

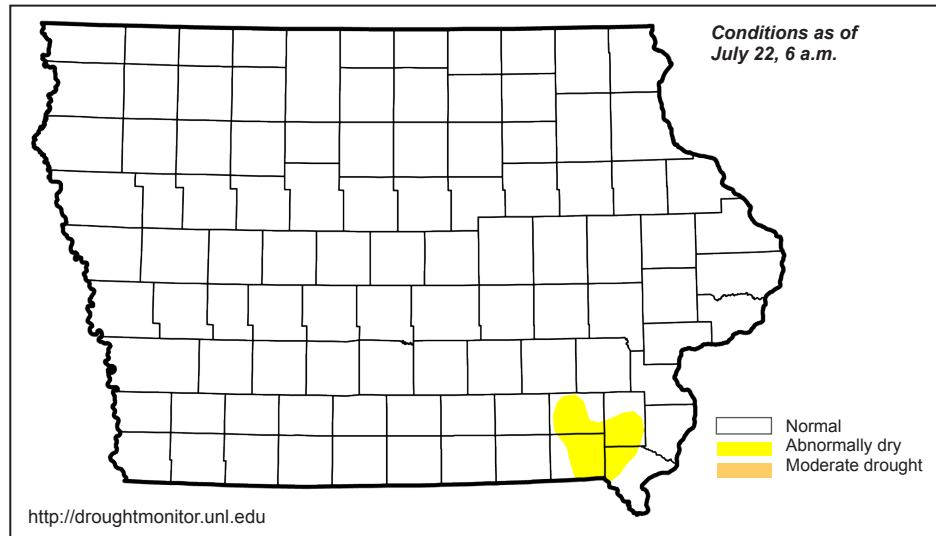
WATER SUMMARY UPDATE

No. 41

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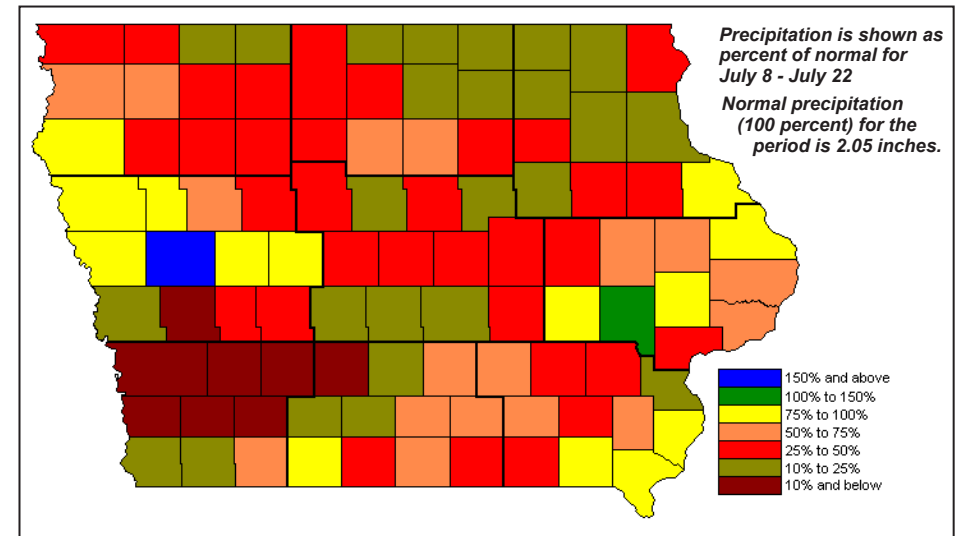
Drought Monitor

National Drought Mitigation Center and partners



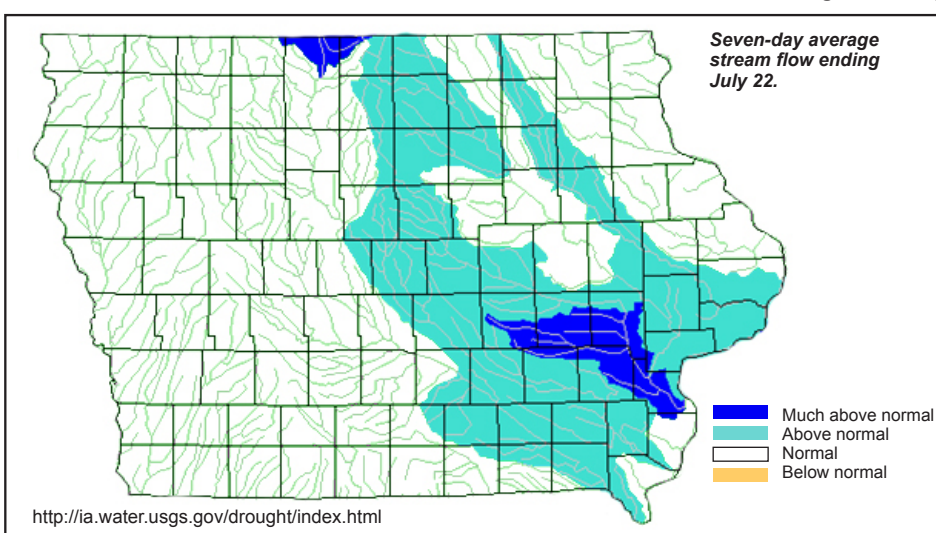
Precipitation

State Climatologist



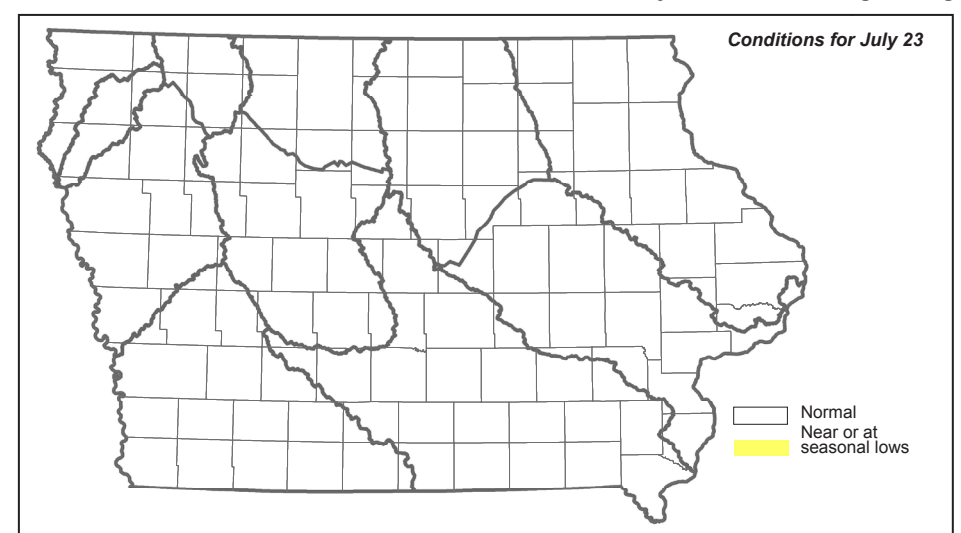
Stream Flow

US Geological Survey



Shallow Groundwater

Iowa DNR and IHR-Hydroscience and Engineering



Recent Developments and Changes

Overall Conditions

Statewide conditions are now as close to normal as could be expected. Despite the past two weeks of below normal precipitation, the average rainfall for 2014 is above average. As the moisture from the wet month of June works its way through the streams and soils of Iowa, overall streamflows are approaching normal levels across most of the state. The drought monitor shows the state maintaining normal conditions, and the stream index for Iowa (which shows average streamflow across all areas of the state) has been steadily moving toward normal flow levels since it peaked in early July. Groundwater levels are generally higher than they were a year ago, and normal rainfall should help to keep them there.

Drought Monitor

The last two weeks of relatively dry weather saw little change in the Drought Monitor, which shows essentially the entire state in drought free condition. This marks the third week in a row of conditions free from drought or dryness.

Precipitation

The past two weeks were unusually cool and dry for July across Iowa. The statewide average precipitation was 0.86 inches, or less than one-half of the normal of 2.05 inches. Nearly all of the precipitation fell in the 24-hour period from late July 11th to late July 12th with greatest rains centered upon west central Iowa. Two week rain totals varied from only 0.01 inches near Earlham in Madison County to 4.64 inches at Denison. Meanwhile, temperatures were below normal for all but two days of the period. The hottest and most humid day of the year thus far came on July 21 with actual temperatures peaking at 98 degrees at Sidney, while the coolest reading of this period was 44 degree readings on the morning of the 16th. July 2014 will likely rank among the ten coolest Julys on record.

Shallow Groundwater

Shallow groundwater levels across the state are beginning to trend slightly downward from the relatively high water levels of late June and early July. Cooler than normal temperatures during July have reduced water demand, and have prevented additional water level declines. Shallow groundwater levels are generally 0.5 to 3.5 feet higher than one year ago across most of Iowa except parts of southeast Iowa. Shallow groundwater levels are currently at or slightly below normal for July across Iowa. Additional rainfall is needed in northwest and southwest Iowa to prevent drought conditions from reoccurring.

Stream Flow

Streamflow levels across the state have steadily decreased since the last water summary update and the majority of the streams and rivers in Iowa now have flows that are either normal or above normal. Flow in the lower Iowa River remains in the

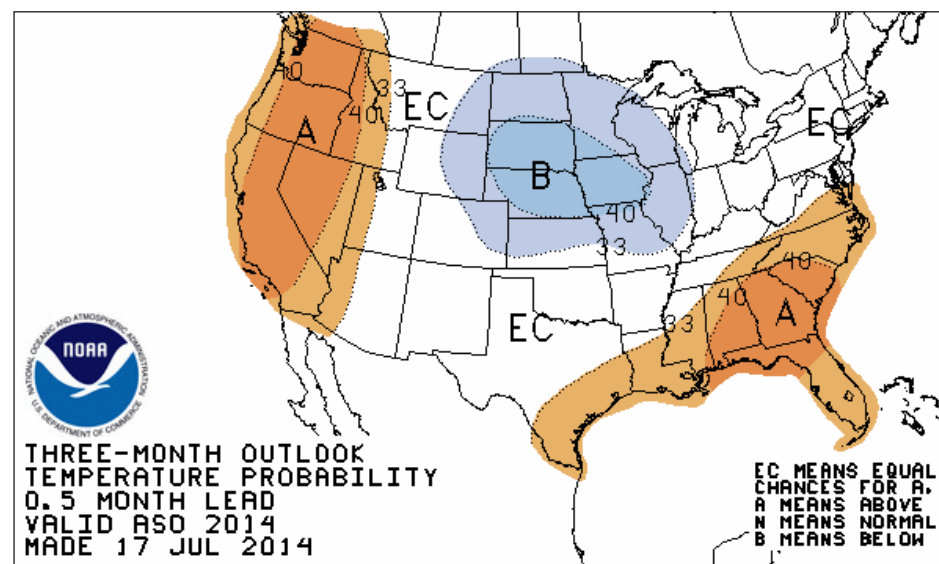
Prepared by the Iowa DNR in collaboration with the Iowa Department of Agriculture and Land Stewardship, the U.S. Geological Survey, IHR-Hydroscience and Engineering and The Iowa Homeland Security and Emergency Management Department.

much above normal condition, and flows in the majority of the eastern half of the state are above normal. This is improved from the "much above normal" flows of two weeks ago. Several stream locations were above the National Weather Service Flood Stage for much of June and July. On July 19, the last stream location dropped below Flood Stage, leaving Iowa without any locations above Flood Stage for the first time since June 15.

Notable Events for the Period

Outlook: The National Weather Service outlook shows the potential for below normal temperatures for August thru October. Precipitation is expected to be near normal through early September. June is typically the wettest month of the year, and average monthly precipitation drops from now until January (the driest month of the year).

Observations: Iowa Secretary of Agriculture Bill Northey noted that over 90 percent of topsoil and subsoil moisture levels are rated adequate or surplus in the most recent Iowa crop progress and condition report.



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