

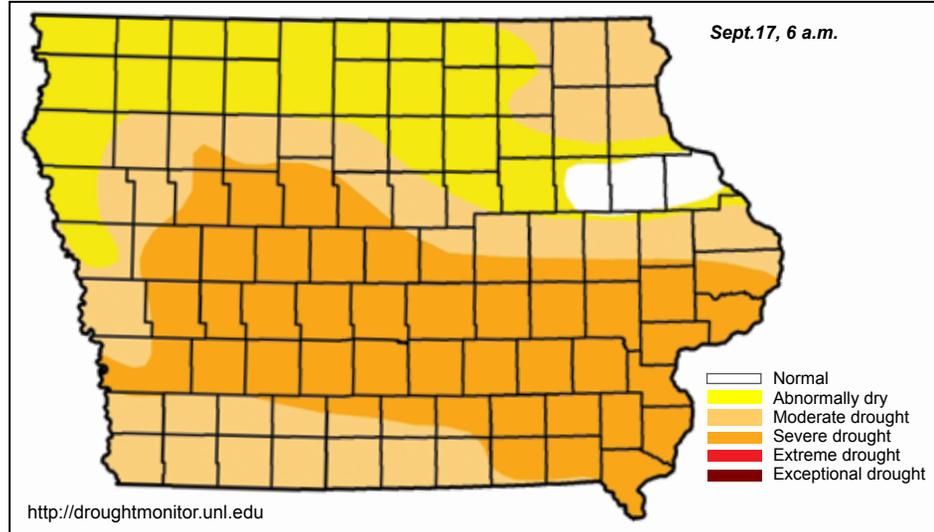
WATER SUMMARY UPDATE

No. 27

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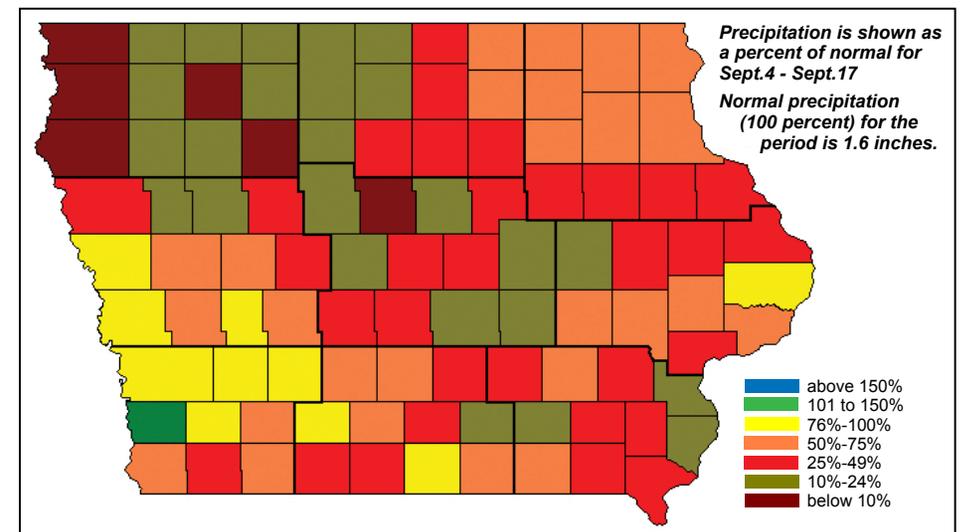
Drought Monitor

National Drought Mitigation Center and partners



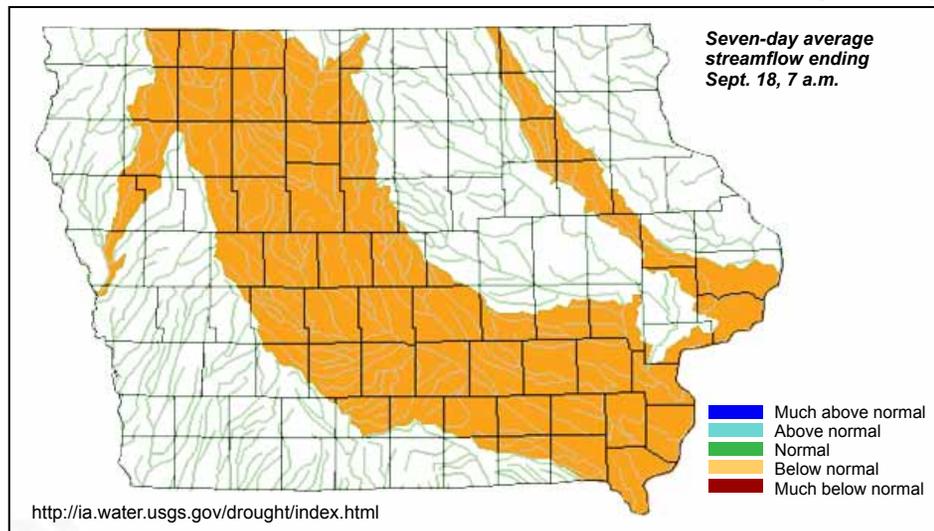
Precipitation

State Climatologist



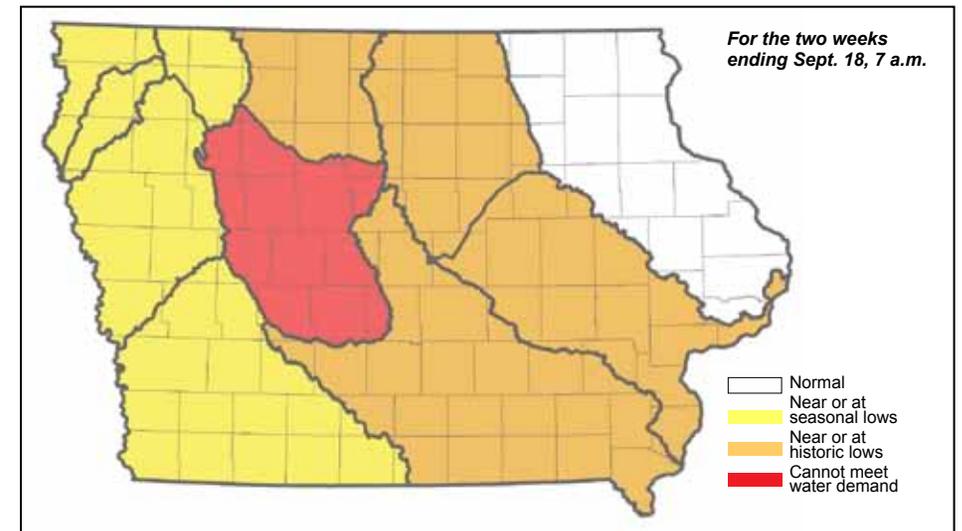
Streamflow

US Geological Survey



Shallow Groundwater

Iowa DNR



Recent Developments and Changes

Overall Conditions

Since the last publication of Water Summary Update in June, the state has seen very dry weather in nearly all areas. Very recent rains have helped, but much like 2012, it will take sustained, above normal rainfall before significant improvement is seen. Conditions now are, in general, slightly better than a year ago, but still below normal for this time of the year. The National Drought Monitor shows conditions in Iowa very similar to those in January 2013 – much of the improvement from the spring rains have been wiped out. Stream flows in nearly half the state are rated as below normal, and groundwater concerns are most significant in a band through the middle of the state. They are driest in the Boone County area.

Iowa Secretary of Agriculture Bill Northey stated in the most recent Iowa Crops and Weather released by the USDA, “Cooler temperatures and rain showers that moved in this weekend were welcome relief after another week of hot and dry weather further stressed corn and soybeans. Harvest remains delayed because of the late planting and cooler weather for much of the growing season.”

South central Iowa was reported as the driest part of the state, with 82 percent of topsoil moisture rated very short.

Drought Monitor

Conditions have worsened dramatically in Iowa in the last three months. The state has moved from almost 90 percent drought free in June to only 3 percent drought free in the most recent drought monitor. Conditions in the current drought monitor closely resemble those of January 1, 2013. A small area in northeast Iowa remains free from drought, but a large area of the middle part of the state (over 40 percent) is designated as D2 – severe drought. The remainder of the state has less severe designations of D1 – moderate drought, or D0 – abnormally dry.

Precipitation

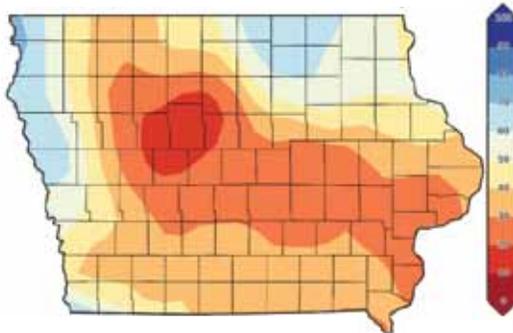
Precipitation over the past two weeks averaged less than half the normal 1.6 inches for the period. Specific rain totals varied from just a trace at Webster City and 0.01 inch at Sheldon to 2.72 inches near Promise City in Wayne County.

Temperatures over the past two weeks have averaged 4.6 degrees above normal, including high temperatures of 102 degrees in south-east Iowa Sept. 9. This was followed by much cooler weather, with temperatures falling to 36 degrees in parts of east central Iowa Sept. 14.

Almost all of Iowa has seen below normal precipitation since late June with the largest rain deficits occurring over the southern two-thirds of the state. Nevertheless, year-to-date precipitation totals remain above normal over much of the northeastern two-thirds of Iowa.

July 1 - Sept. 15, 2013 Precipitation Percent of Average

Dark blue is normal; dark red is less than 10% of normal



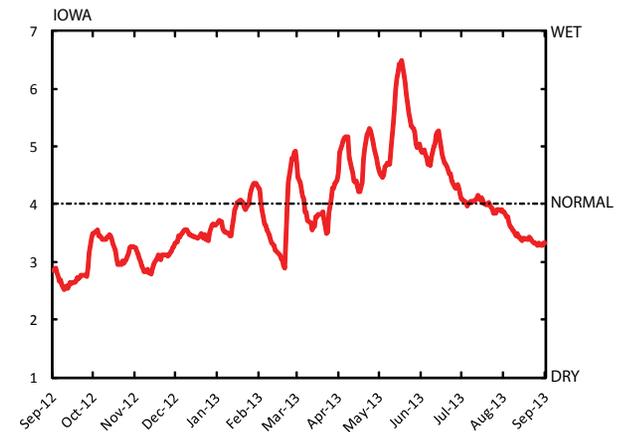
Streamflow

Streamflow conditions have improved slightly in the last few days, but have been steadily declining since July. Current streamflow conditions across half of the state are at below normal conditions with the remainder at the normal condition level. Sixteen stream segments in Iowa are now below protected flows, which can impact irrigators using water from those streams. A number of streams feeding Lake Darling are completely dry right now and have been for at least several weeks.

USGS stream gages along the Skunk River show flow levels below levels a year ago.

The USGS streamflow index peaked in early June, and has trended downward since. Rainfall events can make the index move up for a short time, but the decline has been consistent for the past three months. Other than summer 2012 — when the index was lower than it is now — it has not been this low for more than ten years. It is worth noting this is a statewide average, so streams with normal flow balance streams with exceptionally low flow.

Average Streamflow Index 09/2012 - 09/2013



Shallow Groundwater

Dry and hot conditions during August and September have created abnormally dry and/or drought conditions across all of Iowa except the northeast region. Central Iowa has been especially hard hit with Boone County recording lower static groundwater levels this month than in September 2012. The drought classification for shallow groundwater in central Iowa is classified as severe. Static water levels in Hancock, Johnson and Emmet counties are approaching those of 2012.

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

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