

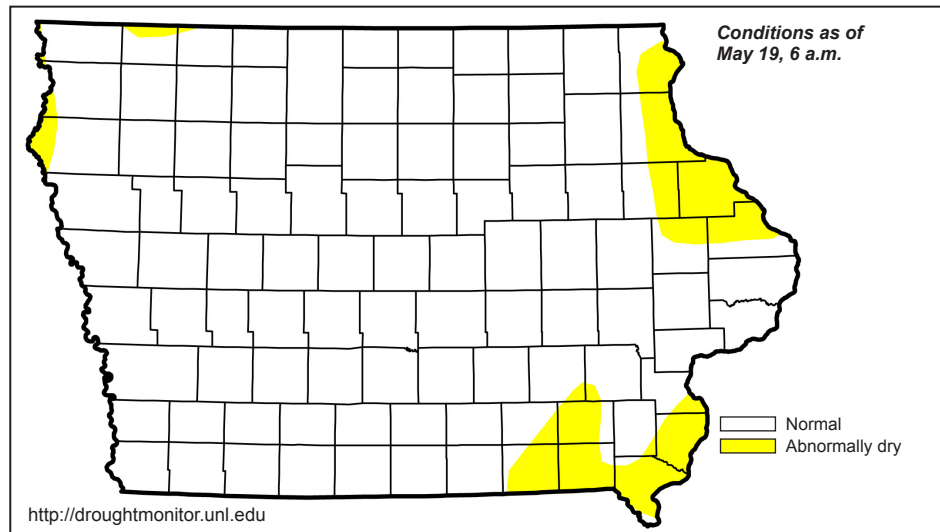
WATER SUMMARY UPDATE

No. 51

Published Date
May 21, 2015

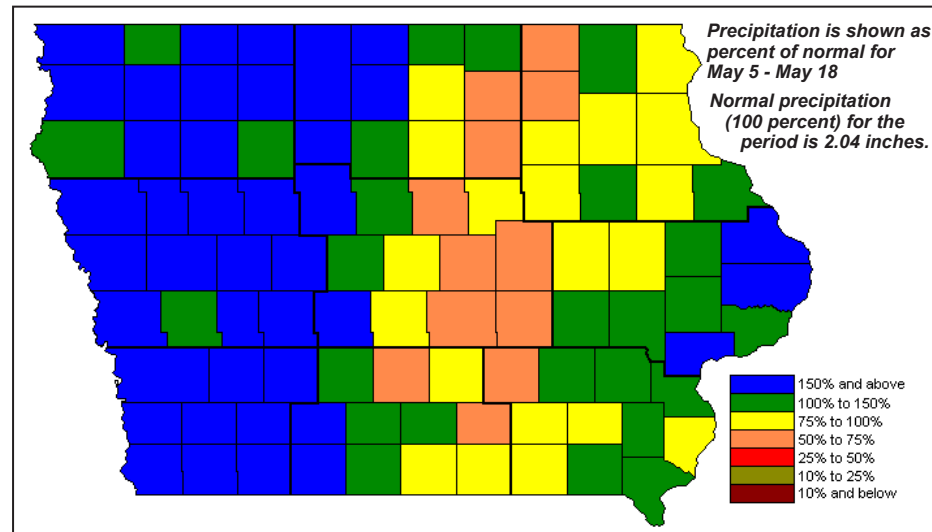
Drought Monitor

National Drought Mitigation Center and partners



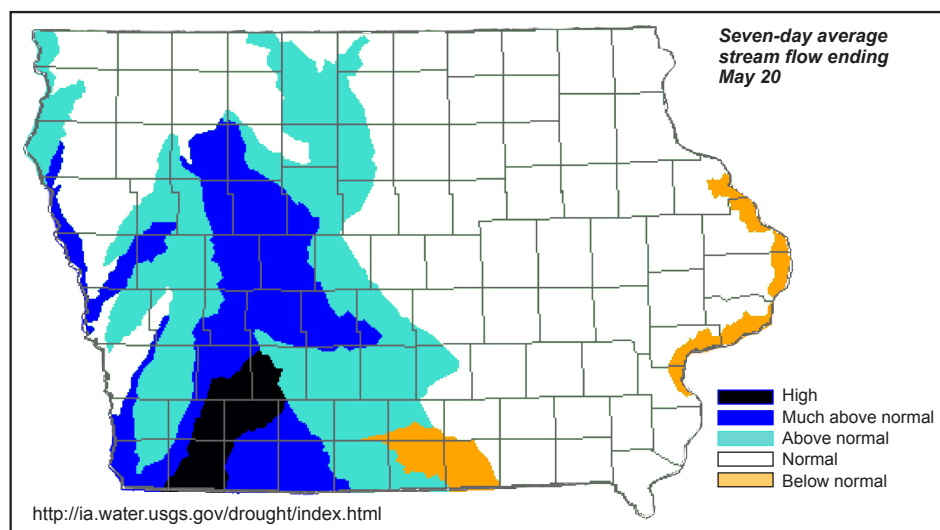
Precipitation

State Climatologist



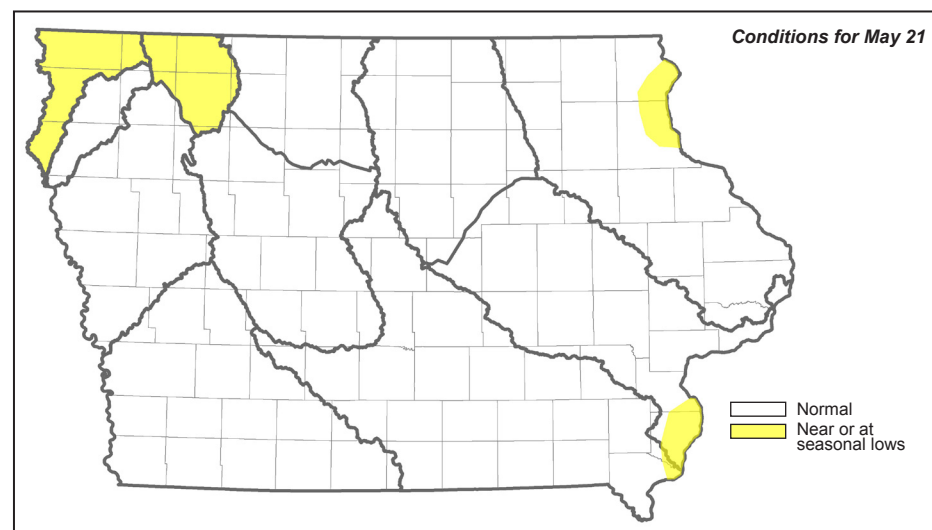
Stream Flow

US Geological Survey



Shallow Groundwater

Iowa DNR and IHR-Hydrosience and Engineering



Recent Developments and Changes

Overall Conditions

Although statewide rainfall for Iowa continues to run below normal for the year, overall conditions continue to improve. The Drought Monitor, streamflow, and shallow groundwater conditions are near normal for most of the state. The far northwestern corner of the state continues to remain a bit dryer than average, with groundwater conditions continuing to require careful watching. To the west, drought conditions have eased somewhat, with adjacent states to the west and north now over 40 percent drought free. The Iowa Department of Agriculture and Land Stewardship is reporting that topsoil moisture levels are adequate or surplus for 96 percent of the state, and subsoil moisture is adequate or surplus in more than 90 percent of the state.

Drought Monitor

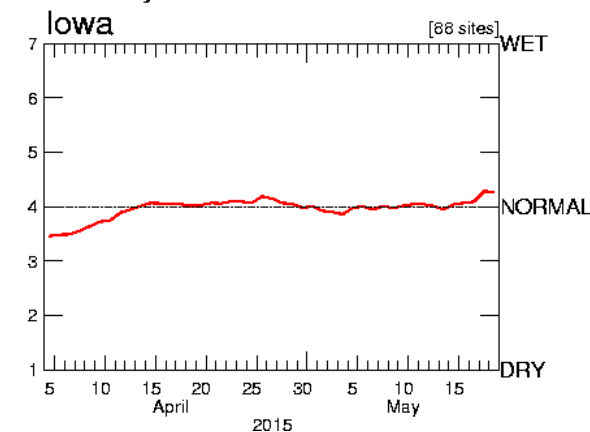
Rainfall over the past two weeks has continued to improve conditions in Iowa. We now have no areas of Moderate Drought, and the area designated as Abnormally Dry is below 10 percent. Well over 90 percent of Iowa is now drought-free. Recent rains have also significantly improved conditions in the surrounding states to our north and west. Minnesota, the Dakotas, Nebraska and Kansas are now 43 percent drought free, up from only 16 percent in those areas two weeks ago. The area of those states that is rated as Severe Drought has been reduced from almost 20 percent to less than 2 percent.

Stream Flow

Streamflow conditions were above normal for half of the state. Since the last water summary update, streamflow conditions across the western half of the state have increased and moved into the above, much above, and high conditions. The Chariton River basin is in the below normal conditions in south central Iowa, with the remainder of the state in normal conditions.

The streamflow index (right), an indication of average streamflow across the state, remains nearly normal, with the index moving slightly into the wet range over the past several days.

Last 45 Days



Precipitation

Precipitation over the two week period ending 7 a.m. Tuesday, May 18 was frequent across Iowa. Rain totals were well above normal across the western one-third to one-half of the state. Precipitation totals were also above normal across far southeast Iowa, but were below normal over much of central and northeast Iowa. The statewide average precipitation was 2.70 inches while normal for the period is 2.04 inches. Rain totals varied from 1.03 inches at Marquette to 5.93 inches in northern Harrison County east of Little Sioux. This was the state's wettest two-week period since early October 2014. Temperatures during the first week of the period were well above normal, then became much more variable during the second week and averaged 2.0 degrees above normal overall.

Shallow Groundwater

The substantial precipitation that fell across most of Iowa over the last 2 weeks served to improve groundwater conditions. The northwest corner of Iowa received much needed rainfall, but many shallow groundwater conditions remain in the slight drought category. Parts of Allamakee, Clayton, and Des Moines counties remain dry, and shallow groundwater conditions were placed in the slight drought category.

Field Observations

Field staff in northwest Iowa report that the region received good rainfall, and that subsequent runoff was not excessive, indicating replenishment of soil moisture. Streams in that part of Iowa are flowing well, but not high, and tile lines are running in most areas. In addition, wetland areas appear to have near normal water levels. Shallow groundwater levels continue to be a concern, so additional timely rains are important to maintain normal levels.

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

Contacts

General Information Tim.Hall@dnr.iowa.gov 515-725-8298
Drought Monitor Harry.Hillaker@iowaagriculture.gov 515-281-8981
Precipitation Harry.Hillaker@iowaagriculture.gov 515-281-8981
Stream Flow Daniel Christiansen, dechrist@usgs.gov 319-358-3639
Stream Flow Michael.Anderson@dnr.iowa.gov 515-725-0336
Shallow Groundwater Mike-Gannon@uiowa.edu 319-335-1581