



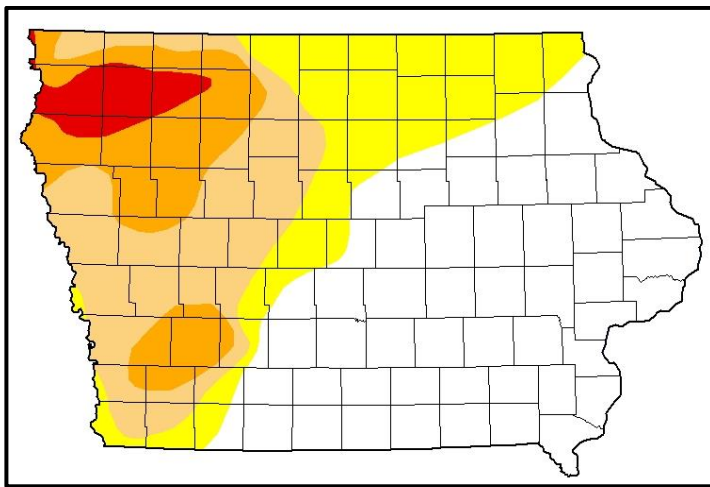
WATER SUMMARY UPDATE

Published Date February 4, 2021 | Issue 115

A snapshot of water resource trends for the month of January 2021

Drought Monitor - Conditions as of February 2, 2021

National Drought Mitigation Center and partners

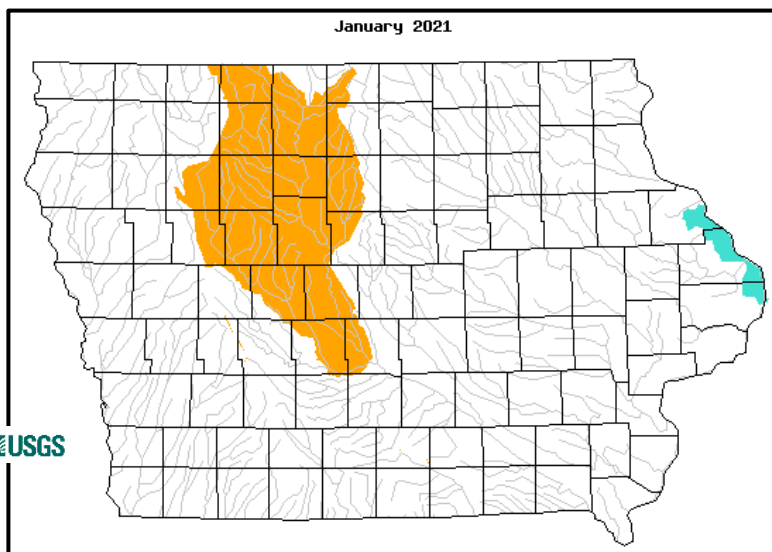


Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

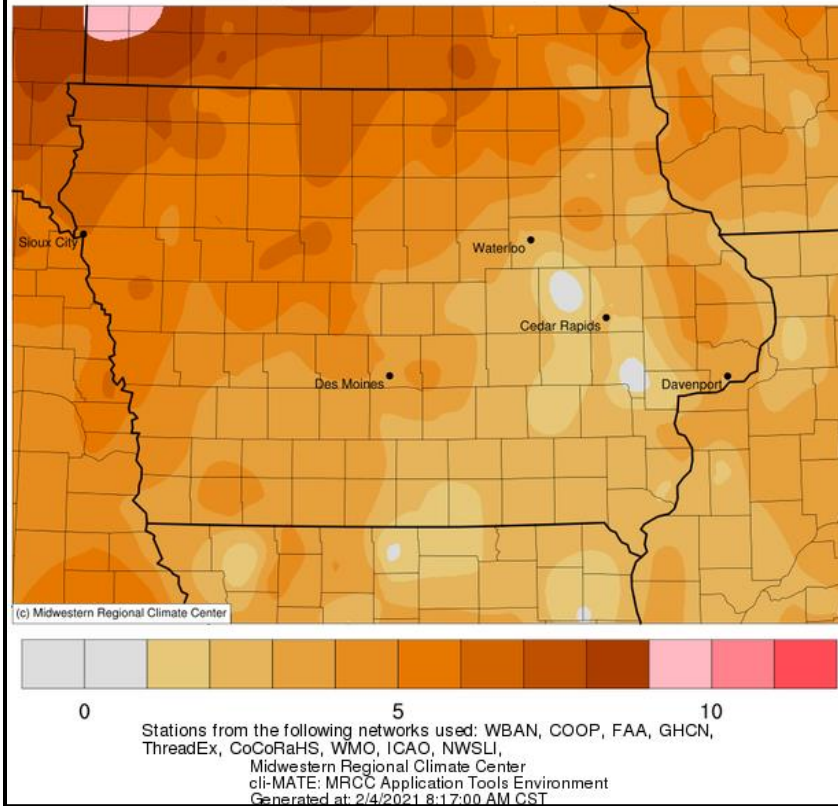
Stream Flow – January 2021



Explanation - Percentile classes					
Low	<10	10-24	25-75	76-90	>90
	Much below normal	Below normal	Normal	Above normal	Much above normal
					High

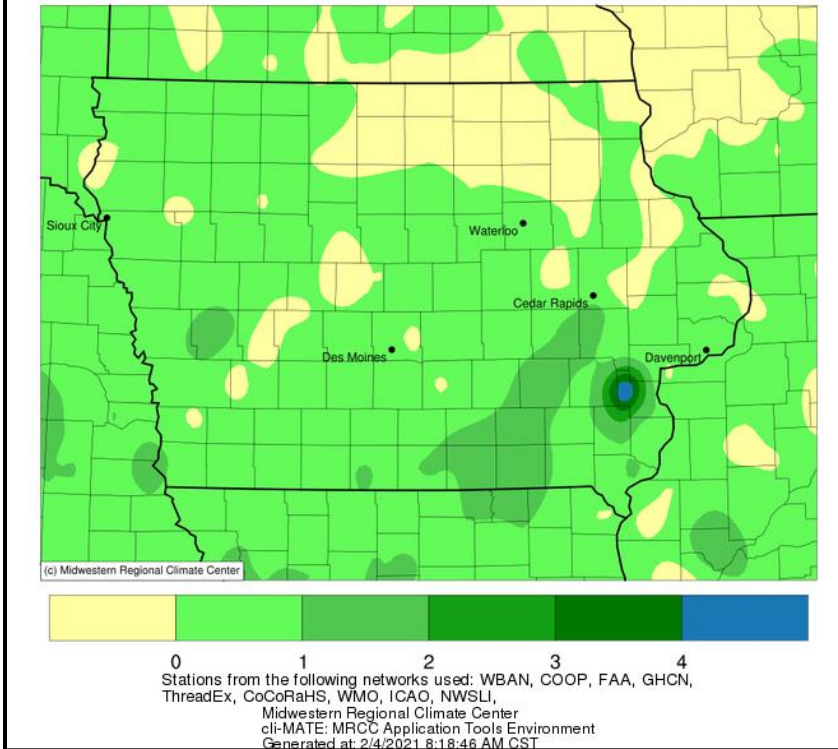
Average Temperature (°F): Departure from 1981-2010 Normals

January 01, 2021 to January 31, 2021



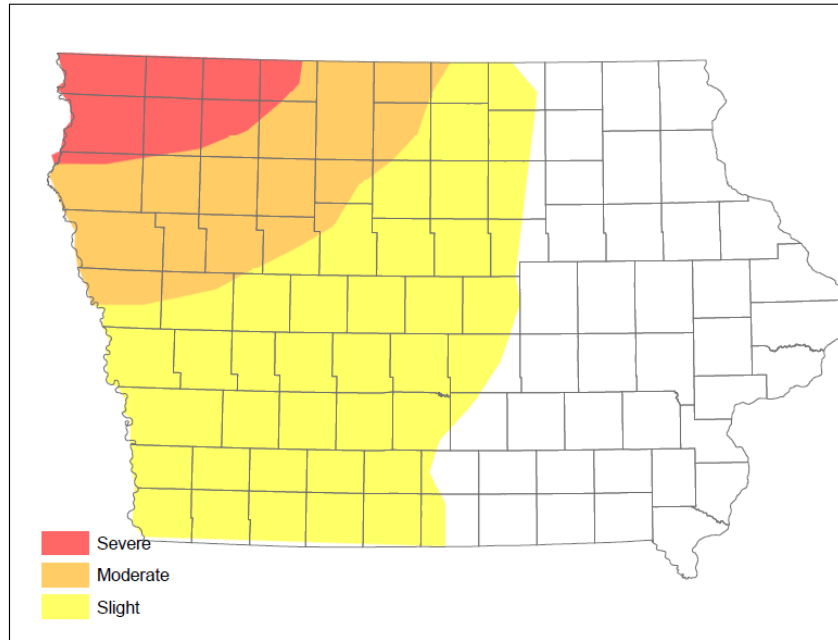
Accumulated Precipitation (in): Departure from 1981-2010 Normals

January 01, 2021 to January 31, 2021



Shallow Groundwater - Conditions for January 2021

Iowa DNR and IIHR-Hydroscience and Engineering



RECENT DEVELOPMENTS AND CHANGES

SUMMARY

The month of January saw above normal precipitation and above normal temperatures across the state. January is typically the driest month of the year, with moisture averaging less than an inch. January of 2021 brought 1.27 inches of moisture to the state. Temperatures averaged 4 degrees above normal for the month. As is generally the case during the winter months, streamflow, and shallow groundwater conditions remain steady, and the US Drought monitor shows little change.

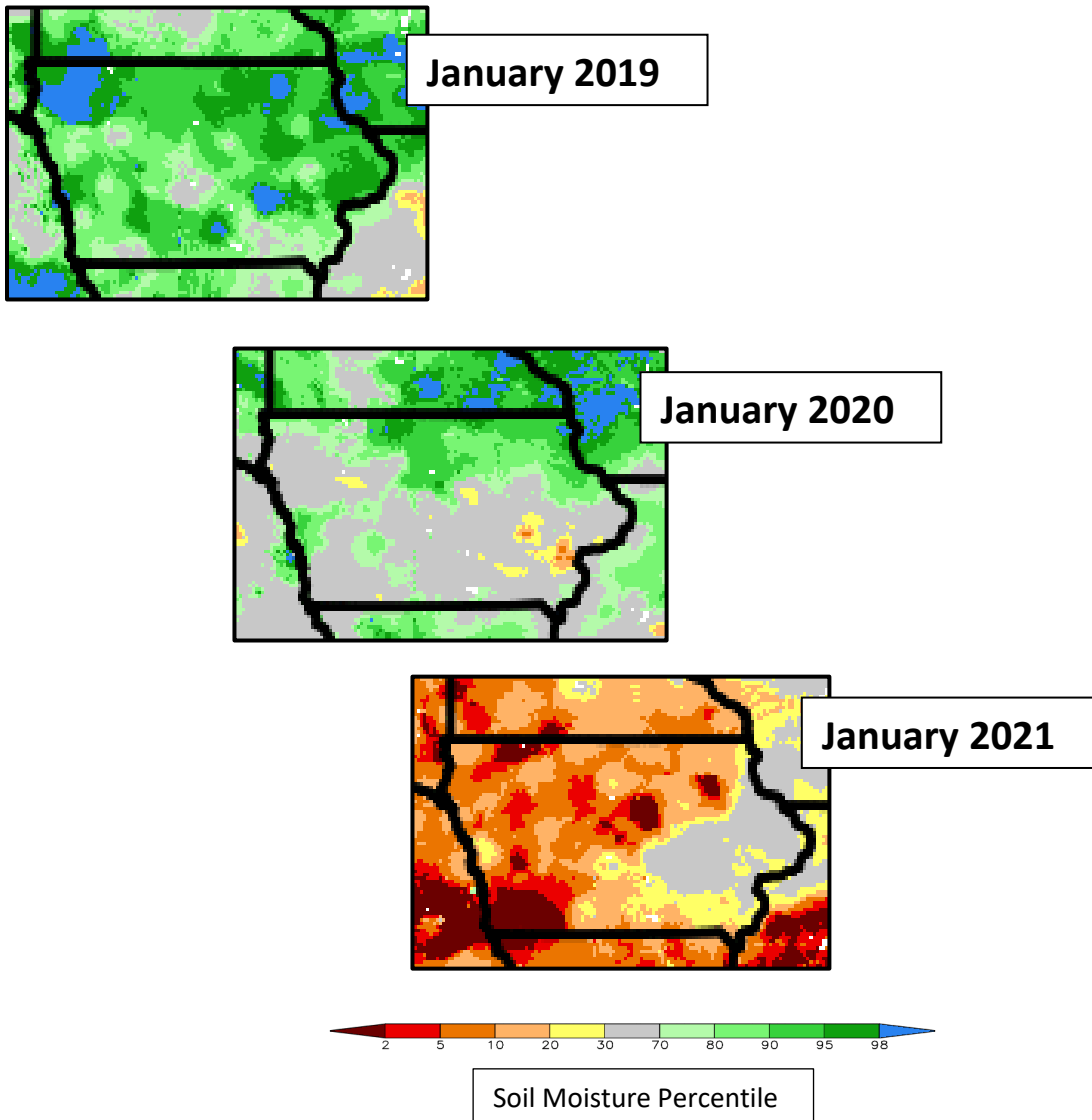
DROUGHT MONITOR

Abnormal dryness and drought conditions as depicted in the US Drought Monitor remained generally unchanged through January. A more active storm track brought multiple winter systems through Iowa leading to above average precipitation, including heavy snow across west-central and eastern Iowa. D0 retreated across central Iowa while a small section of Severe Drought (D2) in western Iowa was upgraded to Moderate Drought (D1). As of this writing, D0-D3 covers 52% of Iowa. To the west of Iowa, much of the United States is very dry, with large areas of the southwest rated as D4 – Exceptional Drought.

SOIL MOISTURE

The current concern with drought conditions may seem confusing, given the abundance of snow this winter, but under the snow the shallow soils are so dry that there is the potential for drought issues later this spring. Below are maps showing the soil moisture percentiles across the state in January of 2019, 2020, and 2021. Red and orange colors show areas of driest soils, and green and blue colors show areas of wettest soils. A grey color indicates normal soil moisture percentages. These figures indicate that the cushion of soil moisture that existed

during the winter of 2019 and also to a lesser degree during the winter of 2020 has all but disappeared. Without any reserves of soil moisture, a drier than normal spring could lead to problems in parts of western Iowa.



JANUARY PRECIPITATION AND TEMPERATURE

Preliminary statewide average precipitation totaled 1.27 inches or 0.35 inches above normal in January, with a majority of Iowa's reporting stations reporting slightly above average precipitation. Preliminary monthly precipitation (melted snow and sleet plus rain) totals ranged from 0.25 inch in Algona to 4.00 inches in Marengo. Above average snowfall also blanketed much of Iowa with the preliminary average snowfall of 12.4 inches, 4.7 inches above average. A band of 15 to 20 inch accumulations ran from Omaha northeast through Waterloo.

Temperatures in January were unseasonably warm, on average 23.6 degrees or 4.2 degrees above normal. Northwestern Iowa experienced the warmest conditions where positive departures of up to seven degrees were reported in the monthly averages. Stations in eastern Iowa reported average temperatures one to three degrees warmer than normal.

CURRENT STREAM FLOW

Streamflow conditions across most of the state are in normal conditions. The Des Moines River basin remains in the below and much below normal condition. Conditions across the state have been stable since the last water summary update. 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.

SHALLOW GROUNDWATER

Shallow groundwater conditions during January remain about the same as December throughout most of Iowa. Severe drought continues to persist in Northwest and parts of Central and West Central Iowa. Moderate and slight drought continues in parts of Northeast and South Central Iowa. Low groundwater levels are found throughout the state, especially along the Des Moines, Raccoon and Skunk rivers in Central and West Central Iowa, and along the Ocheyedan River in Northwest Iowa. Shallow groundwater conditions should remain fairly constant throughout the winter months.

MISSOURI RIVER BASIN CONDITIONS

The US Army Corps of Engineers, in their February 2, 2021 conditions summary, indicated that all stored flood waters from the 2020 runoff season were evacuated as of December 21, 2020. Mountain snowpack is below average, and plains snowpack remains below average for most of the upper basin. The calendar year runoff forecast for the Missouri River Basin above Sioux City is 22.9 Million Acre Feet, or about 89% of average.

DROUGHT CONDITIONS MEETING

A drought conditions virtual meeting is planned for March 4, 2021 from 1:00 to 3:00 pm. Experts from the Iowa DNR, IDALS, USDA, the National Weather Service, and the US Geological Survey will provide current information and projections for potential drought conditions in Iowa. Information on how to attend will be available soon on the DNR web site at

<https://www.iowadnr.gov/Environmental-Protection/Water-Quality/Water-Summary-Update>

ADDITIONAL INFORMATION

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

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