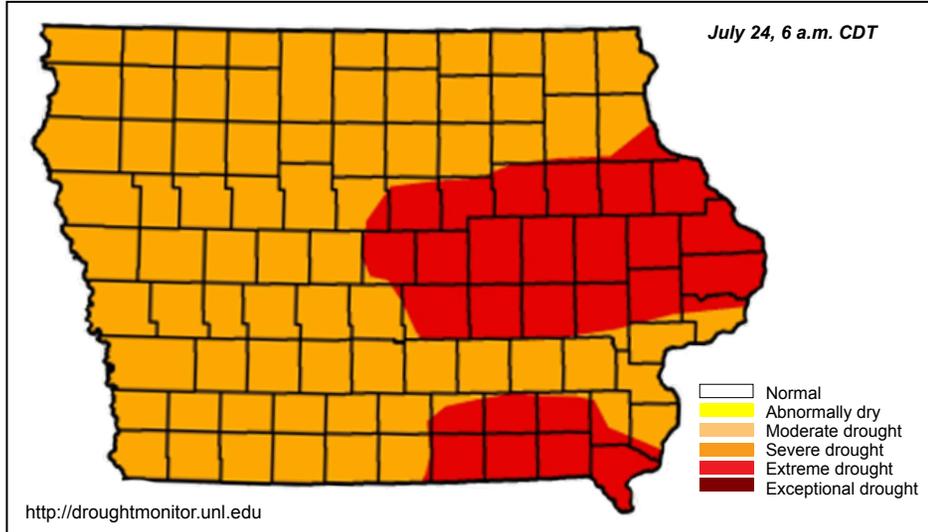


# WATER SUMMARY UPDATE

Published Date  
July 26, 2012

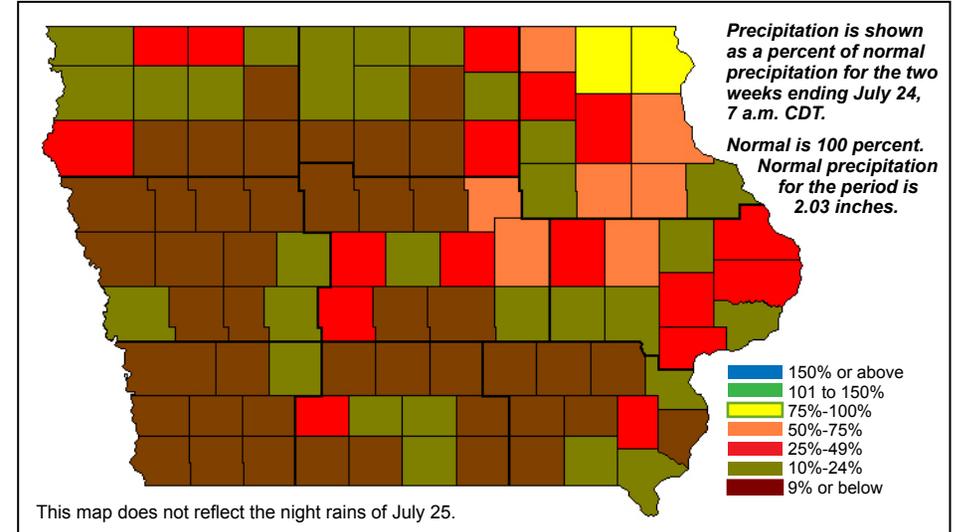
## Drought Monitor

National Drought Mitigation Center and partners



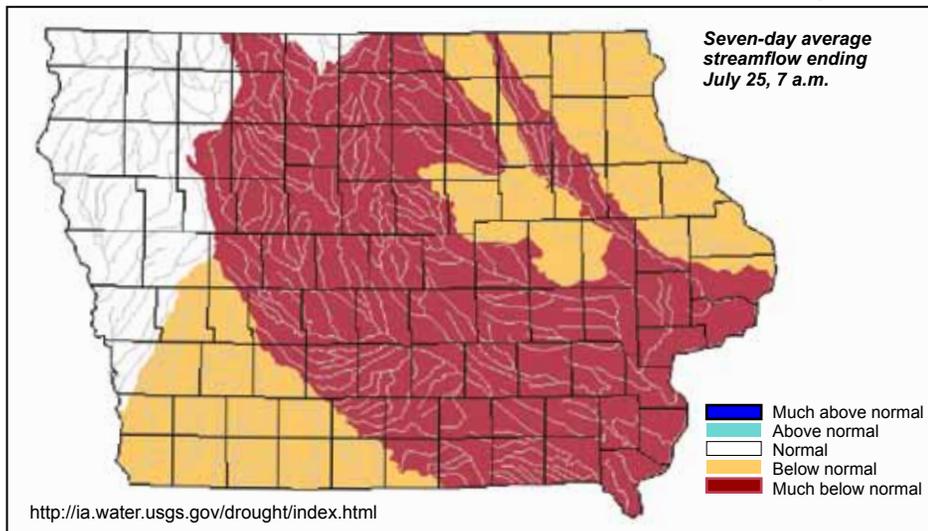
## Precipitation

State Climatologist



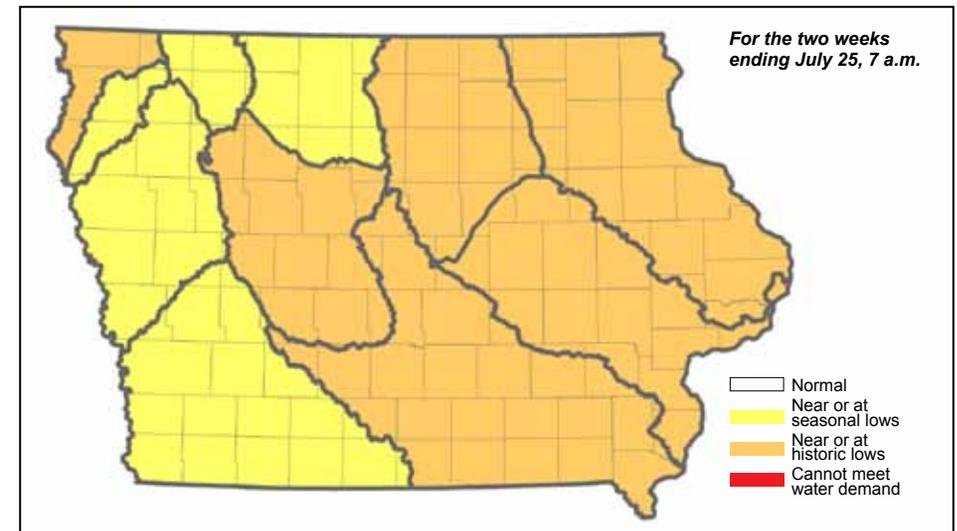
## Streamflow

US Geological Survey



## Shallow Groundwater

Iowa DNR



## Recent Developments and Changes

### Overall Conditions

The previous two weeks have been very dry and very hot. Prior to the night rains of July 25, the state averaged 0.37 inches of rain, much less than the normal two inches for the period. The low amount of precipitation in combination with unusually hot weather is causing significant problems. Streamflows continue to be very low, and groundwater conditions in Iowa are deteriorating as well. This situation is reflected in the Drought Monitor, which indicates parts of Iowa are in extreme drought for the first time since January 2006.

Iowa Secretary of Agriculture Bill Northey commented on the Iowa Crops and Weather report released by the USDA National Agricultural Statistical Service. "Crop conditions continue to deteriorate as the hot, dry weather persists... The weather is also a real challenge for livestock producers as pastures dry up and they work around the clock to keep their animals cool."

### Precipitation

Rainfall across Iowa for the two weeks ending July 24 averaged only 0.37 inches while normal for the period is 2.03 inches. On July 25 a few areas received substantial rain, particularly in the far southwest corner of Iowa and in portions of northeast Iowa from Black Hawk to Clayton county. One of the higher totals came at Shenandoah Airport with 1.78 inches, the first rain at that location since June 23. However, Audubon, in west central Iowa, missed the July 25 night rains entirely and has recorded 33 consecutive days with no rain.

Meanwhile, temperatures over the past two weeks averaged 5.7 degrees above normal. This has been the warmest summer to date and warmest July to date since 1936. The highest official temperatures in Iowa occurred July 23 when Fairfield, Keokuk and Donnellson reached 107 degrees. The excessive heat is very significant as it greatly increases the rate of evaporation. The drying potential of the air is 90 percent greater at 107 degrees than at our typical July maximum temperature of 86 degrees.

### Drought Monitor

The Drought Monitor for July 24 reflects the poor rainfall and high temperatures. All of the state is in some form of drought, with almost three-quarters of the state rated as severe drought and over one-quarter rated as extreme drought. This is the first time since January 2006 that Iowa has seen the extreme drought designation, and represents the greatest area of that designation since the Drought Monitor was developed 12 years ago. Also significant is the rating for areas near the Iowa-Illinois border. This area is designated as both short term (affecting agriculture) and long term (affecting hydrology and ecology) impacts.

### Streamflow

Streamflow conditions over the past seven days were below normal for two thirds of the state with a third of the state's streamflow conditions being much below normal. The lowest streamflow conditions are found in the Skunk River, Des Moines River, Iowa River, Wapsipinicon River and lower Cedar River basins, which were less than 10 percent of normal streamflow. Squaw Creek at Ames has had little to no flow for since July 9, except immediately following a few small precipitation events. Streamflow conditions in northwest Iowa have normal flows.

## Notable Events for the Period

### The following observations were made by Iowa DNR and other agency technical and field staff:

Water temperatures in the 90s have been observed on Big Spirit Lake, the southern half of the Des Moines River, and the Big Sioux.

Drillers are reporting increased calls for pump lowering and maintenance.

Des Moines Water Works has implemented stage one of a water conservation plan. The DNR is aware of five other communities implementing similar measures.

The USDA's Farm Service Agency has authorized emergency grazing use of Conservation Reserve Program land in 25 counties.

Fifty-nine Iowa counties are under open burning bans.

Water level measures in a bedrock well in Johnson County are approximately five feet below levels during the drought years of 1988 through 1990.

### **Water is needed in the process to create energy.**

According to researchers at the Virginia Water Resources Research Center, in Blacksburg, Va., fossil-fuel-fired thermoelectric power plants consume an average of 25 gallons of water to produce 1 kilowatt-hour of electricity.

### ***Conserving energy also conserves water!***

### Shallow Groundwater

Shallow groundwater levels throughout Iowa continue to deteriorate. Shallow groundwater in northeast Iowa and far northwest Iowa were downgraded from slight to moderate drought conditions. Shallow groundwater in southwest and west central Iowa was downgraded to slight drought conditions. All reporting stations indicate downward trends in water levels, and some are approaching historic lows.

## Contacts

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*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.*