



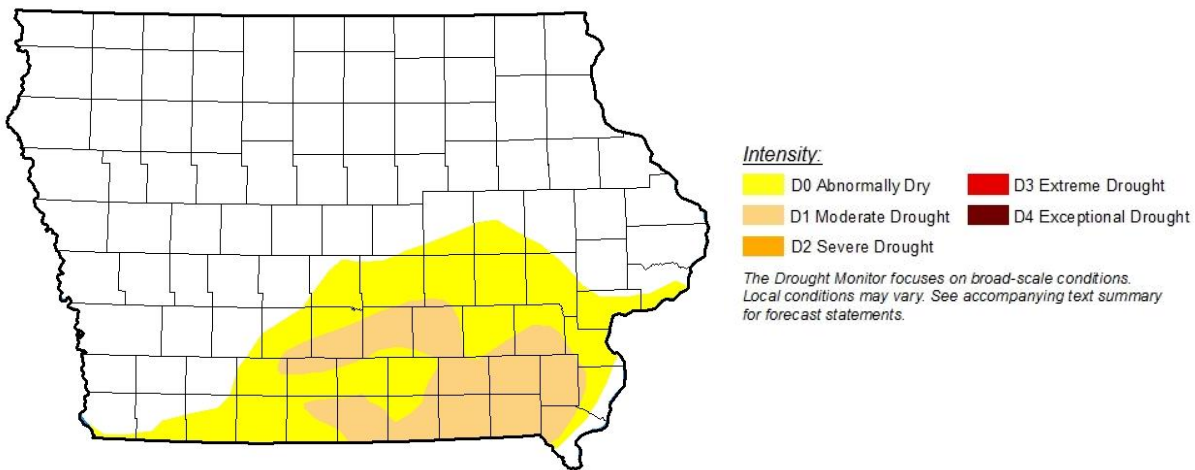
WATER SUMMARY UPDATE

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A snapshot of water resource trends for January/February 2018

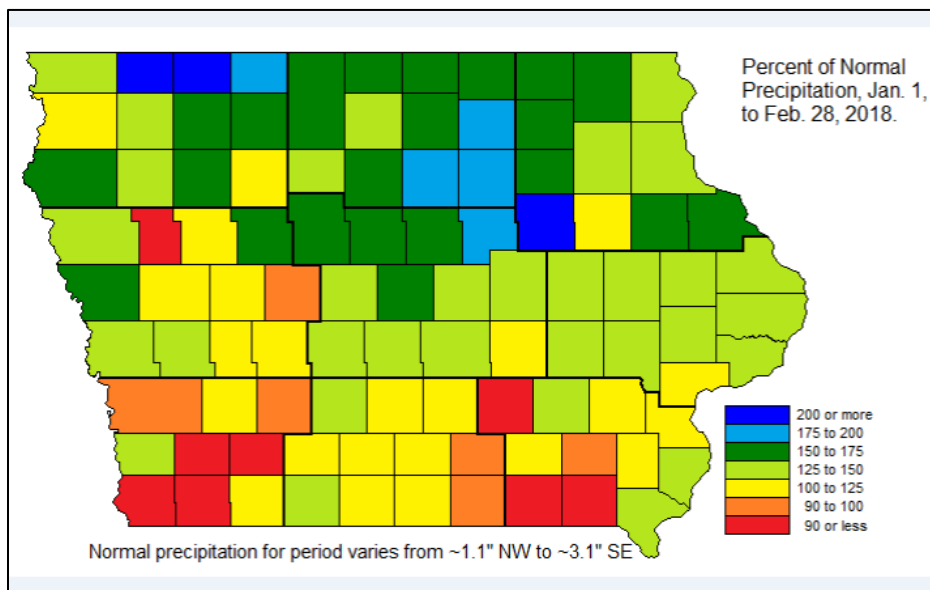
Drought Monitor - Conditions as of March 1, 2018.

National Drought Mitigation Center and partners



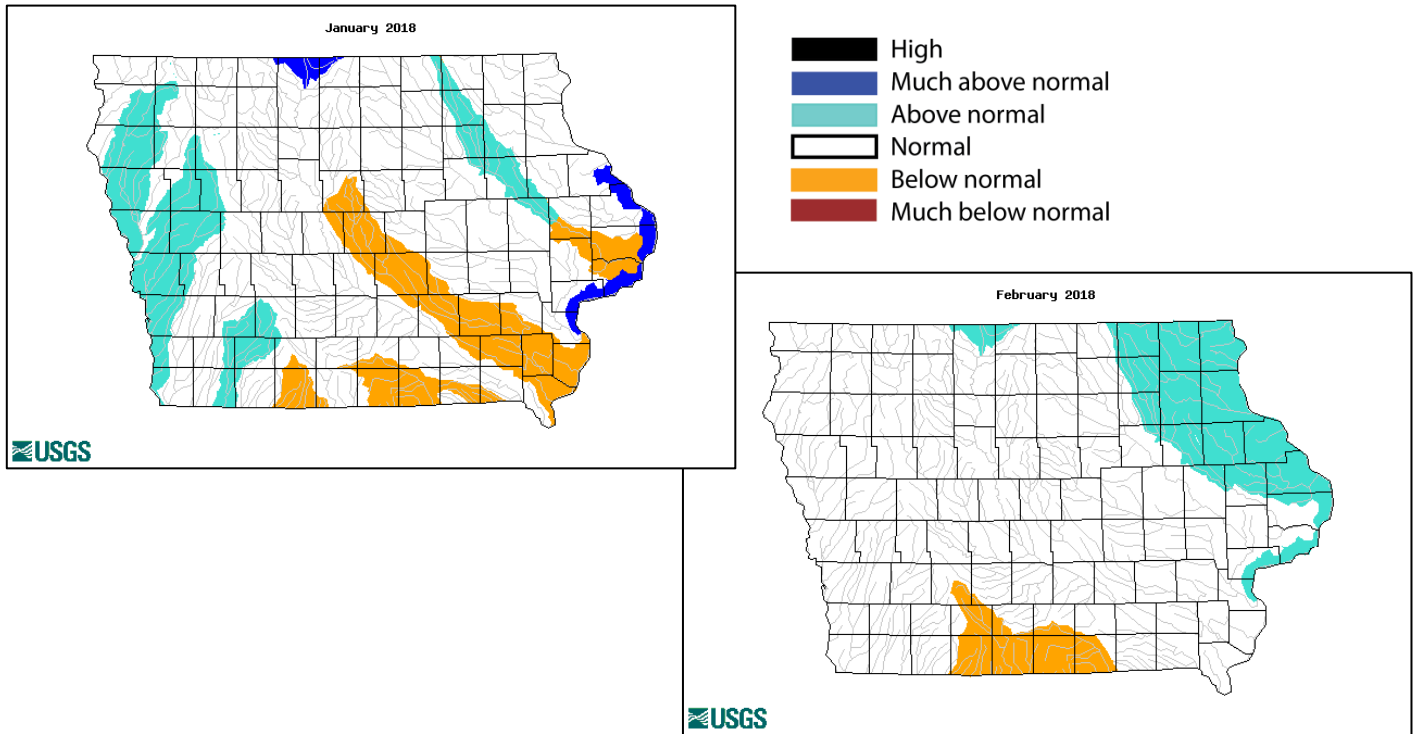
Precipitation - Percent of normal precipitation for January and February 2018.

State Climatologist



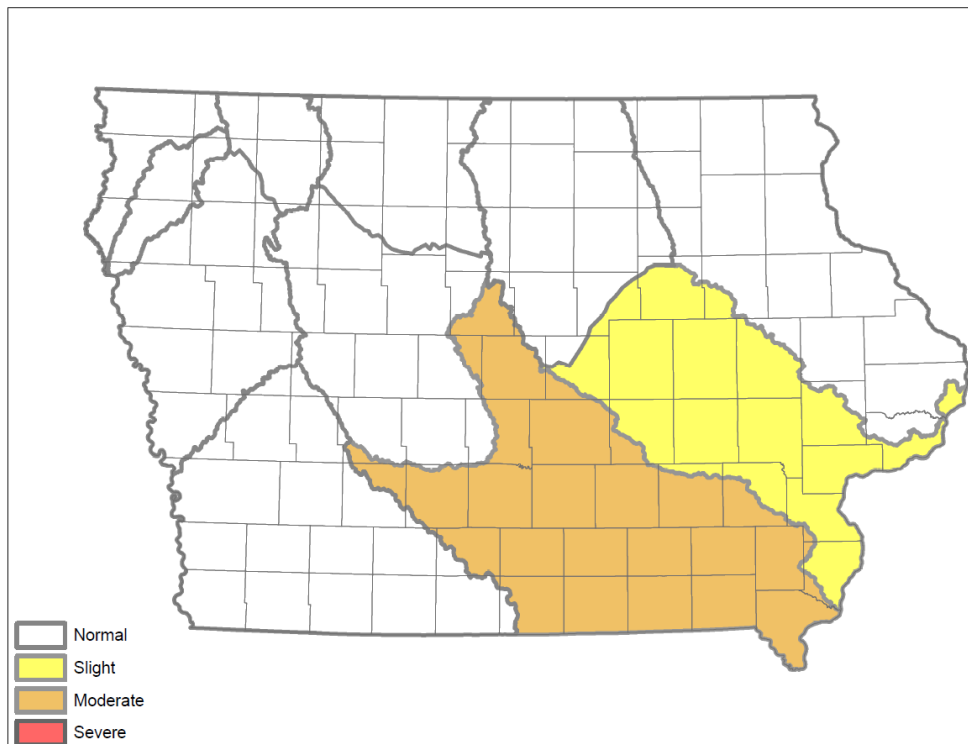
Stream Flow - Seven-day average stream flow for January and February 2018.

US Geological Survey



Shallow Groundwater - Conditions for February 2018.

Iowa DNR and IIHR-Hydroscience and Engineering



Recent Developments and Changes

SUMMARY

Normally the start to the calendar year in Iowa provides little in the way of significant precipitation. This year, however, two rain/snow events produced some localized flooding, and helped to alleviate some of the dry conditions that have been present in the state since last fall. The first two months of the year produced 2.7 inches of moisture, more than 0.7 inches above normal. As a result, streamflow has increased to normal over most of Iowa, and shallow groundwater conditions are improving. There remains an area of concern in Southeast Iowa, where the drought monitor shows about 10 percent of the state in a condition of Moderate Drought. Some parts of Southeast Iowa are short over 20 inches of rainfall over the past two years.

DROUGHT MONITOR

Over the last two months conditions across the state have seen some improvement. The Drought Severity and Coverage Index (DSCI) was developed to provide a way to compare regional conditions over time, and has been dropping in Iowa. The DSCI now stands at 37, down from nearly 80 at the beginning of the year. This shows the gradual improvement in drought conditions over the winter months. Areas of southeast Iowa continue to be of concern, with nearly all of ten counties rated in D1- Moderate Drought; a total of ten percent of the state. This is an improvement over the conditions that existed on October 1 of last year when over 30 percent of the state was rated in D1 and six percent of the state was rated in D2 – Severe Drought. Regionally, considerable improvement to conditions has occurred in Missouri and Arkansas, while significant dryness and drought continues in much of the Southwest and in the Dakotas.

CURRENT STREAM FLOW

Streamflow conditions in much of the state remain in the normal range. Northeast Iowa moved from the normal flow in January to above normal flow in February. Flow in portions of the Thompson and Chariton River basins has been below normal condition for the past two months. Streamflow conditions that were above normal in January for several basins in the western portion of the state have decreased to the normal flow. USGS crews have been making extra site visits to verify ice conditions on the streams as well as collecting additional streamflow measurements to validate real-time values. It should be noted that during the winter season, USGS streamflow data may be impacted by ice formation and backwater. This information should be used as preliminary information only.

JANUARY AND FEBRUARY PRECIPITATION

January and February are typically the driest two months of the year in Iowa, and rarely provide significant moisture for the state. This year precipitation was just 0.72 inches above normal for both months; however, there were a pair of events when unseasonably heavy precipitation combined with frozen soils to result in some flooding. The first event, January 21-23, provided nearly 80% of January's precipitation and brought blizzard conditions to far northwest Iowa where over 14 inches of snow fell at Spirit Lake, and Waterloo recorded a January record daily amount of rain with 2.01 inches on the 22nd. In late February storm systems crossed the state on almost a daily basis with the largest storm on the 19th -20th when heavy rain fell across far eastern Iowa, including 2.67 inches at Burlington. Overall, precipitation for the first two months of the year was above normal over the northeast two-thirds of the state with some small pockets of slightly below normal totals over parts of west central, southwest and southeast Iowa.

Soils were frozen across nearly all of Iowa through most of January and February with the exception of a few brief periods when the uppermost few inches of soils thawed over portions of southern Iowa. However, soils were completely thawed by the end of February over much of the southern one-third of the state with thawing of much of the topsoil across the central one-third of Iowa.

SHALLOW GROUNDWATER

Shallow groundwater conditions have improved over most of northwest, southwest, and northeast Iowa during the first two months of 2018. Shallow groundwater conditions in parts of south central and southeast Iowa remain in a slight to moderate drought classification. Additional spring rainfall is needed across the southern half of Iowa to improve shallow groundwater conditions.

Subsoil remains very dry over much of south central and southeast Iowa where both 2016 and 2017 were unusually dry with 24-month precipitation deficits exceeding twenty inches in some areas.

SEASONAL FLOOD OUTLOOK

On March 1 the National Weather Service (NWS) issued its final spring flood outlook. The outlook calls for a near normal risk of flooding on most of Iowa's rivers this spring. The main exceptions are these rivers, where the risk of flooding is above normal:

- Mississippi River
- Cedar River (portions of it in northeast Iowa)
- Turkey River (northeast Iowa)
- Upper Iowa River (northeast Iowa)
- Volga River (northeast Iowa)

ADDITIONAL INFORMATION

For additional information on the information in this Water Summary Update please contact any of the following:

General Information	Tim.Hall@dnr.iowa.gov	515-725-8298
Drought Monitor.	Harry.Hillaker@iowaagriculture.gov	515-281-8981
Precipitation.	Harry.Hillaker@iowaagriculture.gov	515-281-8981
Stream Flow.	Daniel Christiansen, dechrist@usgs.gov	319-358-3639
Stream Flow.	Michael.Anderson@dnr.iowa.gov	515-725-0336
Shallow Groundwater.	mike-gannon@uiowa.edu	319-335-1581
Flood Outlook.	jeff.zogg@noaa.gov	515-270-4501