



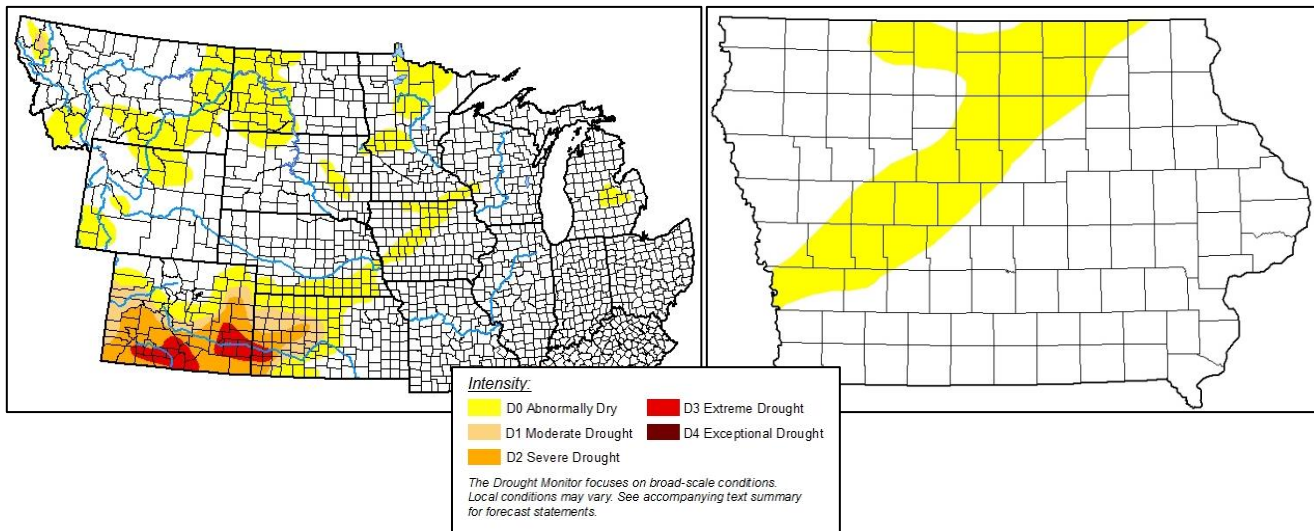
# WATER SUMMARY UPDATE

Published Date May 14, 2020 | Issue 107

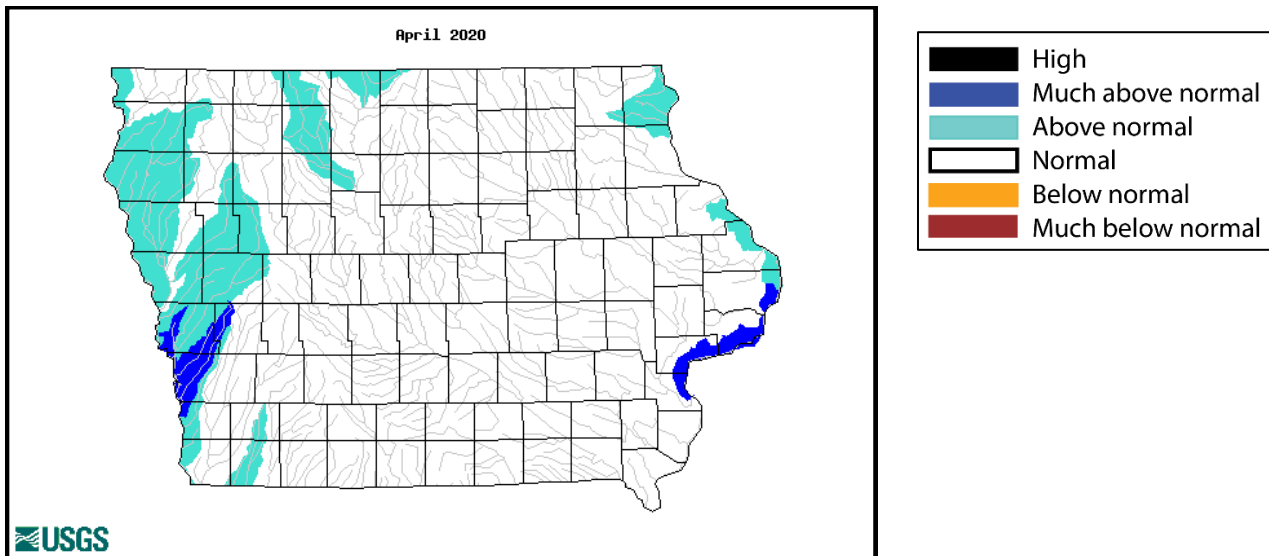
## A snapshot of water resource trends for the month of April 2020

### Drought Monitor - Conditions as of May 12, 2020

National Drought Mitigation Center and partners

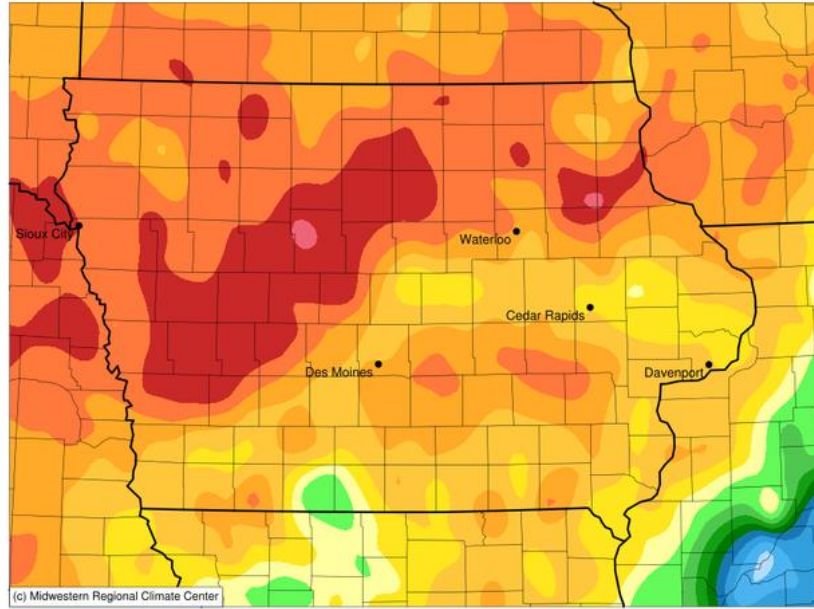


### Stream Flow – April 2020



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

April 01, 2020 to April 30, 2020

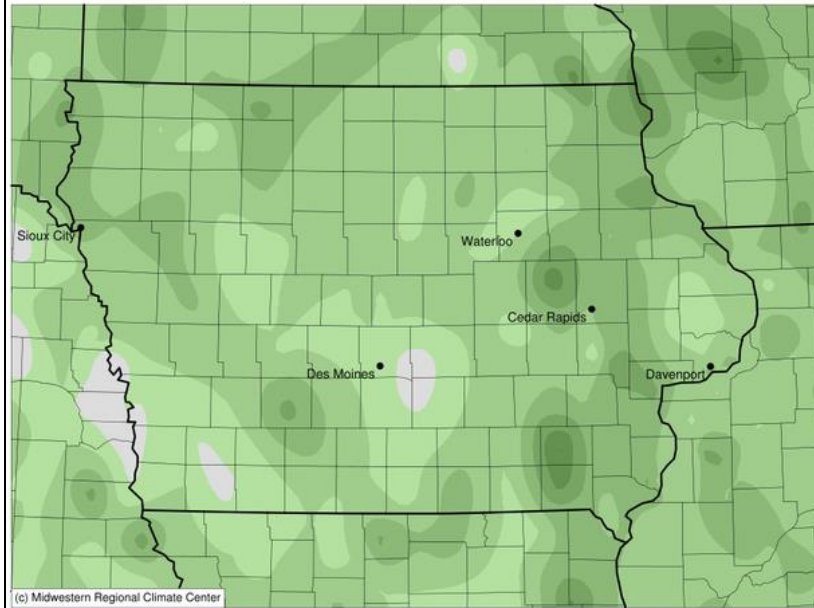


-3 -2.5 -2 -1.5 -1 -0.5 0 0.5 1 1.5 2 2.5 3 3.5

Stations from the following networks used: WBAN, COOP, FAA, GHCN, ThreadEx, CoCoRaHS, WMO, ICAO, NWSLI, Midwestern Regional Climate Center  
cli-MATE: MRCC Application Tools Environment  
Generated at: 5/13/2020 12:20:04 AM CDT

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

April 01, 2020 to April 30, 2020



-6 -5 -4 -3 -2 -1 0 1 2

Stations from the following networks used: WBAN, COOP, FAA, GHCN, ThreadEx, CoCoRaHS, WMO, ICAO, NWSLI, Midwestern Regional Climate Center  
cli-MATE: MRCC Application Tools Environment  
Generated at: 5/13/2020 12:21:01 AM CDT

## RECENT DEVELOPMENTS AND CHANGES

### SUMMARY

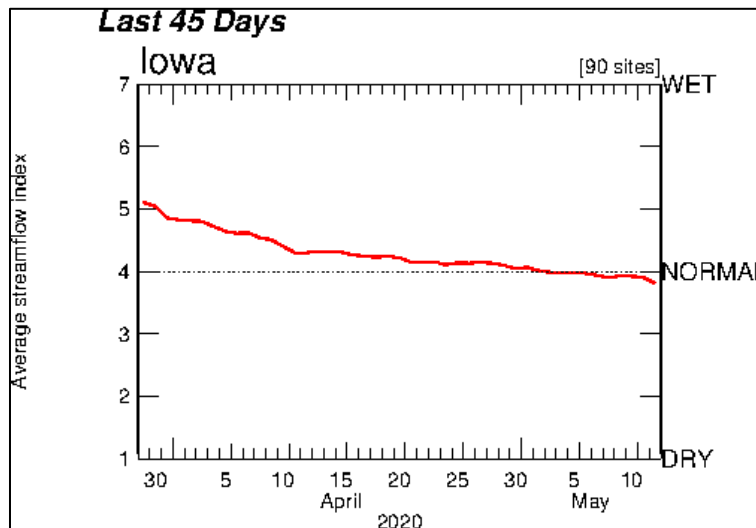
April was cool and dry in Iowa, with rainfall averaging almost 2 inches below normal for the month and temperatures averaging over 2 degrees below normal. Streamflow levels continue to decrease, and groundwater levels are declining in some areas of central and northeast Iowa. These trends continue the reversal of the extended pattern of wet weather that existed across the region for much of 2018 and 2019. As a result of these trends, the National Drought Monitor is showing an area of abnormal dryness covering about 20 percent of the state.

### DROUGHT MONITOR

For the first time since September 2019 an area of “D0 – Abnormally Dry” has been introduced in the state. This area, running from west-central Iowa up toward northeast Iowa, covers about 20 percent of the state. Current precipitation as well as average rainfall in May and June should help to alleviate this dryness. More significant areas of drought exist to the west and south of Iowa in western Kansas and southern Colorado.

### CURRENT STREAM FLOW

Streamflow conditions across the majority of the state have continued to decrease, with most basins now experiencing normal flow. A few western basins, Boyer, Floyd, and Soldier Rivers are still in the above normal condition. By early May the 7-day average streamflow across the State of Iowa had dipped below the “normal” line for the first time since late 2018.



### APRIL PRECIPITATION AND TEMPERATURE

While measurable rain and snow fell across Iowa during April, many locations reported below average precipitation. The driest part of the state is in a band stretching from western Iowa into north-central Iowa, where precipitation deficits were between 2.50 to 3.00 inches. The statewide average precipitation was 1.59 inches, 1.92 inches below normal, ranking it as the 13th driest on record; a drier April last occurred in 2018. Monthly precipitation totals ranged from 0.51 inches in Denison (Crawford County) to 4.34 inches in Lamoni (Decatur County).

Portions of Iowa reported above normal snowfall, especially across south-central Iowa, with the preliminary average statewide total of 3.7 inches, 2.1 inches above average. This ranks as the 13th snowiest April on record. Allerton (Wayne County) reported the highest total of 13.6 inches.

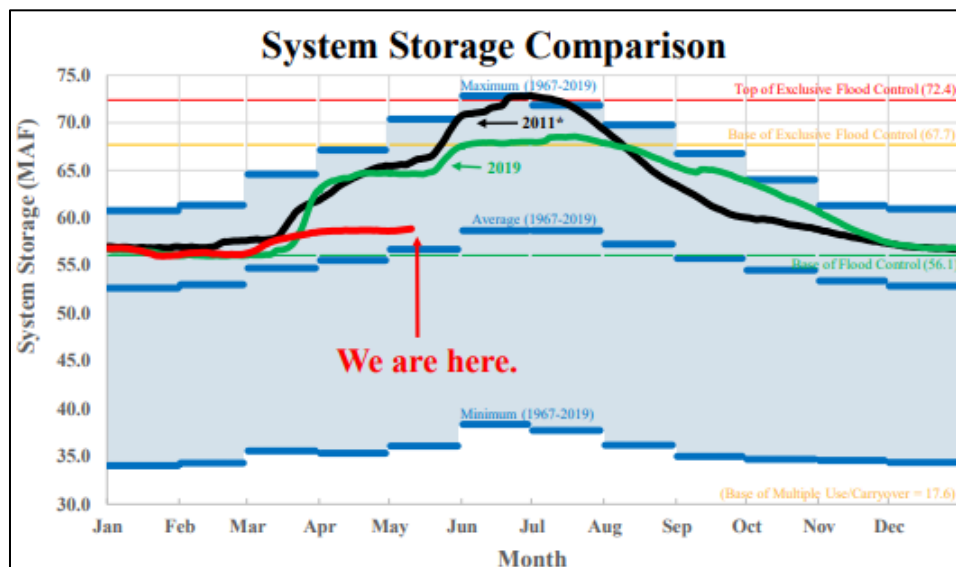
Statewide temperatures were colder than normal in April, averaging 46.8 degrees or 2.1 degrees below normal. Negative temperature departures were reported statewide with eastern Iowa up to four degrees below normal. April's statewide average maximum temperature was 59.3 degrees, 1.3 degrees below normal while the average minimum temperature was 34.3 degrees, 3.0 degrees below normal. Red Oak (Montgomery County) and Shenandoah (Page County) reported the month's high temperature of 87 degrees on the 7<sup>th</sup>, 26 degrees above normal. Estherville Municipal Airport (Emmet County) reported the month's low temperature of 6 degrees on the 15<sup>th</sup>, 29 degrees below normal.

### SHALLOW GROUNDWATER

Shallow groundwater conditions were normal across the entire state in April, but levels are declining, especially in Central and Northeast Iowa. Groundwater levels are approximately two to four feet lower in April of 2020 when compared to April of 2019. Normal to above normal precipitation is necessary during May and June to adequately recharge Iowa's shallow alluvial and bedrock aquifers.

### MISSOURI RIVER BASIN

In its most recent communication, dated May 12, 2020, the US Army Corps of Engineers indicated that conditions continue to improve in the basin, with some abnormal dryness appearing in parts of the upper river basin. 58.9 Million Acre Feet (MAF), or 83% of the designated flood control storage, is available to store runoff from mountain snowmelt and spring/summer rainfall events. This is significantly better than conditions from last year, and is close to the long-term average for the system for this time of year. Mountain snowpack, which peaked in mid-April, continues to melt. The upper Basin runoff forecast, updated on May 1, predicts 32.2 MAF (125% of average) for 2020. This is a reduction from the estimate of 35.5 MAF made on April 1 – indicating the continued improvement in the basin. If realized, this runoff would higher than the average runoff of 25.8 MAF, but only about half of the near record 60.9 MAF of runoff from 2019. For more information on the Missouri River please go to: <http://www.nwd-mr.usace.army.mil/rcc/reports/pdfs/weeklyupdate.pdf>



**ADDITIONAL INFORMATION**

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

General Information . . . . .	<a href="mailto:Tim.Hall@dnr.iowa.gov">Tim.Hall@dnr.iowa.gov</a>	515-725-8298
Drought Monitor and Precipitation. . . . .	<a href="mailto:Justin.Glisan@iowaagriculture.gov">Justin.Glisan@iowaagriculture.gov</a>	515-281-8981
Stream Flow. . . . .	Daniel Christiansen, <a href="mailto:dechrist@usgs.gov">dechrist@usgs.gov</a>	319-358-3639
Stream Flow. . . . .	<a href="mailto:Michael.Anderson@dnr.iowa.gov">Michael.Anderson@dnr.iowa.gov</a>	515-725-0336
Shallow Groundwater. . . . .	<a href="mailto:mike-gannon@uiowa.edu">mike-gannon@uiowa.edu</a>	515-725-0336