

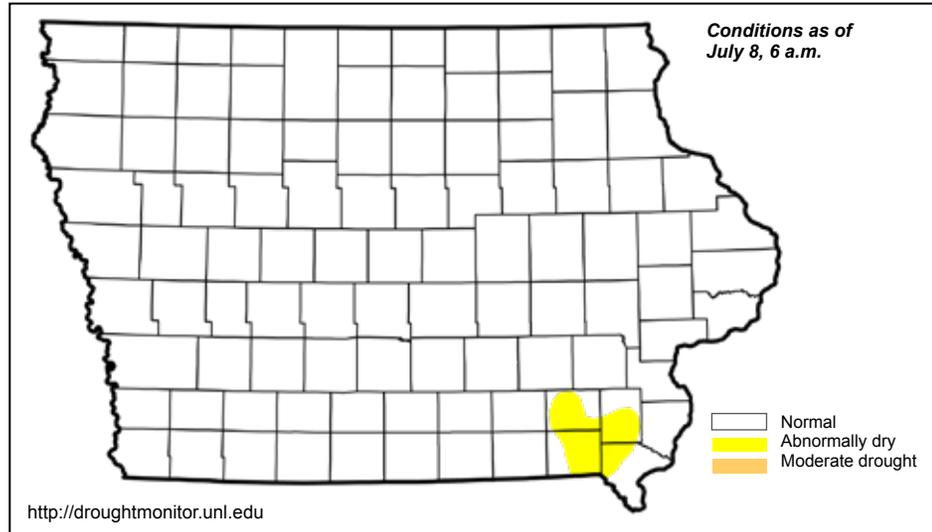
WATER SUMMARY UPDATE

No. 40

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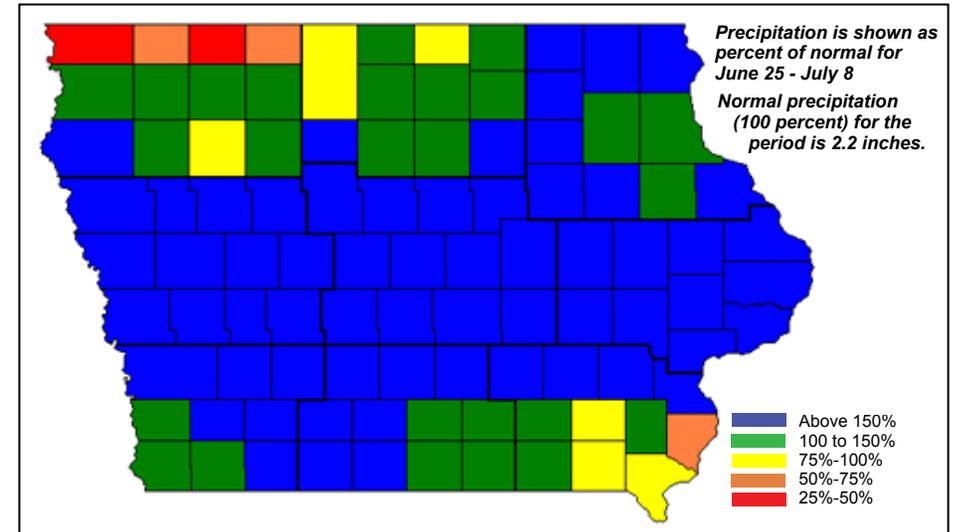
Drought Monitor

National Drought Mitigation Center and partners



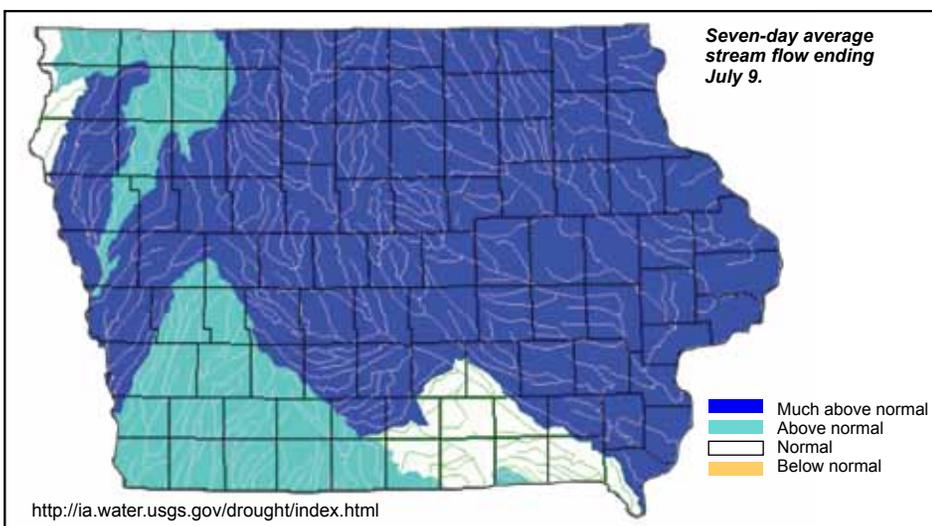
Precipitation

State Climatologist



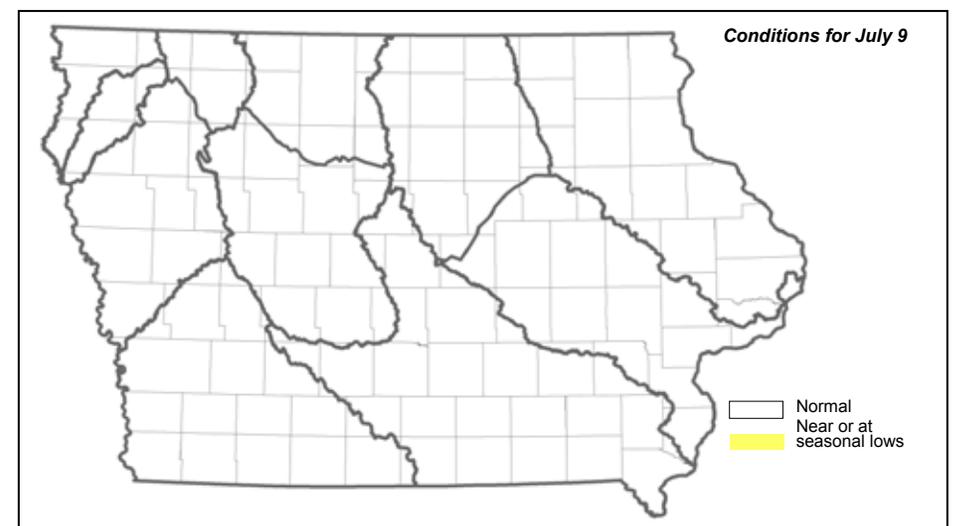
Stream Flow

US Geological Survey



Shallow Groundwater

Iowa DNR and IHR-Hydroscience and Engineering



Recent Developments and Changes

Overall Conditions

June rainfall brought statewide average precipitation for the first half of 2014 to above normal levels. The Drought Monitor shows the state to be almost completely free of drought conditions — a situation last seen in Iowa one year ago. For the first time in over two years, shallow groundwater conditions are shown as normal across the entire state. Stream flows are high across nearly all of the state, but continue to drop slowly as excess water moves downstream.

Drought Monitor

It was almost one year ago to the day when the state last saw this level of drought-free conditions. The most recent Drought Monitor shows over 98 percent of the state without any drought conditions, and the small area that is indicated is only shown as abnormally dry.

In 2013 conditions deteriorated fairly rapidly, and within seven weeks there were large areas of severe drought. Hopefully the state will experience normal rainfall for the balance of this summer, and drought-free conditions will remain.

Precipitation

All Iowa reporting locations for June recorded above normal precipitation, and parts of northwest Iowa recorded their wettest calendar month of record during June. Correctionville in Woodbury County received nearly 18 inches of rain in June, the highest for the month in the state. For the whole state, June 2014 ranked as the third wettest June and fourth wettest calendar month among 141 years of records.

Much of the rain during the past two weeks fell over the last five days of June in a wide swath across west central, central and east central Iowa. Rain totals varied from 0.5 inches at Estherville to 10 inches at Maxwell. The statewide average rainfall was 4.3 inches or nearly double the normal for the period of 2.2 inches.

Although most of Iowa received very wet weather during this period, there were exceptions: the far northwest portion of the state received a welcome reprieve from mid-June flooding; and in far southeast Iowa a few areas — centered on Van Buren County — consistently missed heavy rains.

Shallow Groundwater

Record rainfall and flooding improved shallow groundwater levels across all of Iowa. Heavy rainfall in northwest Iowa saw groundwater levels rise from 3.5 feet to over 8 feet, with an average increase of 6 feet. Wells located within 100 feet of a river or stream saw immediate increases in shallow groundwater levels. Wells located further from streams and rivers needed a week to see improvement.

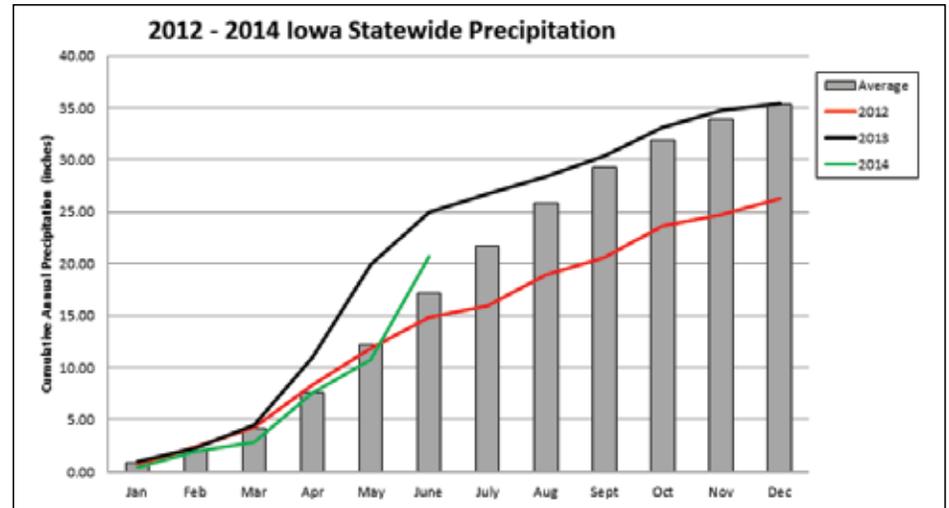
In southwest and south central Iowa, shallow groundwater levels have risen approximately 7 to 12 feet from early June water levels. In southeast Iowa, levels have risen 3 to 5 feet.

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.

Stream Flow

Stream flow conditions are either normal or much above normal for the majority of the state, and have increased significantly since the last Water Summary Update. Due to the heavy rains over the past few weeks, U.S. Geological Survey field crews have been out nonstop, making flood measurements at stream gages and have recorded record flows at 20 locations across the state. These measurements are critical to National Weather Service river forecasts and U.S. Army Corps of Engineers reservoir operations. In some locations stream flow levels have begun to drop as excess water continues to move downstream..

Three-year Precipitation Comparison



For the first half of the year, cumulative statewide average precipitation is above average, and is greater than 2012 but less than last year. The National Weather Service has indicated that short-term models for Iowa show signs of a wet signal versus normal into mid-August. This means the potential exists for continued wet and possibly flooding conditions in the weeks ahead.

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