

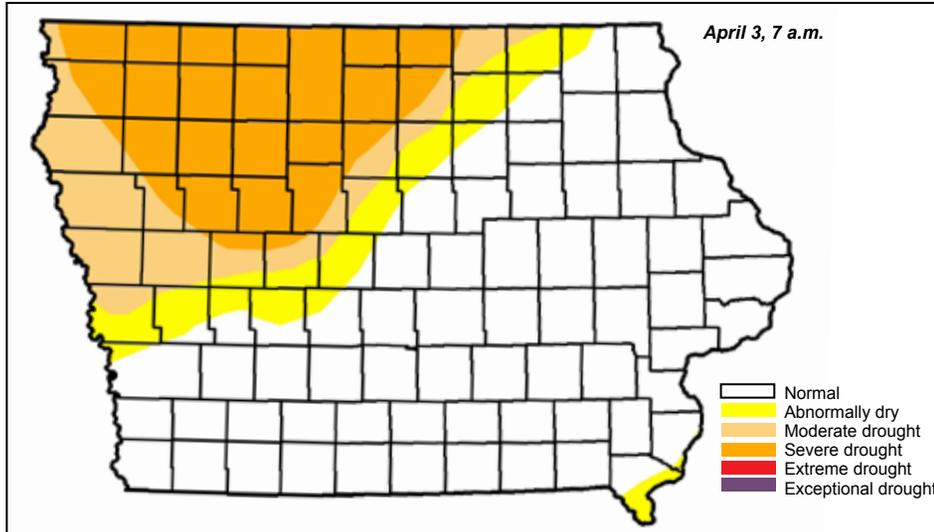
# WATER SUMMARY UPDATE

No. 1

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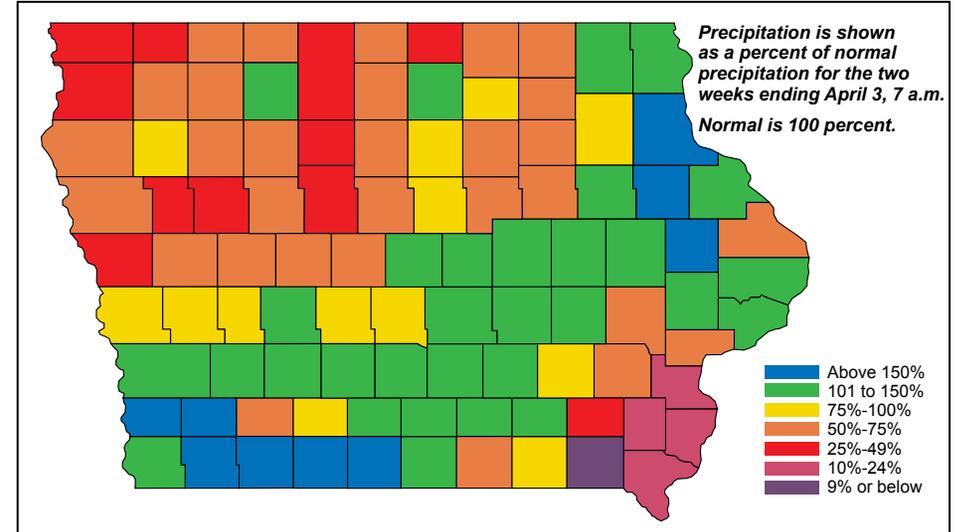
## Drought Monitor

University of Nebraska



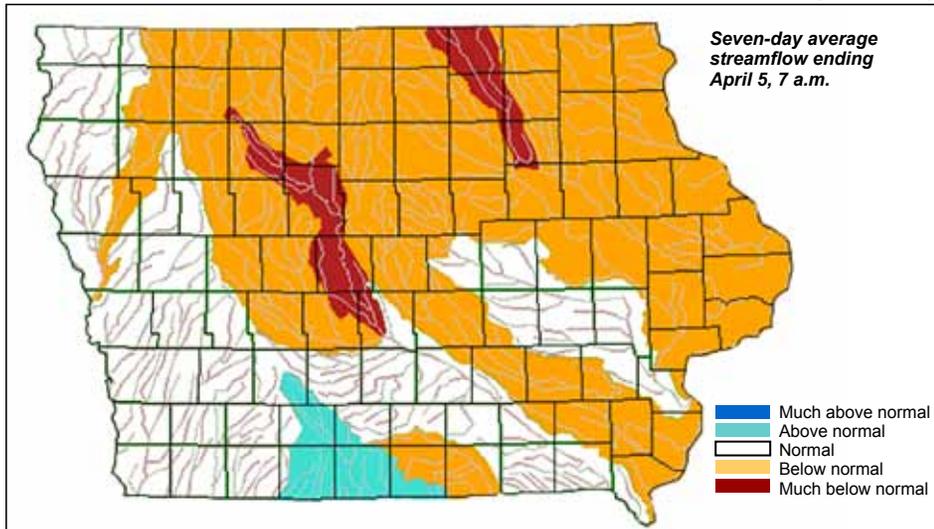
## Precipitation

State Climatologist



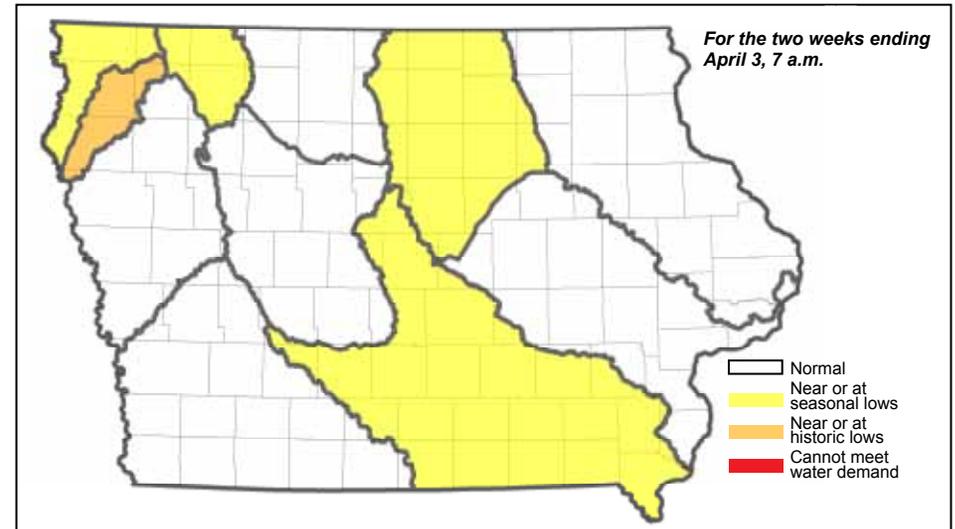
## Streamflow

US Geological Survey



## Shallow Groundwater

Iowa DNR



## Recent Developments and Changes

### Overall Conditions

Today's Water Summary Update shows that despite recent rainfall in parts of the state, northwest to north-central Iowa remains very dry. Shallow groundwater levels are causing concerns for some communities, and streams and ponds are very low locally. It is hoped that normal spring rains will bring long-term relief to that part of the state. However, warm temperatures and low precipitation in March have put the "hydrologic calendar" a month ahead, and those with interests in water should be keeping aware of the situation.

### Drought Monitor

The drought monitor, put together by the University of Nebraska, shows that almost 20 percent of Iowa is in a severe drought condition, but this is a smaller area than three months ago. As the map shows, drought conditions are confined to the northwest part of the state, with one exception: a small area in extreme southeast Iowa.

Currently about 40 percent of Iowa is in some form of drought. This is a much smaller area than the 70 percent of the state that was in some form of drought in September 2011.

### Precipitation

The past two weeks brought exceptionally warm weather to Iowa with temperatures averaging 17 degrees above normal. Statewide precipitation was slightly below average. The benefit of this rain was offset by unusually high evaporation resulting from record heat. Rain amounts were well below normal in the already dry northwest and north central portions of Iowa, as well as in the extreme southeast corner of the state. Heaviest rain fell in far southwest Iowa. Widespread light to moderate rain fell from March 20 to March 22 while thunderstorms brought highly variable amounts of rain on the night of March 29.

### Streamflow

Streamflow conditions over the last seven days were below normal for much of Iowa as compared to the normal streamflows at this time of year historically. Observed streamflows were generally less than 25 percent of normal streamflow conditions, with the lowest area being the upper portions of the Cedar River, which was less than 10 percent of normal streamflow conditions.

### Shallow Groundwater

Shallow groundwater levels were stable to slightly higher across most of Iowa during the month of March. Higher than normal temperatures, along with trees and shrubs beginning to leaf-out, will increase evaporation and transpiration rates. This may cause a drop in shallow groundwater levels in April unless substantial rainfall occurs.

## Notable Events for the Period

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

Tile lines in northwest Iowa are dry or discharging at very low levels.

Tile lines in Lyon county had been running in early March but are now dry.

Tile lines in O'Brien, Clay, Buena Vista, and Palo Alto counties are dry or just trickling.

The water levels in small streams and ponds in Lyon and Sioux counties have dropped over the past two weeks and a few streams have stopped flowing.

A public water system along the Floyd River has had problems maintaining adequate water supplies from their alluvial wells, but March shallow groundwater levels improved slightly in this system.

Borrow pits (where earth is taken for use as fill elsewhere) and ponds along Highway 20 are extremely low or dry.

Center Lake in Dickinson county is already experiencing a blue-green algae bloom (months ahead of typical conditions) due in part to low water levels.

Warm temperatures and low precipitation in March have put the "hydrologic calendar" a month ahead. Early vegetation growth has moved the evaporation and transpiration conditions about a month ahead of schedule. This could deplete soil moisture unless precipitation increases during the early growing season.

Iowa DNR staff conducted a drought status meeting in Sioux Center on March 27.

## Contacts

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