NWS Wilmington, Ohio
July 2018
Regional Climate Summary

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The month of July featured two very different weather patterns between the first 2/3 or so of the month and the final part of July. The main story for the first portion of July was the heat and overall lack of widespread precipitation. Temperatures reached into the 90s many times in the first 18 days or so, with even some mid-90s on the 4th of July. The second half of the month, however, featured much cooler and wetter conditions – a stark contrast to how the month started off.

Temperatures

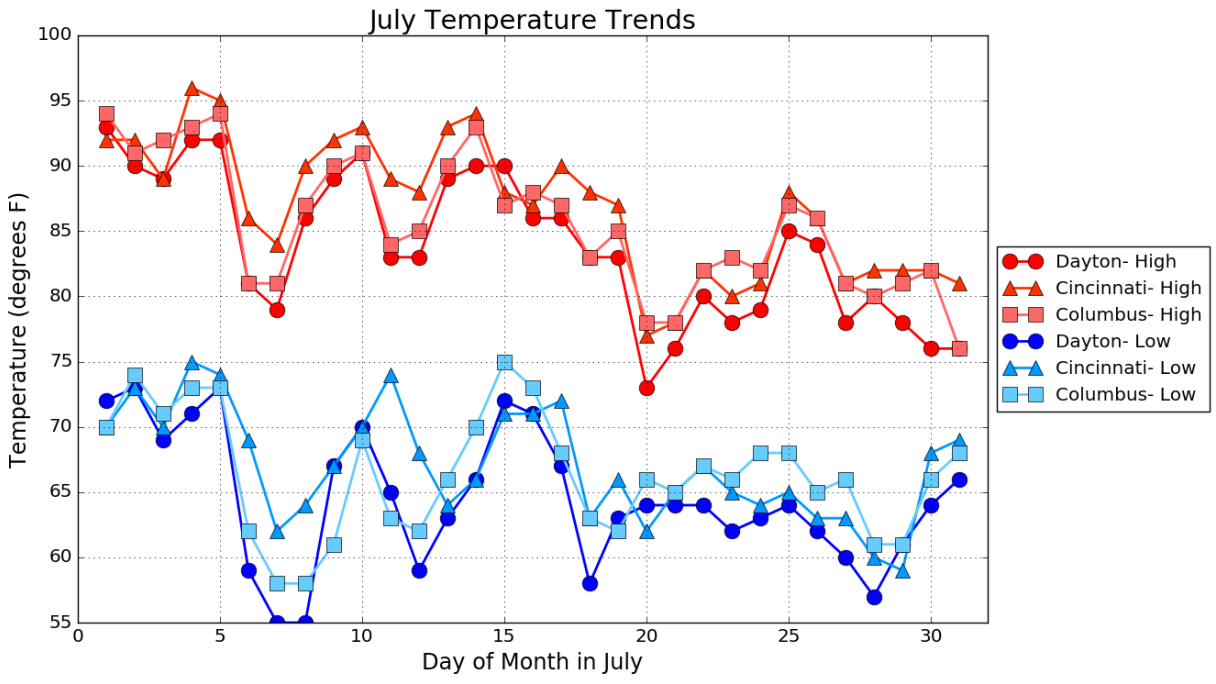
The month of July certainly featured a "tale of two weather patterns," as hot conditions during the first part of the month yielded to cooler temperatures towards the end of July. High temperatures reached into the 90s numerous times within the first half of July. In fact, the temperature reached 96˚F at Cincinnati (CVG) on the 4th of July – the hottest temperature recorded at the site since 2012. In fact, within the first 17 days of the month, the temperature reached at least 90˚F on 10 separate days at Cincinnati. However, it failed to reach such a mark at the site during the final 14 days of the month. Despite the warm start to the month, no daily records were set at any of the three major climate sites.

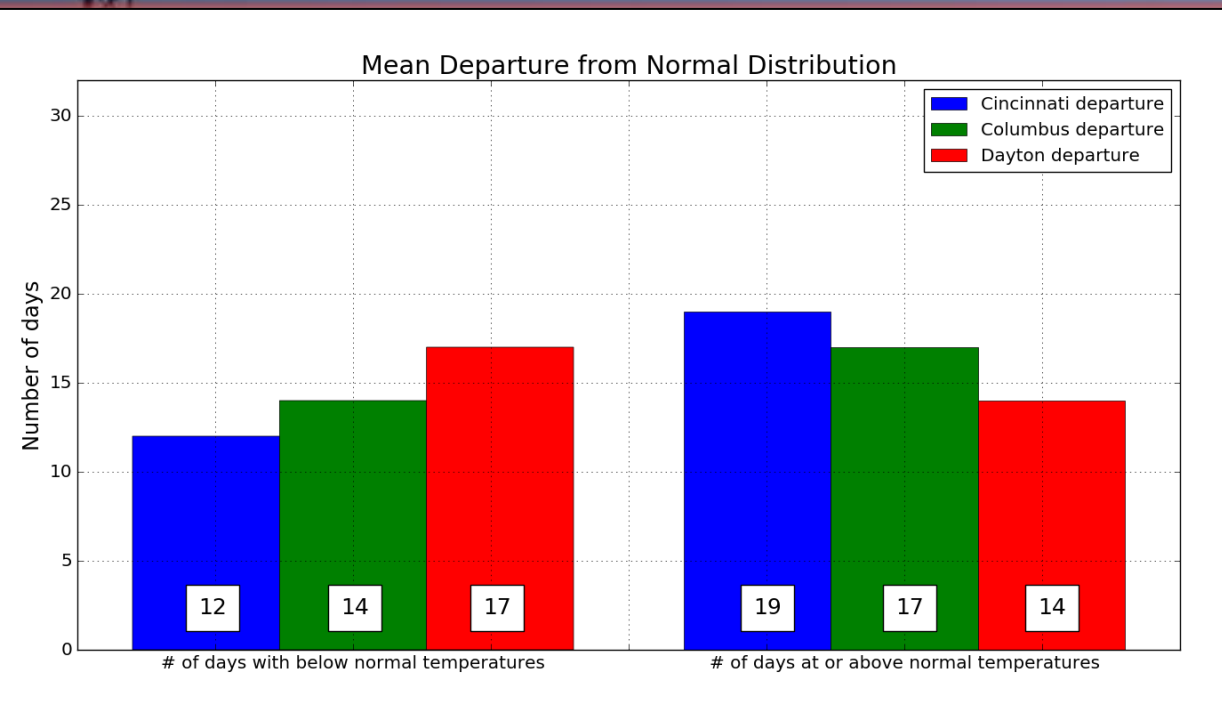
The final 2 weeks of July featured a much different weather pattern in the Ohio Valley – one characterized by more widespread precipitation, which consequently led to slightly below normal temperatures. Although late July is climatologically the warmest period of the entire year for the area, the weather pattern just did not support any widespread heat. In fact, the high temperature failed to even reach 80˚F on several occasions during the final part of the month at the three climate sites (Cincinnati, Columbus, Dayton). Persistent upper-level troughing and frequent cold frontal passages yielded a rather mild and wet period to close out the month.

Because of the two very distinct and opposite temperature trends between the first half and second half of the month, average temperatures generally trended to close to normal by the time August came around.

Site	Avg Temp (°F)	Avg High Temp (°F)	Avg Low Temp (°F)	Departure From Normal (°F)	Maximum Temperature (°F)	Minimum Temperature (°F)
Cincinnati (CVG)	77.0°F	86.9°F	67.1°F	+1.1˚F	96˚F (07/04)	59˚F (07/29)
Columbus (CMH)	76.0°F	85.5°F	66.4°F	+ 0.8˚F	94˚F (Mult.)	58˚F (Mult.)
Dayton (DAY)	74.2°F	83.8°F	64.5°F	+ 0.1˚F	93˚F (07/01)	55˚F (Mult.)

Temperatures (Continued)





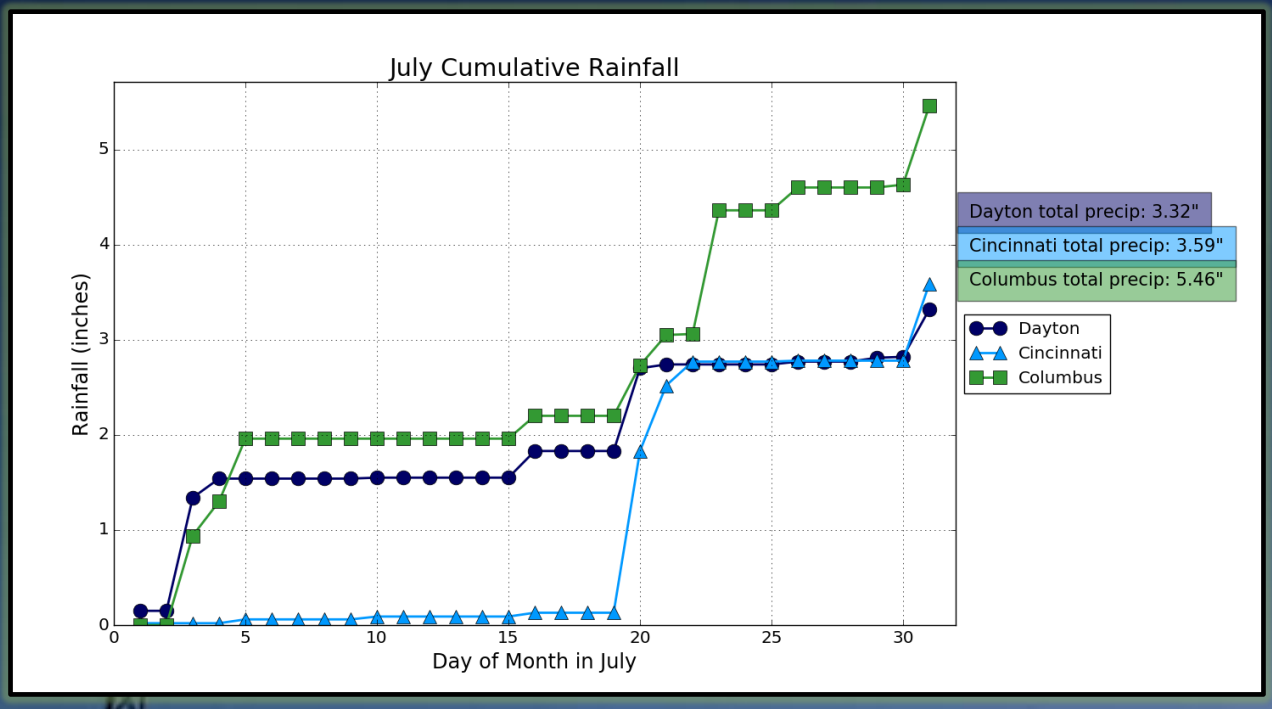
Precipitation

As was the case with temperature trends throughout the month, precipitation in the area was distributed very unevenly between the first and second part of July. Although daily afternoon showers and thunderstorms yielded their traditional splotchy rainfall patterns throughout the first 2 ½ weeks or so of July, many locations in the local area received below normal rainfall during this time period. In fact, some spots had received less than 0.1" of rainfall through the first half of the month. That all changed, however, by the 20th as a potent system resulted in widespread thunderstorms, some of which were severe, in the local area. Portions of southeastern Indiana and northern Kentucky were particularly hard hit with heavy rainfall during this event, with some locations receiving 2-3" or more within a very short time period. The unsettled weather pattern continued for several more days before a generally drier period evolved following the active stretch.

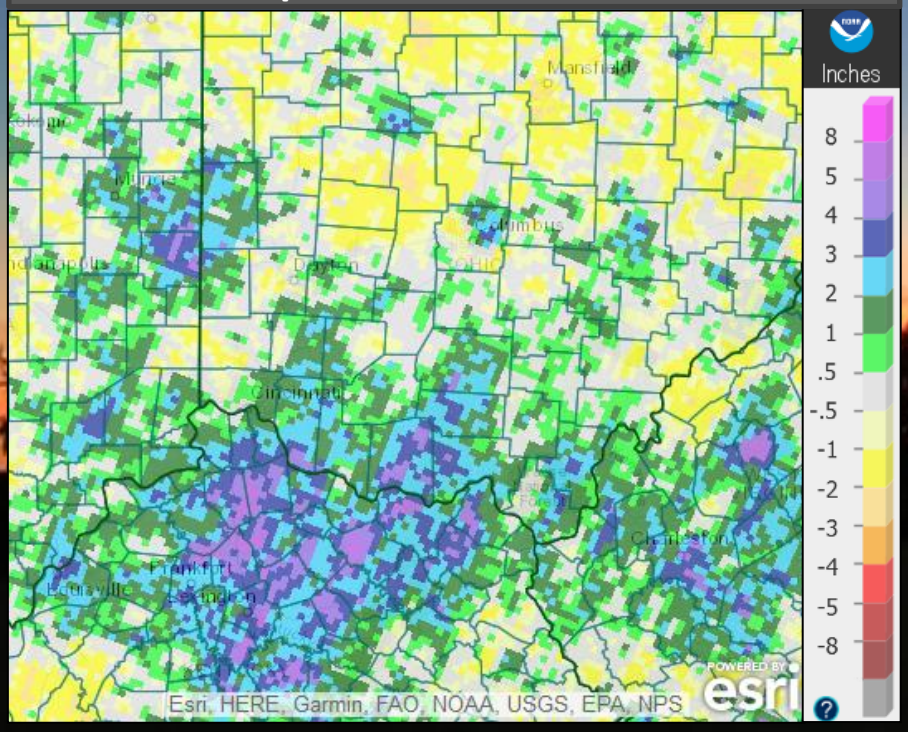
The month of July ended with one more widespread rainfall event, which moved through during the morning hours of the 31st. A low pressure system tracked right through the local area, bringing widespread rain ranging from approximately ½" to 2"+ over most of the local area. With this, many locations ended up with near normal rainfall for the month as a whole.

Site	Total Precipitation (in.)	Departure From Normal (in.)	Max Daily Precipitation (in./date)		Total Snowfall (in.)
Cincinnati (CVG)	3.59 in.	-0.17 in.	1.70 in.	07/20	0.0 in.
Columbus (CMH)	5.46 in.	+0.67 in.	1.30 in.	07/23	0.0 in.
Dayton (DAY)	3.32 in.	-0.79 in.	1.19 in.	07/03	0.0 in.

Precipitation (Continued)



July Precipitation Departure From Normal



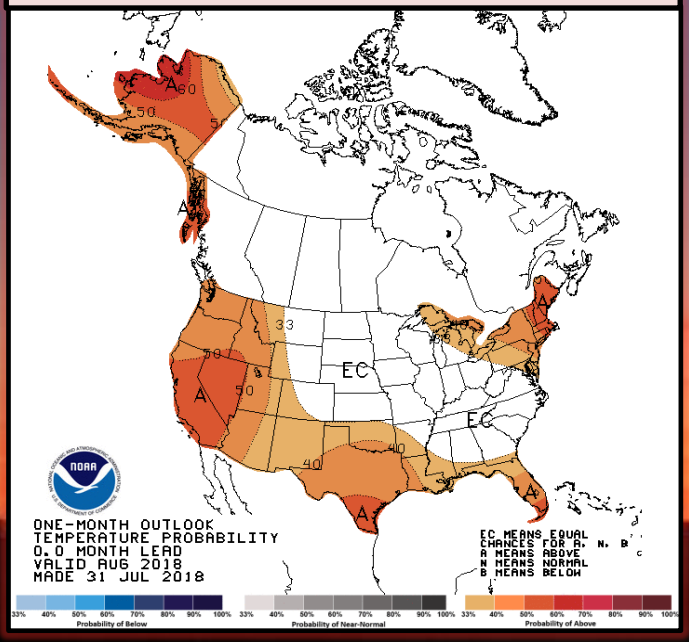
August Outlook

The latest outlook from the Climate Prediction Center (CPC) indicates increased likelihood for above normal precipitation in the month of August.

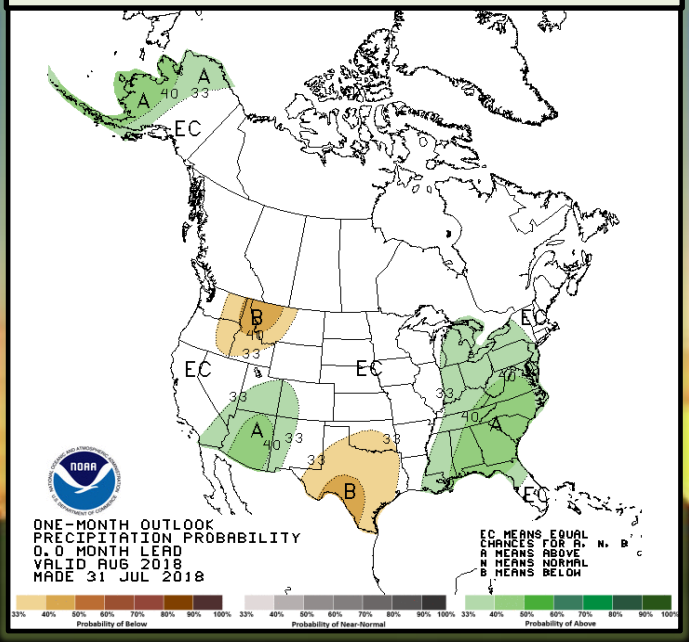
Site	Normal Avg Temp (°F)	Normal High (°F)	Normal Low (°F)
Cincinnati (CVG)	74.8°F	84.9°F	64.8°F
Columbus (CMH)	73.9 °F	83.7°F	64.1°F
Dayton (DAY)	72.7°F	82.6°F	62.7°F

Site	Normal Precipitation (in.)
Cincinnati (CVG)	3.41 in.
Columbus (CMH)	3.32 in.
Dayton (DAY)	2.99 in.

Upcoming Temperature Outlook



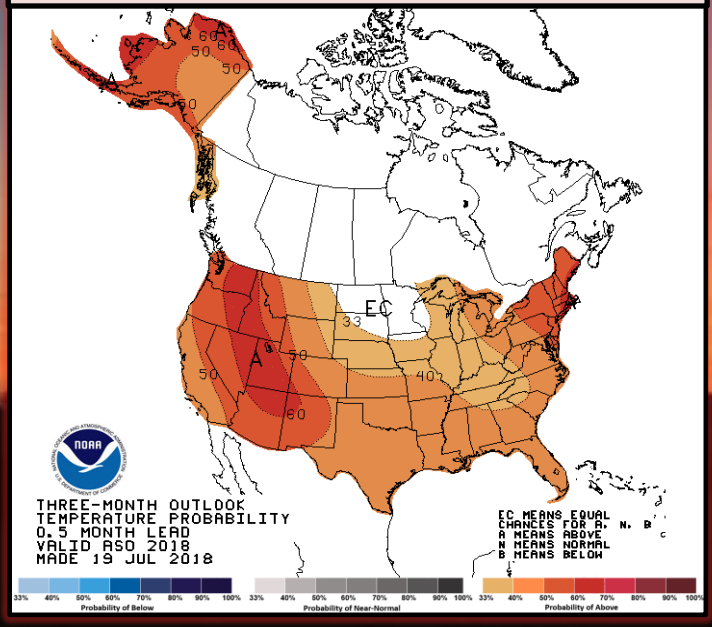
Upcoming Precipitation Outlook



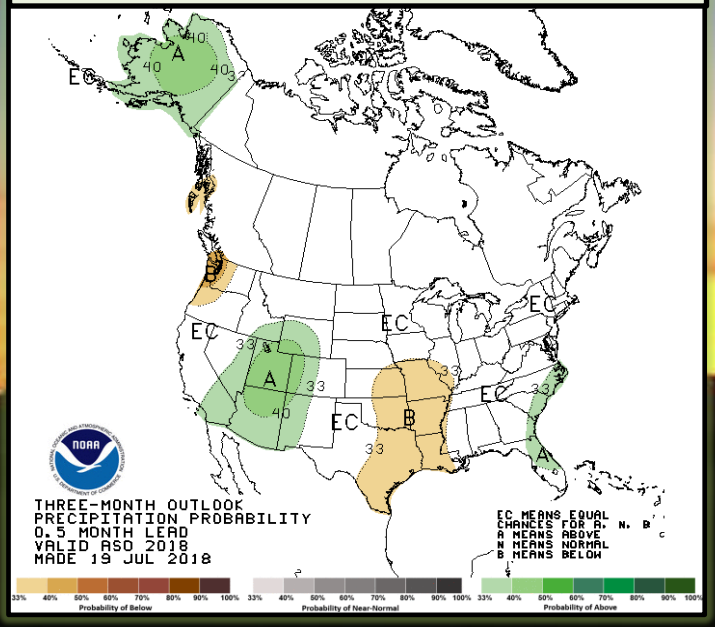
August-October Outlook

According to the Climate Prediction Center (CPC), current data and long-term weather patterns will likely support an increased likelihood of above normal temperatures during the late summer and early autumn time period (August through October) in the Ohio Valley. However, current data remains inconclusive on whether the overall pattern is likely to produce above normal or below normal precipitation during the next three months, as an average.

Three-Month (ASO) Temp. Outlook



Three-Month (ASO) Precip. Outlook



Severe Weather

During the morning hours of July 20, 2018, widespread showers and thunderstorms ahead of an advancing warm front moved through the area. In the western and southwestern portions of the area, peeks of sunshine during the late morning and early afternoon enabled the environment to destabilize amidst unseasonably-strong deep-layer shear. Intense thunderstorms erupted over portions of southern Indiana and northern Kentucky and progressed east-southeast through the Tri-State area. Numerous reports of hail and damaging winds were received. Additionally, heavy rain from the thunderstorms resulted in instances of flooding, particularly in northern Kentucky and southeaster Indiana.

Local Severe Weather & Rainfall Reports