest July in the 124-year period of record. It was the wettest July since 1945 (Table 1). Above-average precipitation was observed in all parts of the state (Figure 1). The greatest monthly precipitation accumulation was 16.73 inches, recorded at Baltimore-Washington International Airport. The greatest 24-hour precipitation was 7.32 inches, recorded at BIRDSVILLE 0.2, WSW in Anne Arundel County on July 22. Based on historical records, statewide July precipitation showed no long-term trend since 1895. The highest and lowest July precipitation for the state ranged from 10.70 inches in 1945 to 1.34 inch in 1983 (Figure 2).

Percent of Normal Precipitation
July 2018

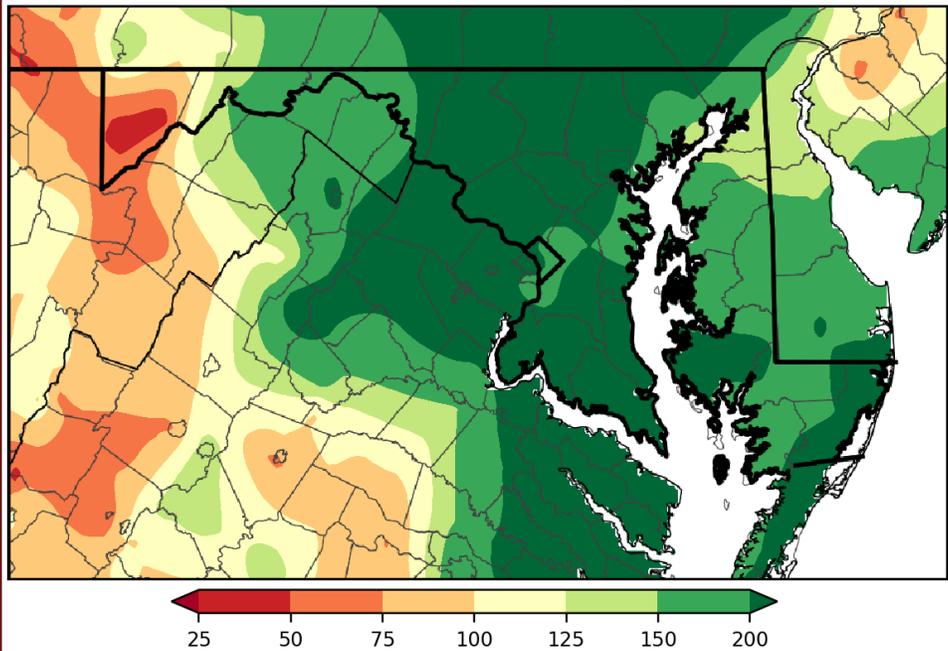


Figure 1: July 2018 precipitation percent of normal for Maryland. (NRCC)

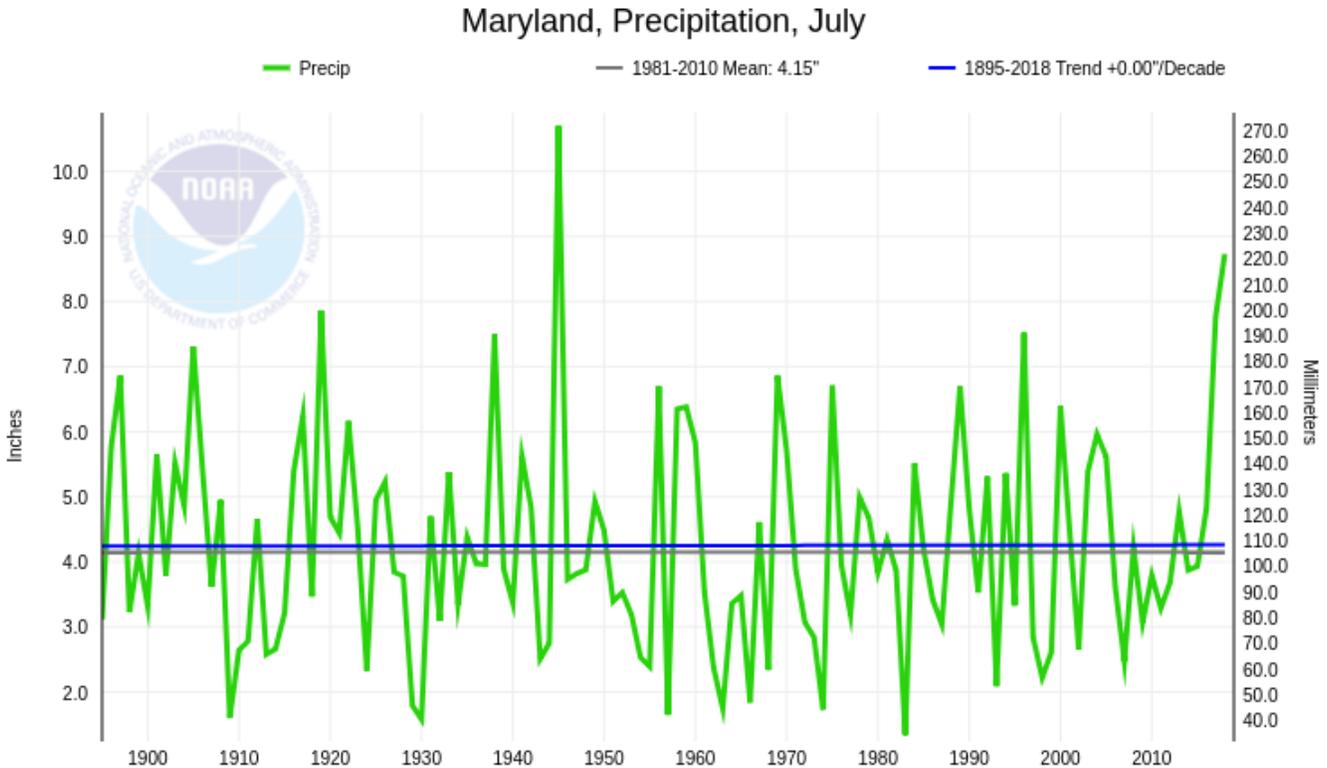


Figure 2: Historical July precipitation time series for Maryland.

July Precipitation Statistics (124 Years)

Record High: 10.70" in 1945	July 2018 value: 8.73"
Record Low: 1.34" in 1983	1981-2010 average: 4.18"
Trend: 0.00" per decade	Anomaly: 4.55"
Rank: 123 rd driest	Driest since: 2017
2 nd wettest	Wettest Since: 1945

Table 1: Maryland July Precipitation Statistics

TEMPERATURE

Avg Temperature Departure (° F)
 July 2018

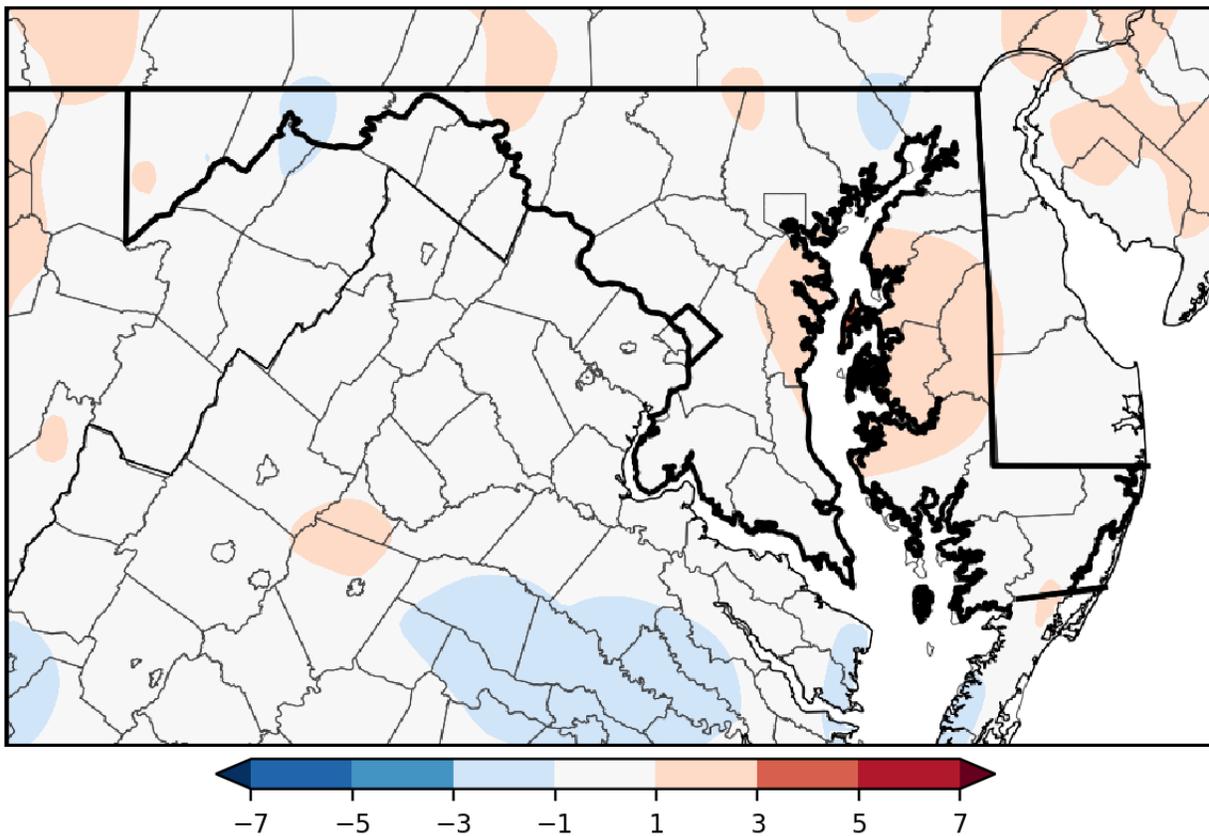


Figure 3: July 2018 average temperature departure from normal for Maryland. (NRCC)

The official state average July temperature was 76.4 F, 4.2 °F warmer than last month and 0.9 °F cooler than in July 2017, but 1.3 °F warmer than the 1981-2010 average, making it the 93rd coolest July in the 124-year period of record. It was the warmest July since 2017 (Table 2). Average temperatures were observed commonly in the state, except for a few small areas where slightly above and below-average conditions were observed (Figure 3). The state’s highest and lowest daily temperatures ranged from 100 °F on July 3rd at the Maryland Science Center, to 43 °F on July 30th at the Savage River Dam. Based on the historical records, the state average July temperature showed a positive long-term trend of 0.1 °F per decade since 1895. The highest and lowest monthly state July average temperatures ranged from 79.8 °F in 2012 to 71.4 °F in 1895 (Figure 4).

Maryland, Average Temperature, July

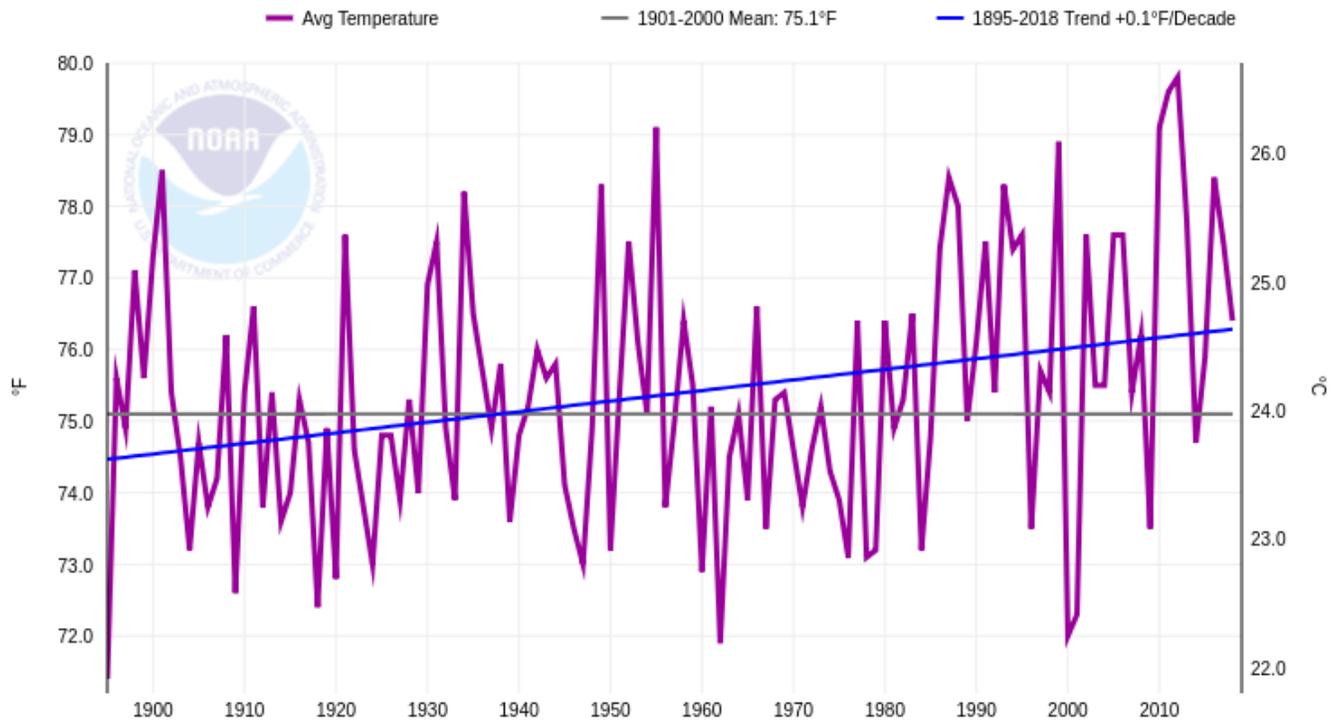


Figure 4: Historical July temperature time series for Maryland.

July Temperature Statistics (124 Years)

Record High: 79.8 °F in 2012	July 2018 value: 76.4 °F
Record Low: 71.4 °F in 1895	1981-2010 average: 76.1 °F
Trend: 0.1 °F per decade	Anomaly: 0.3 °F
Rank: 32 nd warmest	Warmest since: 2017
93 rd coolest	Coolest Since: 2015

Table 2: Maryland July Temperature Statistics

Maryland Monthly Climate Summary

MARYLAND STATE CLIMATOLOGIST OFFICE

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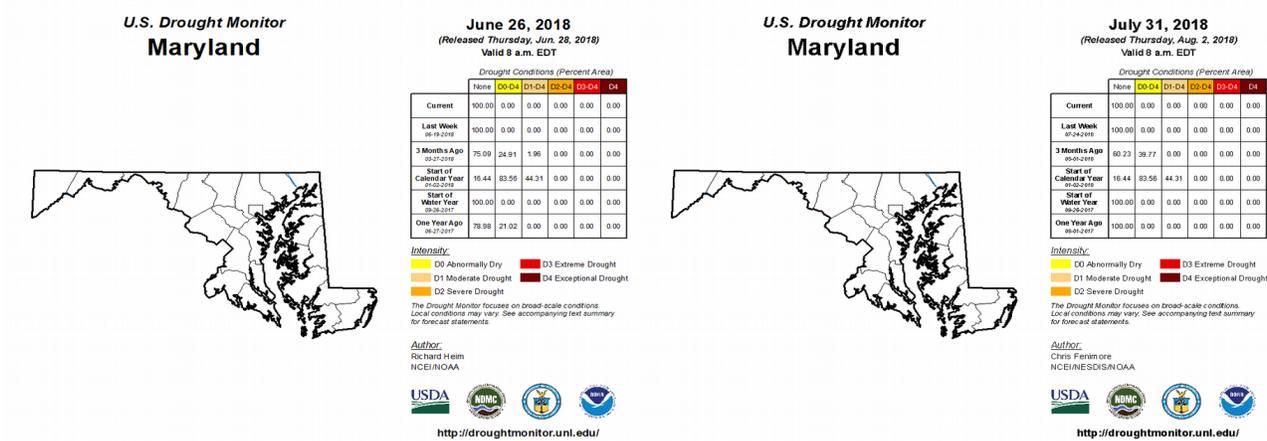


Figure 5: Drought Monitor map comparison for Maryland at the beginning (left) and end (right) of July 2018.

Drought Monitor (DM): In general Maryland experienced little to no drought except for a brief period the week of July 17th. Figure 5 shows a comparison of the drought conditions across the state from the beginning to the end of the month. Figure 6 below shows the statewide drought coverage in percentage and intensity in a time scale representing the state from the beginning to the end of the month, with a one-week resolution.

Maryland State Drought Severity and Coverage (July 2018)

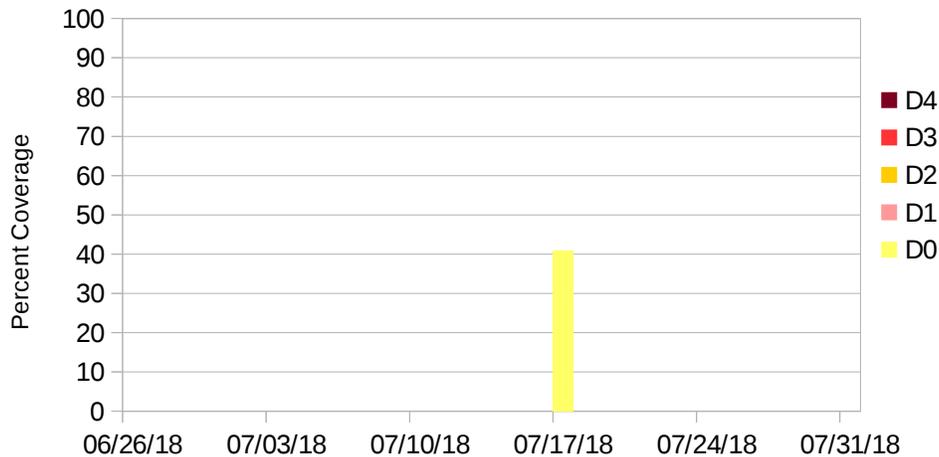


Figure 6: Maryland drought severity and coverage for July 2018.



Storm Reports: The NOAA Storm Prediction Center’s Storm Report reported a total of 40 significant storm events in July. Table 3 summarizes the number of tornado (0), hail (1) and damaging wind (39) reports in July, while Figure 7 geographically displays the locations of these storm reports.

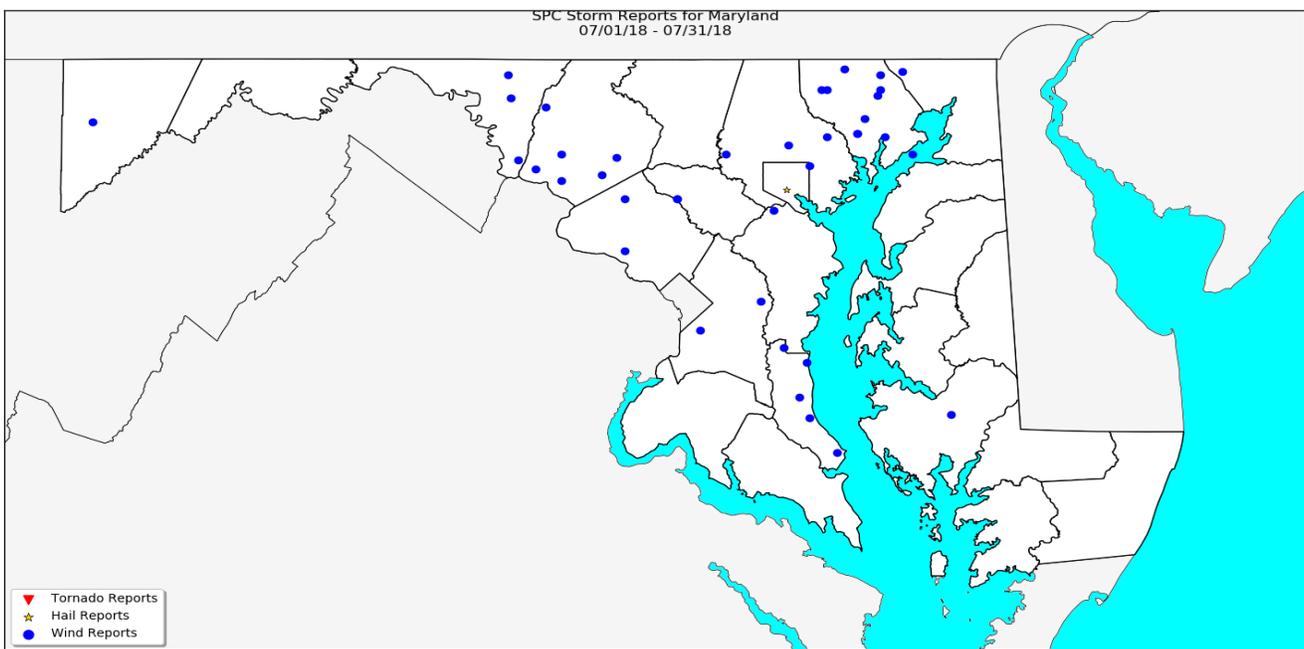


Figure 7: Map of July 2018 Maryland storm events (red: tornado, blue:wind, green:hail).

Category	Number of Reports
Tornado reports	0
Hail reports	1
Wind reports	39
Total	40

Table 3: Summary of July severe storm reports in Maryland. (SPC, NOAA)