IOWA DEPARTMENT OF NATURAL RESOURCES

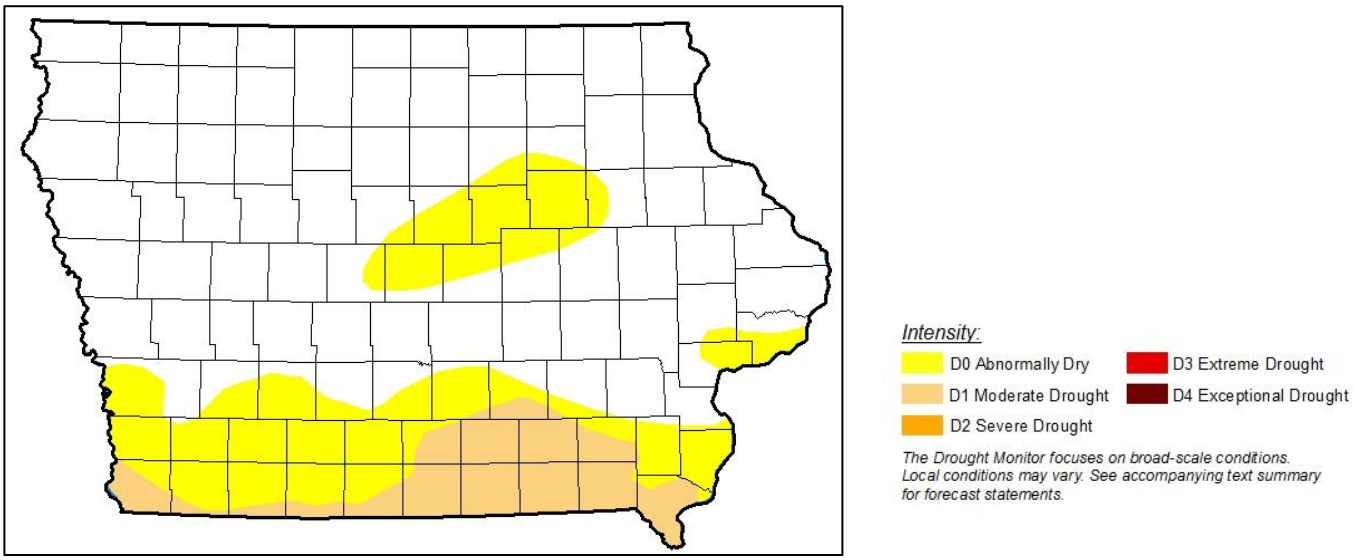
WATER SUMMARY UPDATE

Published Date June 7, 2018| Issue 86

A snapshot of water resource trends for May 2018

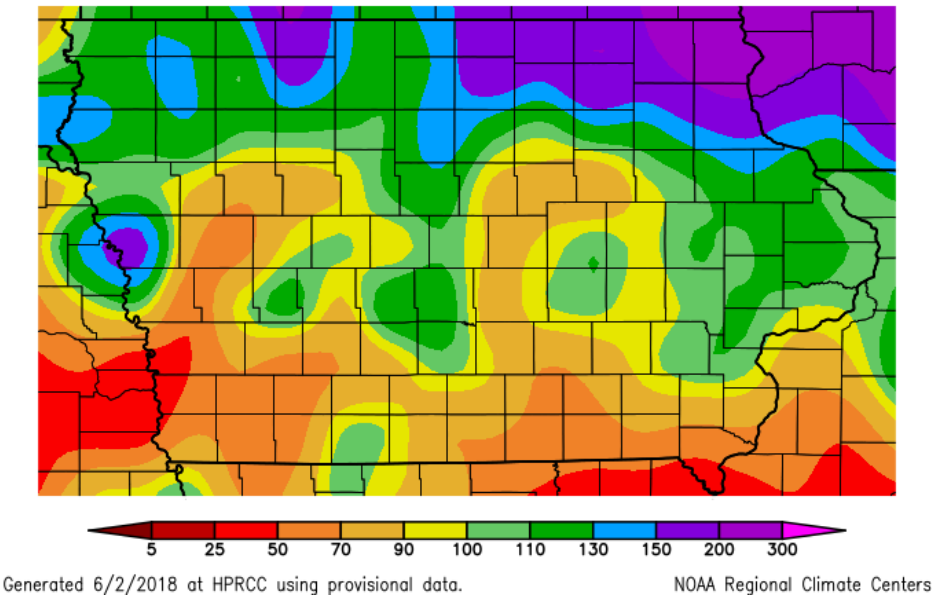
Drought Monitor - Conditions as of June 7, 2018.

National Drought Mitigation Center and partners



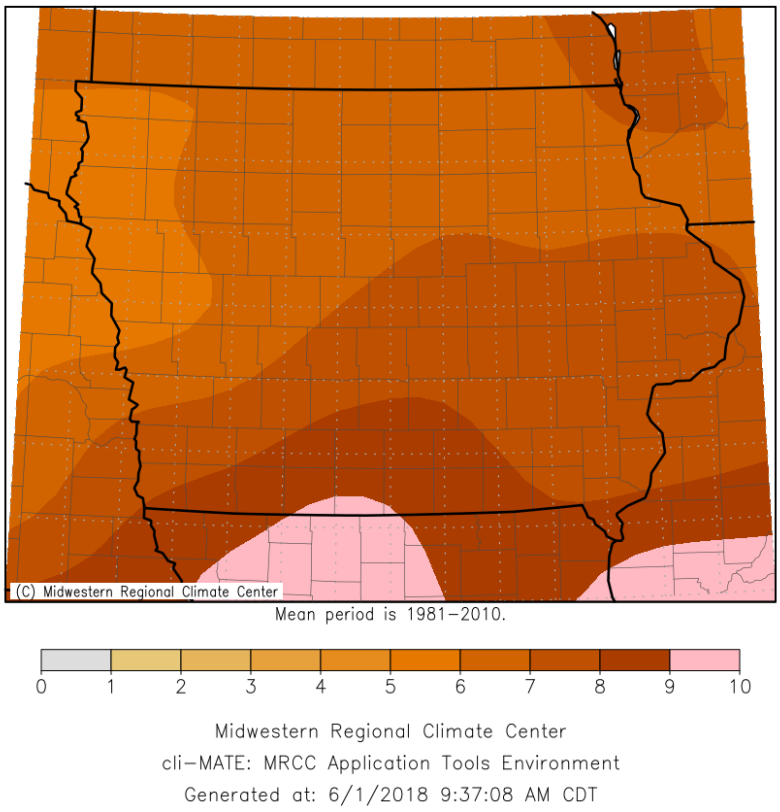
Precipitation - Percent of normal precipitation for May 2018.

High Plains Regional Climate Center



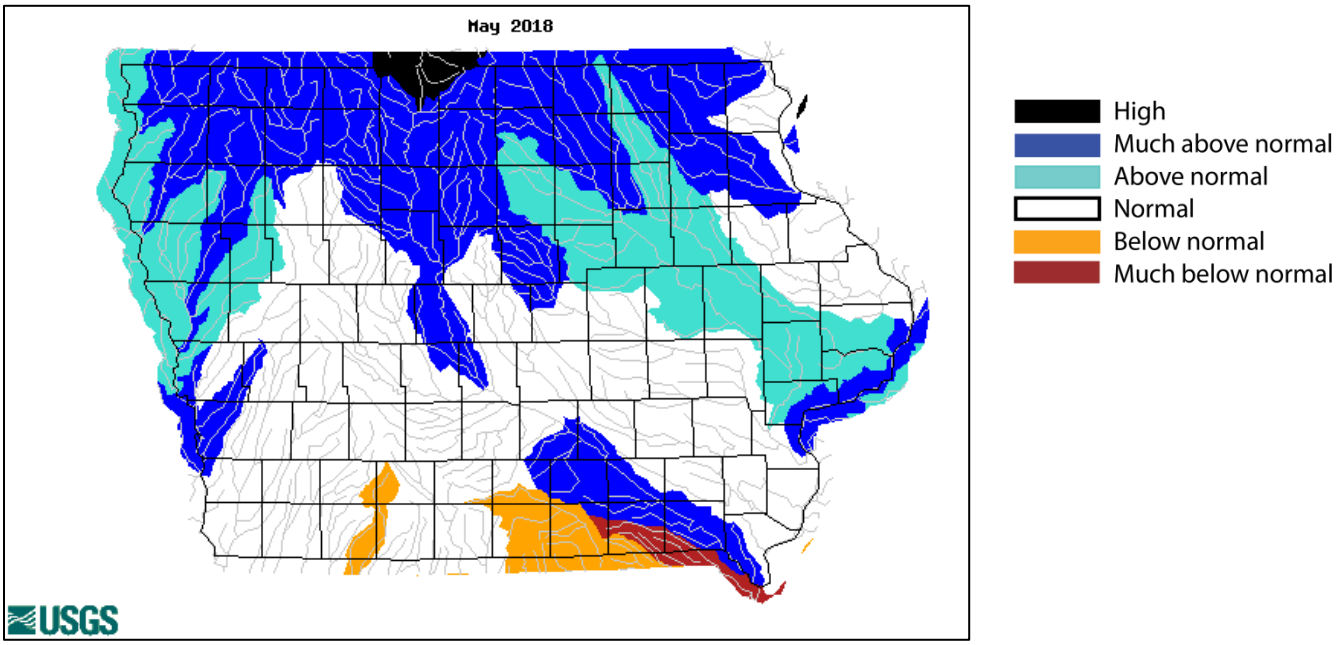
Temperature – Departure from normal temperature (°F) for May 2018.

High Plains Regional Climate Center



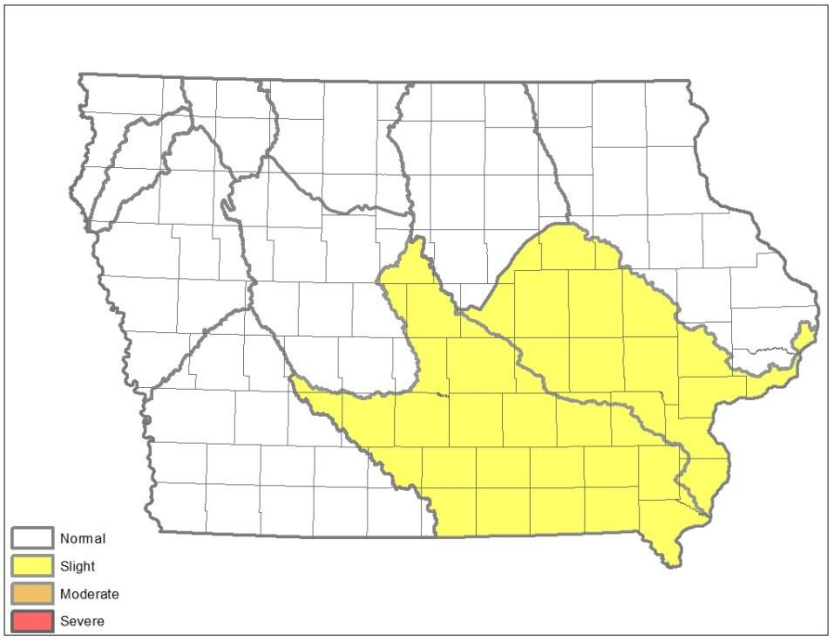
Stream Flow - Seven-day average stream flow for May 2018.

US Geological Survey



Shallow Groundwater - Conditions for May 2018.

Iowa DNR and IIHR-Hydroscience and Engineering



Recent Developments and Changes

SUMMARY

The warmest April on record for Iowa was followed by the third coolest May on record. Precipitation for the month of May was just slightly above normal, but ranged from very wet in norther Iowa to very dry in southern Iowa. As a result of the long-term dryness in southern Iowa, streamflow is much below normal in some areas, and an area of drought stress in shallow groundwater exists in the southeastern corner of the state. During the month of June it is normal for the State to get over an inch of rain per week, with June being the wettest month of the year. Continued consistent rainfall in southern Iowa is needed to reduce dryness and drought concerns. Topsoil and subsoil moisture levels are generally good, except in south central Iowa where over 70 percent of subsoil moisture levels remain short to very short.

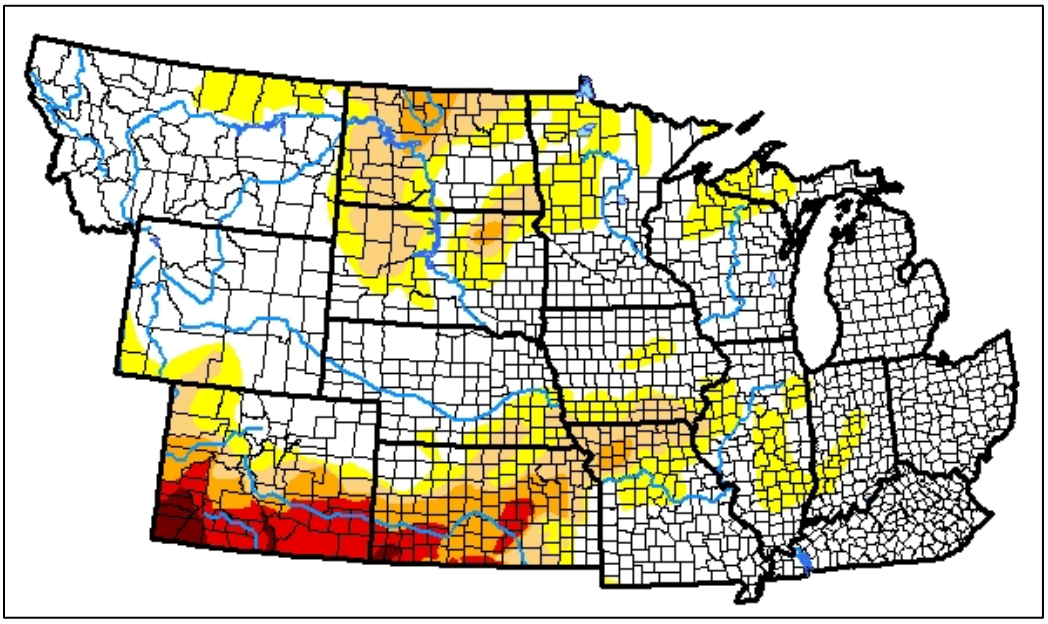
MAY PRECIPITATION AND TEMPERATURE

Iowa had an average of 4.67 inches of rainfall in May; statewide precipitation typically averages around 4.50 inches. The northern half of the state received near normal precipitation, with the northern tier reporting 125 – 175% of normal precipitation. The northwest corner recorded precipitation of up to 300% of normal. The south central section of the state had below to near normal precipitation, with the extreme southern counties recording just 50-75% of normal rainfall. This spring season months of March, April, and May had a deficit of more than 2.14 inches, with a seasonal average of 8.09 inches. The spring months typically see an average precipitation total of 10.10 inches.

Temperatures across the state ranged from 4 degrees above normal across the northern two-thirds to 8 – 10 degrees above normal in the southern third. Statewide average temperature was 7 degrees above normal, at 67 degrees. This ranks May 2018 as one of the warmest on record, following the coldest April ever. Spring temperatures averaged 47.1 degrees, nearly 4 degrees below the expected average.

DROUGHT MONITOR

Above normal temperatures and dry conditions across Iowa have continued through the month of May. The southern third of the state remains in D0 (Abnormally Dry) to D1 (Moderate Drought) along the Missouri-Iowa border. From this time last month, the D0 area has increased by about 4% to 23% of the state. D1 did not have much change as it still covers about 9% of the state; some or all of 15 southern counties. Across the broader region, about 1.5% of northwestern Missouri had an upgrade into D2 – Severe Drought. Kansas and the pan-handle of Oklahoma and Texas saw a slight easing of the D3-Extreme Drought and D4-Exceptional Drought from April. The northern two-thirds of Minnesota experienced an increase in the Abnormally Dry (D0) conditions. Severe Drought across North Dakota has subsided with D0-D1 conditions still covering much of the state.



CURRENT STREAM FLOW

Streamflow conditions in much of the state have moved into the above normal range. Northeast Iowa moved from the normal flows in April to above normal flows in May. Recent wet conditions across the northern portion of the state have moved northern half of the state into the above normal range.

SHALLOW GROUNDWATER

Shallow groundwater conditions continue to be below normal in May for parts of south central Iowa, and these areas remain in a slight drought classification. Conditions have deteriorated in parts of south east and east central Iowa, and shallow groundwater conditions in these areas have been downgraded to a slight drought classification. Shallow groundwater conditions in the rest of Iowa are normal or above normal for spring.

NEW STATE CLIMATOLOGIST

One of the important resources for these Water Summary Updates is the State Climatologist. Dr. Justin Glisan was recently hired as the new State Climatologist within the Iowa Department of Agriculture and Land Stewardship. He replaces Harry Hillaker, who retired earlier this year following a 37 year career with the Department. Dr. Glisan graduated from Iowa State University in 2012 and has participated in many research projects at Iowa State University and the University of Missouri, including in-depth research on precipitation and

temperature extremes and their causes. His contributions will be a valuable part of these Water Summary Updates into the future.

ADDITIONAL INFORMATION

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

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