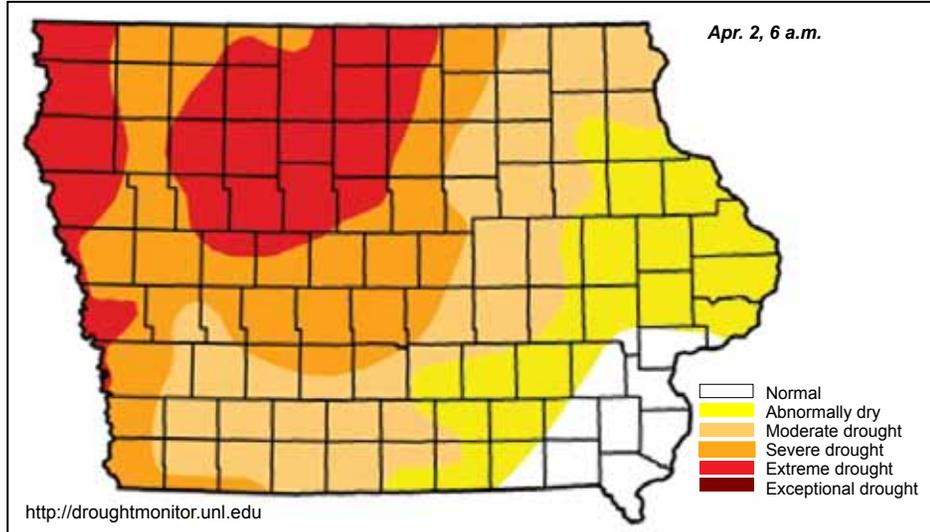


WATER SUMMARY UPDATE

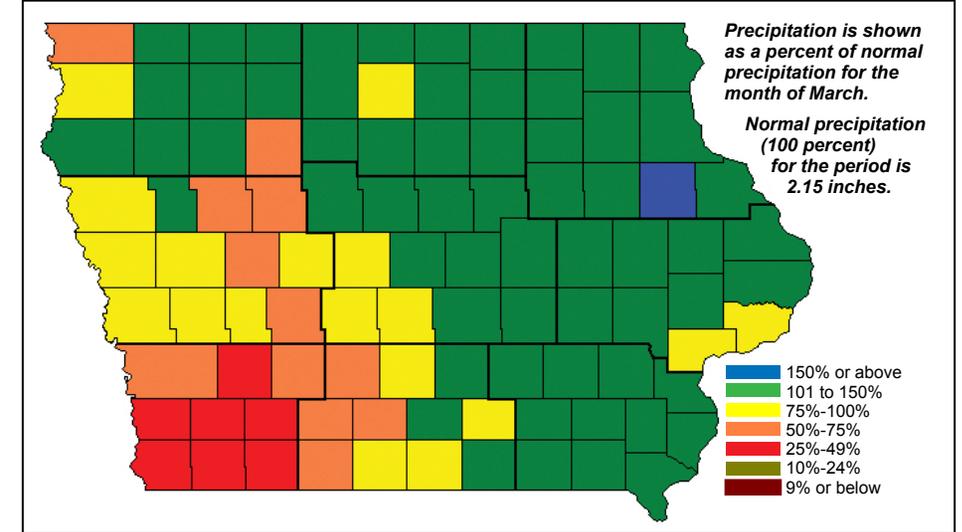
Drought Monitor

National Drought Mitigation Center and partners



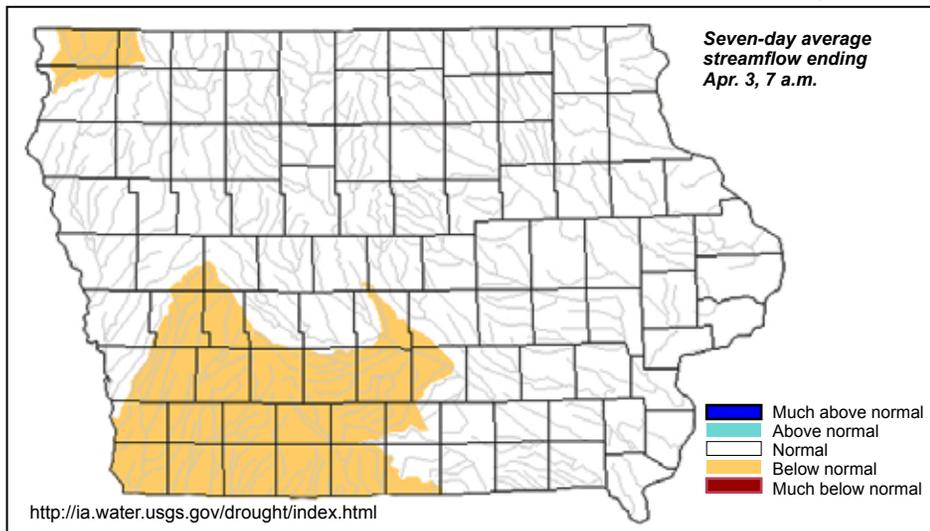
Precipitation

State Climatologist



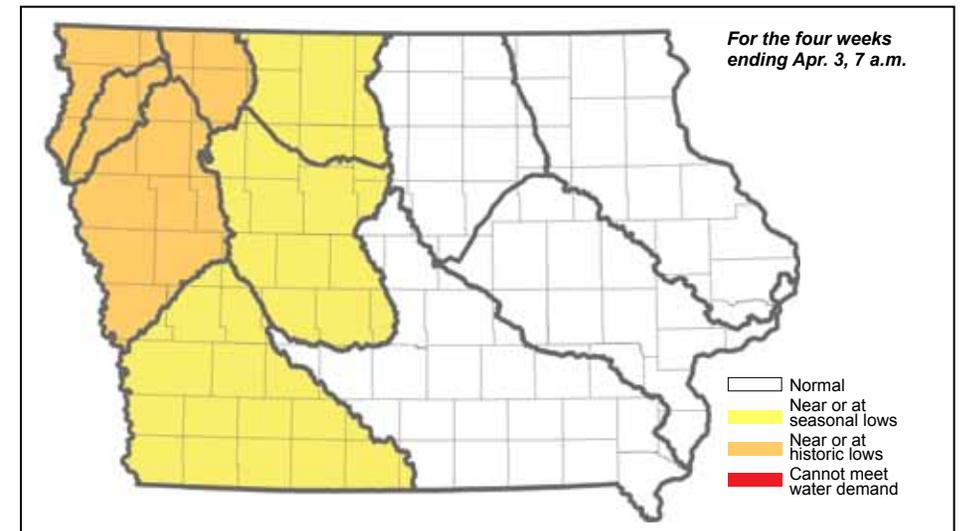
Streamflow

US Geological Survey



Shallow Groundwater

Iowa DNR



Recent Developments and Changes

Overall Conditions

General drought conditions in Iowa have improved over the past month, and a small area of southeast Iowa is now viewed as normal — free of drought conditions. However, improvement must continue, especially in western Iowa, before statewide drought conditions are greatly reduced or eliminated. Precipitation in March was just above normal for the state, marking the fourth month in a row with slightly wetter than normal weather. Stream flows have also improved over much of the state.

Despite this good news, parts of northwest and west-central Iowa still have low streamflows. Groundwater levels have improved in much of the state, but portions of northwest Iowa still have very low groundwater levels. Some water systems are starting the 2013 growing season with groundwater reserves lower than at the start of the 2012 growing season.

Shallow Groundwater

Shallow groundwater levels across north-central, southeast, and northeast Iowa have improved substantially over the last month. Warmer temperatures have resulted in snow melt in north-central and northeast Iowa, and groundwater levels have risen across much of the state — from 2.5 feet in Hancock County to over 9 feet in Fayette County. However, very little improvement has occurred in much of the western third of Iowa. Sioux, O'Brien, Osceola, Shelby and Crawford counties are especially hard hit.

Streamflow

Streamflow conditions have improved for a majority of the state over the last month. Many areas where streamflow conditions were below normal, are now in normal streamflow condition and a few areas are even above normal. The highest streamflow conditions are within the Cedar River basin and are more than 75 percent of normal streamflow. The lowest streamflow conditions in the state are located in the southwest, south-central, and a small area in the northwest — at or below 25 percent of normal flow.

Precipitation

The statewide average precipitation for March 2013 was 2.19 inches, or just slightly above the normal amount of 2.15 inches. This was the fourth consecutive month with slightly greater than normal precipitation. However, March precipitation was well below normal over the southwest quarter of Iowa where Red Oak reported just 0.68 inches for the month. Precipitation elsewhere in Iowa was near to above normal with Burlington reporting the most with 3.62 inches. Much of the month's precipitation came from just one storm system during March 8-11 which brought a statewide average of 1.6 inches and was the largest storm total precipitation event since mid-April 2012. Unfortunately Iowa City received only 0.27 inch during the last the three weeks of the month

Meanwhile, this was the coldest March since 1975 with temperatures averaging 7.4 degrees colder than normal. The cold weather, plus frequent snow cover, kept soils frozen across the state for most of the month, thus preventing much moisture from soaking into dry Iowa soils. At month's end, soils were mostly thawed across southern Iowa but considerable frost remains across the north.

The next Water Summary Update will be published April 18, 2013.

Notable Events for the Period

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

Frozen soils resulted in considerable runoff from March precipitation. The water level in Saylorville Reservoir rose nearly seven feet in just over a week, and is now at a normal level for the first time since August 2012.

Lakes and wetland levels in northwest Iowa rose slightly after rains fell on frozen ground in early March. Water levels in shallow wetlands fell quickly after filling, likely due to water movement into the ground.

The Floyd River at Alton, Iowa, is currently flowing at only 8.3 cfs; normal for this date is nearly 100 cfs. This is typical of some streams in that part of the state that had brief increased flows in early March, but are once again quite low.

Groundwater levels in western Iowa rebounded a bit in March, but are back down to fairly low levels, but not quite as low as in December.

DNR staff observed many "creeks" in Sioux County last week, mostly in the Rock Valley area, that were completely dry. They also observed several tile outlets which were dry.

As March ended, statewide topsoil moisture levels rated 35 percent very short, 49 percent short and 16 percent adequate. Southeast Iowa is reporting the highest soil moisture levels, while western Iowa is reporting the driest soil conditions.

Drought Monitor

Over the past month the conditions shown by the drought monitor conditions have noticeably improved. For the first time in nine months, a portion of the state (about 7 percent) is rated normal. For the first time in eight months, there is essentially no part of the state rated in the worst category (D4 — exceptional drought). However, over 20 percent of the state remains in extreme drought, and almost half of the state is rated as at least D2 — severe drought. Conditions are slowly improving, but there is a long way to go. The National Oceanic and Atmospheric Administration (NOAA) issued a Seasonal Drought Outlook valid thru June 30 — which indicates that for the eastern three-quarters of Iowa conditions are "likely to improve." For the western quarter of Iowa the outlook calls for "drought ongoing, some improvement."

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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