

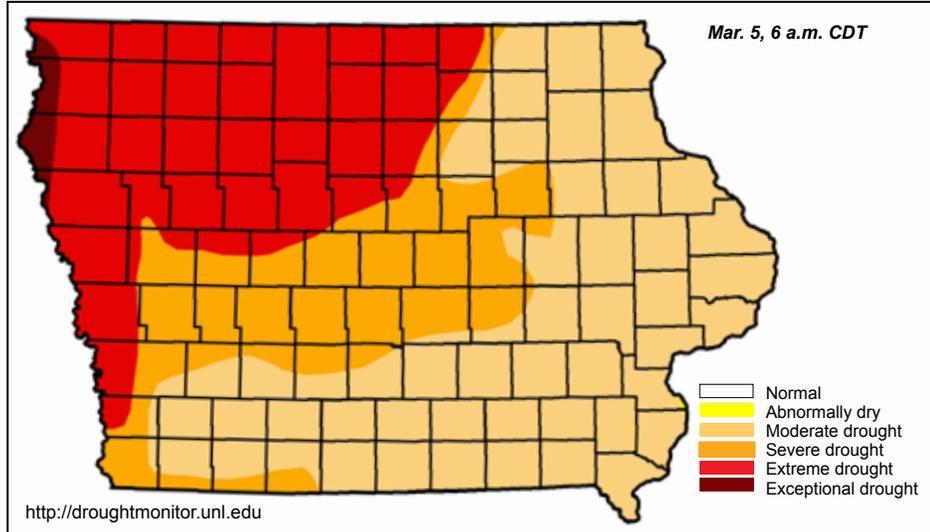
WATER SUMMARY UPDATE

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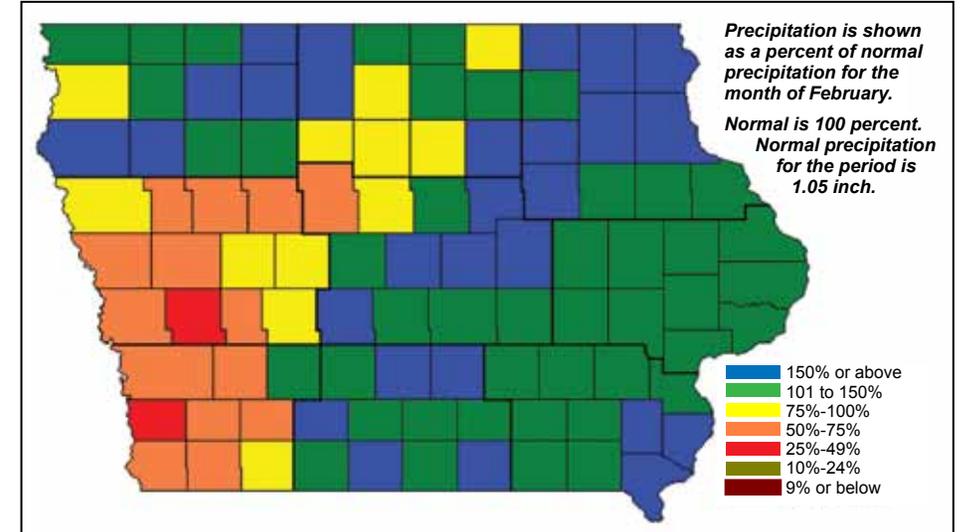
Drought Monitor

National Drought Mitigation Center and partners



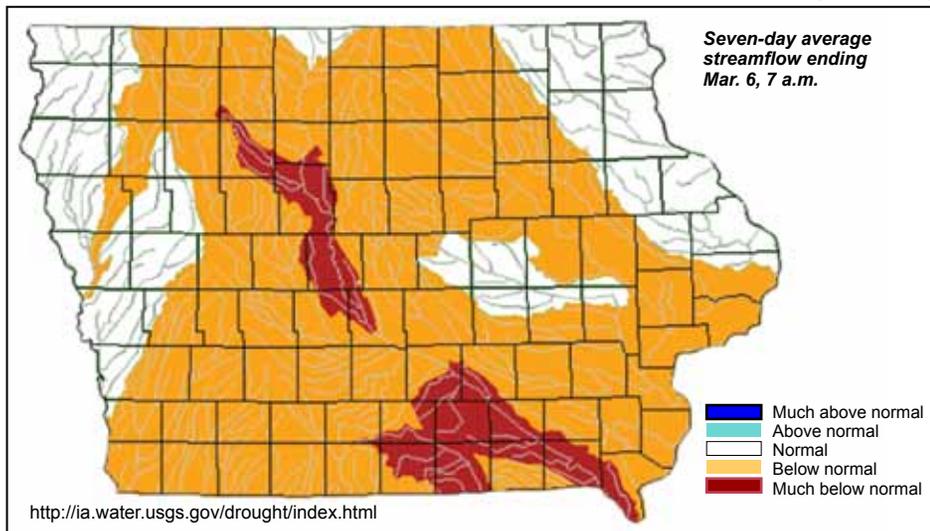
Precipitation

State Climatologist



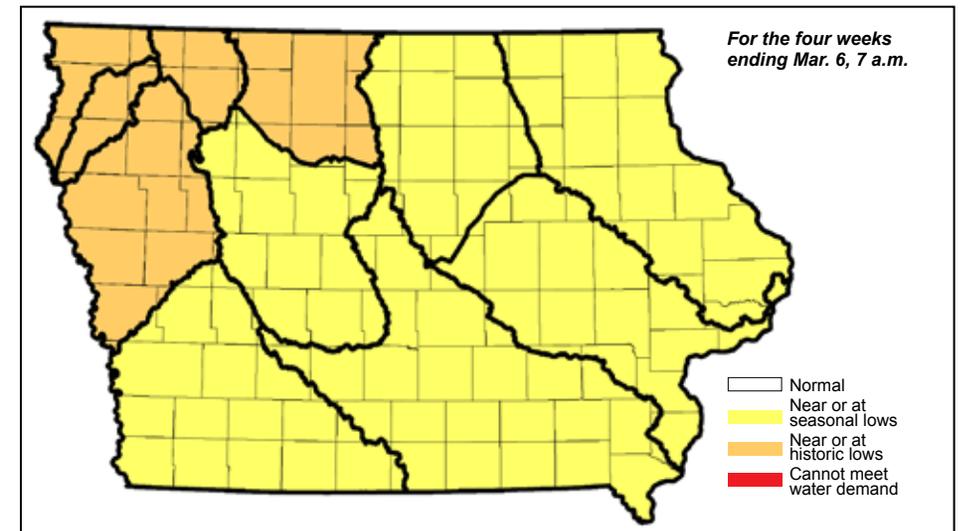
Streamflow

US Geological Survey



Shallow Groundwater

Iowa DNR



Recent Developments and Changes

Overall Conditions

February precipitation was above normal for Iowa, marking the second month in a row with wetter than normal weather. In spite of this, streamflows have deteriorated, with much of the state showing below normal flows. Average flows are typically low in February, so flows below normal can be extremely low this time of the year. However, small amounts of precipitation this time of year can change average flows rapidly. Considerable concern remains for the continued low groundwater levels in shallow sand and gravel (alluvial) deposits. Normal low demand in winter months are helpful during times when supplies are low — but rising groundwater levels typically seen this time of the year are not being observed in many locations. Some water systems will begin the 2013 growing season with groundwater reserves lower than those at the start of last year's growing season.

Drought Monitor

Over the past month the drought monitor conditions have remained essentially unchanged. About a third of the state remains in at least the D3, or extreme drought designation, while just over half the state is in at least the D2, or severe drought. These drought trends are reflected in conditions over the upper Midwest regions as well. States to the west are in much worse condition, with almost three-quarters of Nebraska in at least D4, the worst drought designation. To our east, conditions are better, with significant portions of Missouri and Illinois showing normal conditions. The National Oceanic and Atmospheric Administration, for the time period through May 2013, is predicting the eastern third of Iowa could see drought conditions improving, while the western two-thirds of the state could see persistent drought, but with some improvement.

Streamflow

Streamflow conditions have deteriorated over the past several weeks, and are below normal for the majority of the state. Levels have generally decreased since the last water summary, and many areas that had normal flow are now showing below normal streamflow conditions. The lowest streamflow conditions are within the Des Moines River and Chariton River basins which have less than 10 percent of normal streamflow. Streamflow conditions in the central and northwestern portion of the state remain normal. U.S. Geological Survey reminds Iowans that during the winter season, streamflow data may be impacted by ice formation and backwater, and that their data should be used as preliminary information only.

Precipitation

Iowa saw near normal temperatures in February with above normal precipitation over much of the state. The month's precipitation was fairly evenly distributed among two rain and two snow events. Monthly moisture totals varied from a paltry 0.27 inches near Hastings in Mills County to an unseasonably large total of 3.49 inches at Burlington. Snow depth at month's end varied from 1 to 3 inches in the far west to three to ten inches in the east. There remains substantial frost in the ground, varying from about six inches of frozen soil in the southwest, about a foot in central Iowa and a foot and one-half or more over the northeast. Iowa recorded its seventh consecutive wetter than normal winter season (Dec. - Feb.) but precipitation amounts were not as great as last winter, especially over the northwest.

The next Water Summary Update will be published April 4, 2013.

Notable Events for the Period

Many streams in northwest Iowa continue to be dry.

There are some reports of private wells failing or being unable to meet the water demand.

The water level at Saylorville Reservoir is at the record low elevation of 829.26 feet, about seven feet lower than the level one year ago, and almost 60 feet lower than the level in July 2010. The Corps of Engineers expects the level to continue to drop.

A concrete frost situation exists across northern Iowa, especially north of U.S. Highway 20. The concrete frost extends north into southern Minnesota. In these areas, rainfall in December and January has resulted in the top layer of ground being frozen nearly solid. Until the ground thaws in that region, more runoff than normal will occur from snowmelt or rainfall. The result may be river flooding or even flash flooding.

Water supplies, private wells, and anyone using shallow aquifers should have a contingency plan in place for other sources. Iowa DNR water supply programs are working with communities to review and update water conservation plans in advance of the summer months.

Fisheries staff predicted that low water conditions and a lack of drainage tile flow would lead to an increased probability of significant winterkills on the natural lakes and farm ponds, but with winter coming to an end, conditions are better than expected.

Many of the largest drainage tiles entering some of the natural lakes have dried up. In many cases local residents indicate that this is the first time some of these tiles have had no flow.

Shallow Groundwater

Shallow groundwater levels across most of Iowa are at or near seasonal and historic lows. Northwest Iowa and parts of southwest Iowa are one to three feet lower than last summer's static water levels. Sioux, Palo Alto, Osceola and Crawford counties are especially hard hit. Static water levels have improved slightly in northeast, southeast and north-central Iowa compared to last summer, but are still two to eight feet lower than March 2012. Static water levels in the sand and gravel aquifers along the Ocheyedan, west fork of the Des Moines, Floyd, Boyer and Rock rivers are at seven-year lows.

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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