IOWA DEPARTMENT OF NATURAL RESOURCES

# WATER SUMMARY UPDATE

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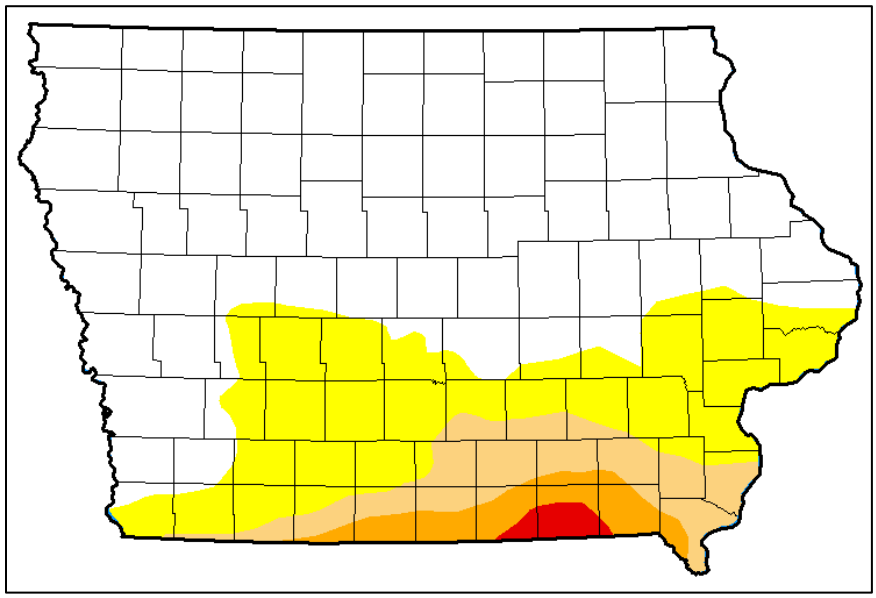
## A snapshot of water resource trends for July 2018

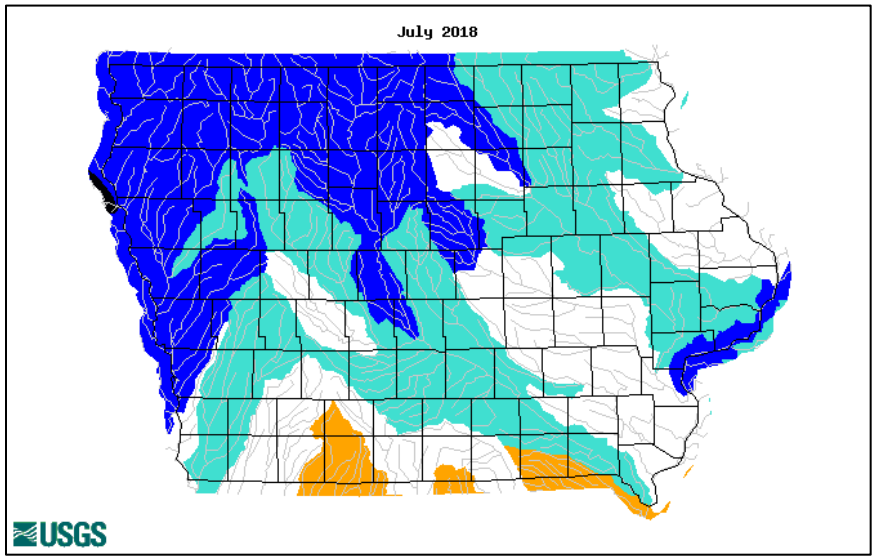
**Drought Monitor - Conditions as of August 7, 2018.**

National Drought Mitigation Center and partners



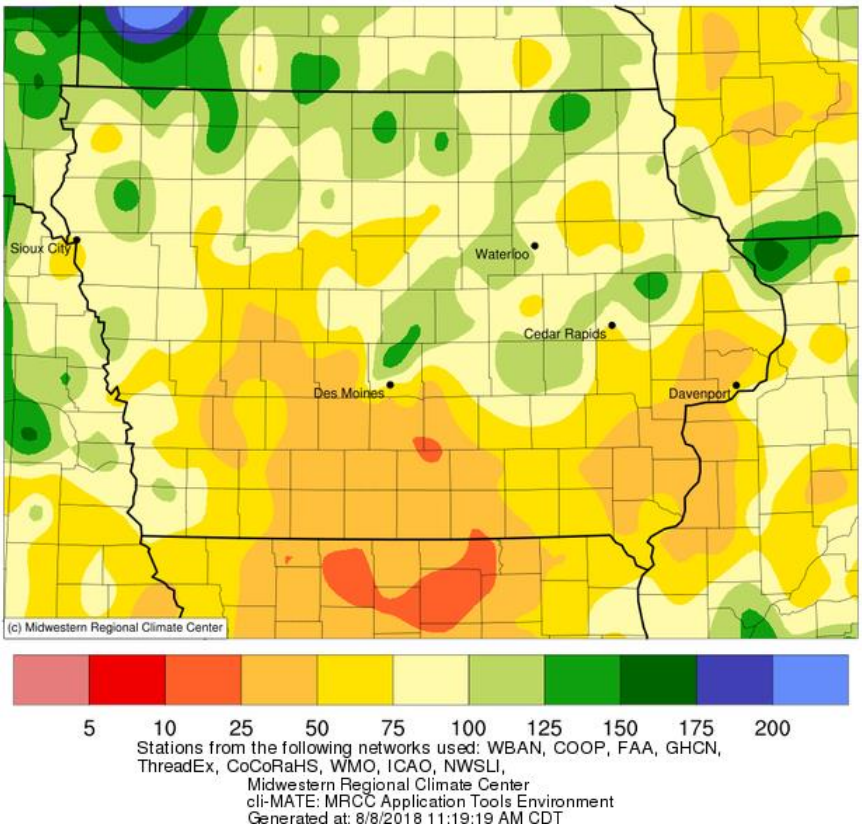

**Stream Flow - Seven-day average stream flow for July 2018.**

US Geological Survey



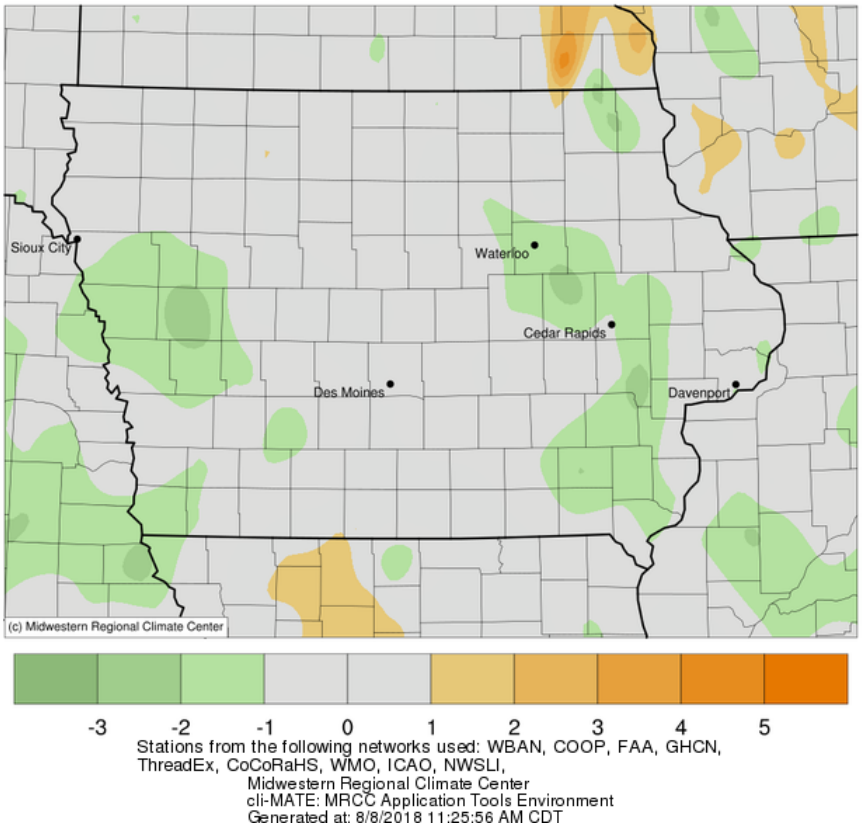
**Precipitation - Percent of normal precipitation for July 2018.**

High Plains Regional Climate Center

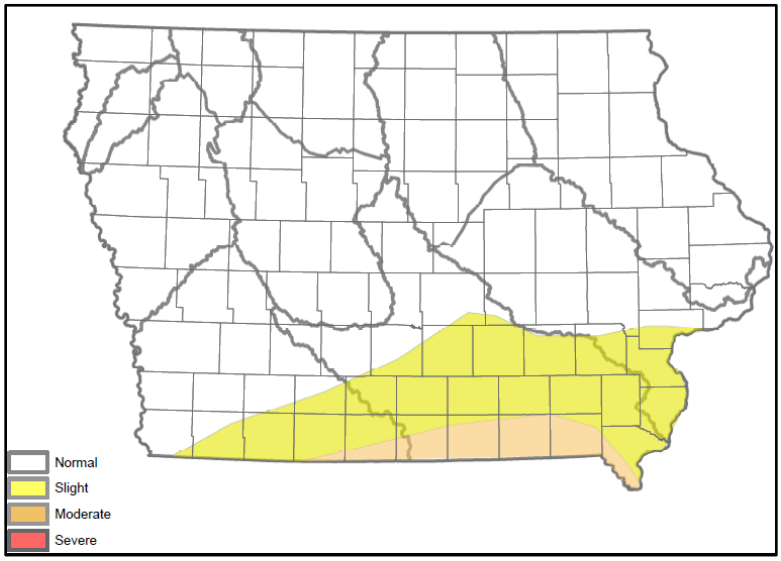



**Temperature – Departure from normal temperature (°F) for July 2018.**

High Plains Regional Climate Center



**Shallow Groundwater - Conditions for July 2018.**
Iowa DNR and IIHR-Hydroscience and Engineering




# Recent Developments and Changes

### SUMMARY

The pattern that has prevailed across the state in 2018 continues. Conditions from north to south in Iowa change from generally wet to generally dry. In July, northern portions of the state received above normal rainfall, while southern portions received below normal rainfall. This range of rainfall is evident in the streamflow patterns across the state, as well as the shallow groundwater conditions. The Drought Monitor also reflects this trend. The Iowa Crop Progress and Condition report released by the USDA National Agricultural Statistical Service indicates that subsoil moisture levels across the state are rated 31 percent short or very short and 69 percent adequate or surplus. Subsoil moisture levels in south central and southeast Iowa continue to worsen, with 48 percent considered very short.

### DROUGHT MONITOR

Drought conditions worsened in the southeast corner of the state, where extreme drought (D3) was introduced during the last part of the month by the US Drought Monitor. As of early August, the D3 category covered much of Davis County and some of western Appanoose County. Abnormally dry (D0) conditions covered around 12% of Iowa; combined D0 – D3 conditions covered around 23% of Iowa. At this time last year, D0 – D3 drought covered 67% of the state. From this time last month, the area of extreme to severe drought has increased by 1%, with abnormally dry conditions increasing in eastern Iowa by around 2%.

### CURRENT STREAM FLOW

Streamflow conditions in much of the state remained in the above and much above normal condition throughout July. The northern third of the state is experiencing above and much above normal flows, whereas the middle third is above normal and southern third is a mix of below normal to above normal streamflow conditions. Streamflow conditions in the Chariton and Fox Rivers are in the below normal range.

## JULY PRECIPITATION AND TEMPERATURE

July 2018 was the 56th driest on record, with Iowa receiving an average of 3.36 inches of rainfall, 1.14 inches below the 30-year climatological expectation. South-central Iowa saw precipitation deficits between 25-50% of expected rainfall, on the order of three to four inches below normal. The border between Iowa and Illinois observed rainfall deficits between two to three inches. Only a few pockets across the state received above-average precipitation. Des Moines experienced the second driest July since 1900, receiving only 0.38 inches of rain.

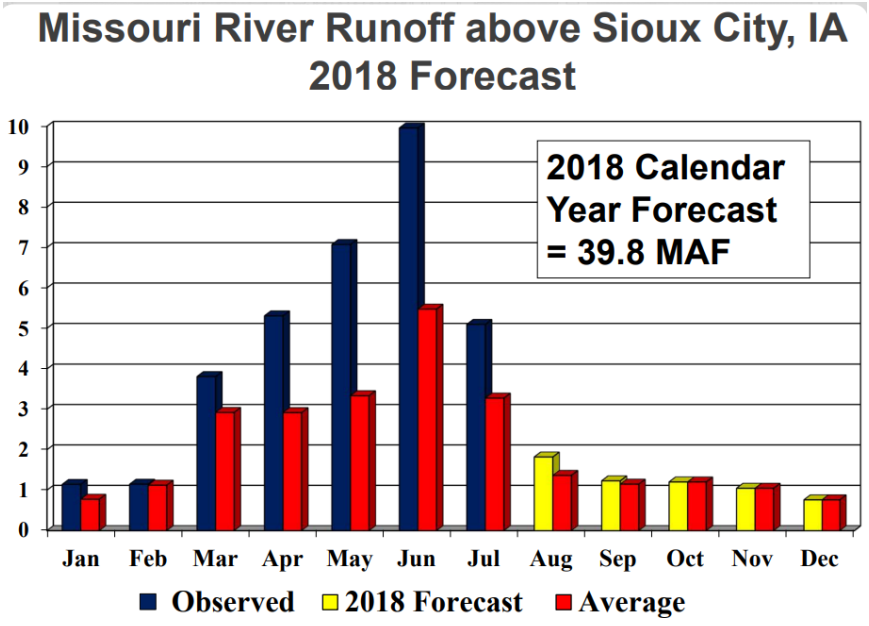
Temperatures across the state were generally near normal. The average statewide temperature was 73.1 degrees, about a half of a degree cooler than normal. This ranks July 2018 as the 50th coolest month, tied with 1900, 1946, 2003 and 2008. The southwest and southeast corners were generally cooler than the rest of Iowa. During the last half of the month, cooler than normal daily highs and overnight lows help mitigate some of the crop and livestock stressed induced by lack of precipitation, especially in Iowa's southern third.

## SHALLOW GROUNDWATER

Shallow groundwater conditions continue to be below normal in July for parts of south central and south east Iowa, and the southern tier of counties has been downgraded to moderate drought. Davis County is now in severe drought. Shallow groundwater conditions in the rest of Iowa are normal for July.

## MISSOURI RIVER CONDITIONS

Along the western border of Iowa the Missouri River has been experiencing higher than normal flows for most of the summer due to last year's heavy winter snowpack in the mountains and early season rainfall. The US Army Corps of Engineers is predicting that the runoff from the Missouri River basin will be 157 percent of normal for 2018. Releases from all the reservoirs in the Missouri River system will be higher than average during through the fall months to evacuate all water stored in the designated flood control storage zones of the reservoirs.



## ADDITIONAL INFORMATION

For additional information on the information in this Water Summary Update please contact any of the following:

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