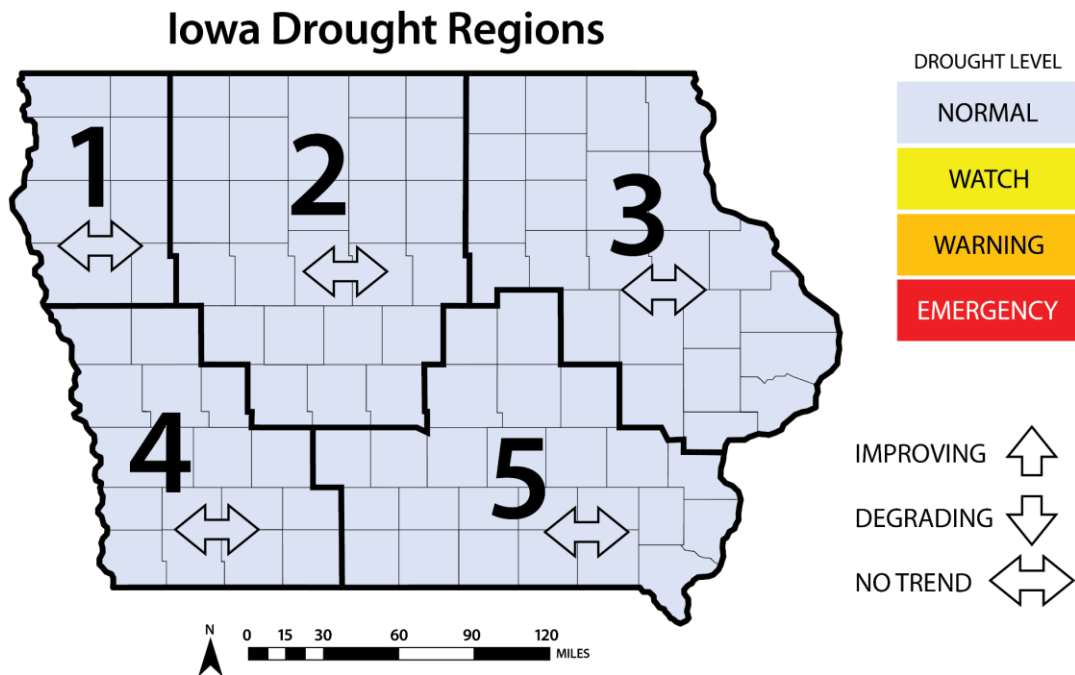


# WATER SUMMARY UPDATE

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## A snapshot of water resource trends for July 2024

### IOWA DROUGHT CONDITIONS



### CONDITION SUMMARY - MONTH OF JULY CONTINUES THE ABOVE NORMAL RAINFALL TREND

After the significant localized heavy rainfall and flooding of June, July continued the wetter than normal trend, ending the month with statewide precipitation averaging 5.40 inches, or 1.23 inches above normal. Since the start of the 2024 Water Year on October 1, 2023, every region of the state has received above normal rainfall, with the statewide total four inches above normal. Statewide temperatures in July averaged 72.4 degrees or 1 degree below normal. Cooler temperatures and above normal rainfall have been extremely beneficial in helping Iowa recover even further from the drought conditions that were present over the last four years.

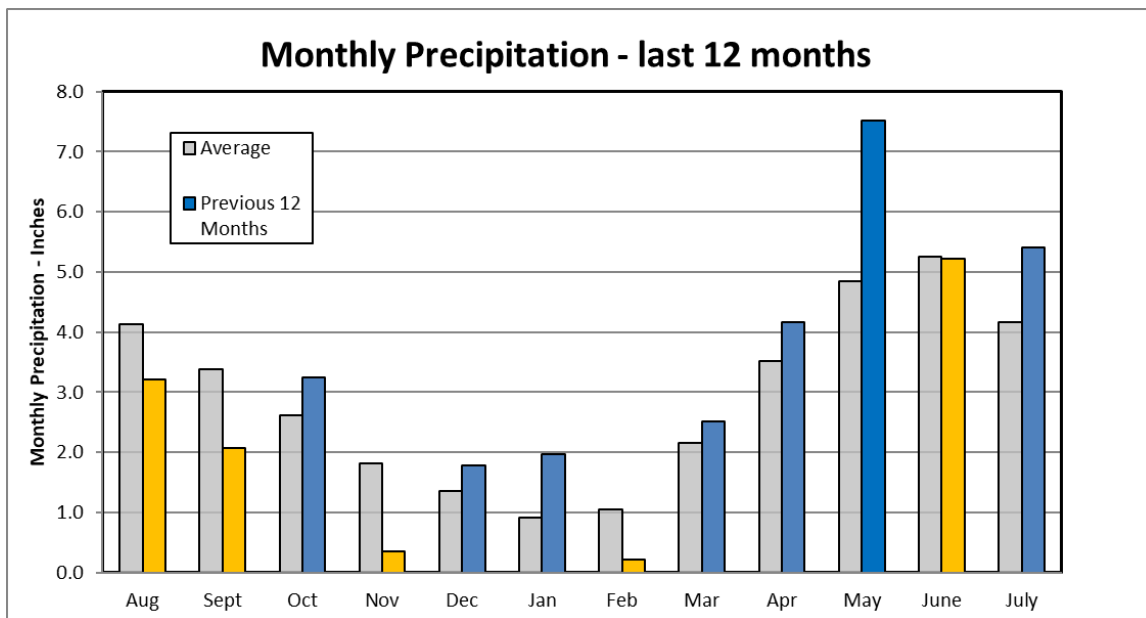
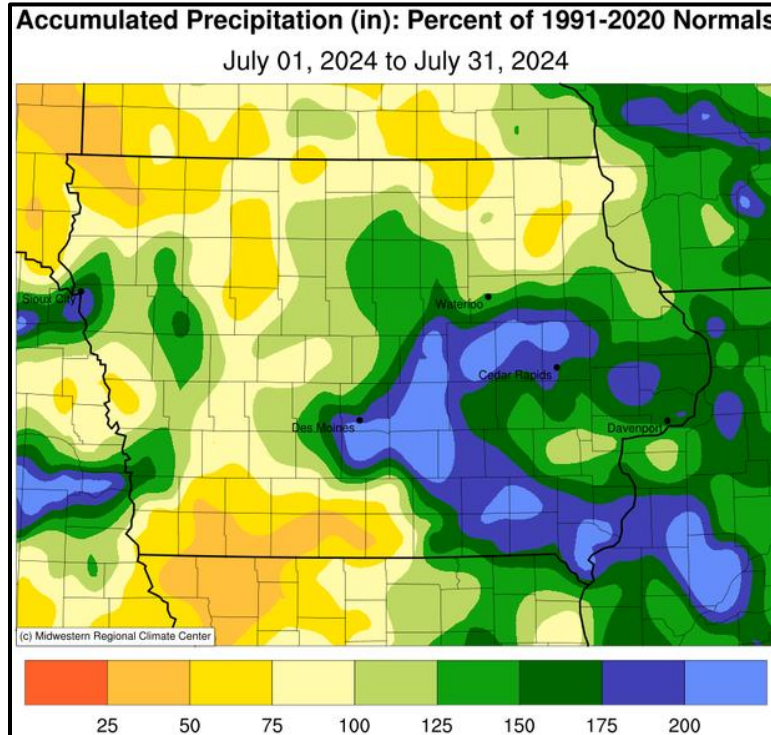
The US Drought Monitor, one measure reflected in the Iowa Drought Plan (IDP), showed no drought or dryness anywhere in the state as of July 16. Abnormal dryness or drought was present in Iowa from May 5, 2020 until July 16, 2024, a span of 219 weeks. During the first week of August a small area of D0 – Abnormal Dryness was introduced in southwest Iowa in response to short-term rainfall deficits in northwest Missouri and southwest Iowa. Despite this development, according to the IDP, all five monitoring regions are drought free, with conditions stabilized. After above normal precipitation in eight of the last ten months, all areas of the state are now in “Normal” condition.

### July Precipitation and Temperature

A majority of the state’s National Weather Service co-op and Community Collaborative Rain, Hail and Snow (CoCoRaHS) stations reported above-average rainfall with positive departures in the two to six-inch range in central and eastern Iowa. Parts of northern and southwestern Iowa observed departures one to three inches. Monthly precipitation

totals ranged from 0.94 inches in Rock Rapids to 13.78 inches in Pella.

Statewide average temperatures in July were near-normal across smaller swaths of northern, eastern, southern-central Iowa with negative departures of up to two degrees at most stations. The month's high temperature of 96 degrees was reported at Little Sioux on July 16 and in Osceola on July 29. Both of these high temperatures were about 10 degrees above normal for those dates and locations. Elkader and Battle Creek reported the month's low temperature of 47 degrees on July 1 and 18, respectively. These low temperatures were about 14 degrees below normal for those dates.



**Standardized Precipitation Index (SPI)**

The SPI is an index based on accumulated precipitation for various time scales. SPI is the most commonly used indicator worldwide for detecting and characterizing meteorological droughts. The SPI indicator measures precipitation

differences based on a comparison of observed total precipitation amounts over the period of interest with the long-term historical precipitation record for that period. Droughts are characterized by negative SPI values, while positive SPI values indicate wet periods. The range of SPI values is between -3 and +3, denoting “extremely dry” to “extremely wet”.

Both the 90-day and 180-day SPI values for all Drought Regions in July (comparing, May, June, and July precipitation) are well above zero. This continues the favorable precipitation going back six months, and maintains all drought regions in normal conditions for this indicator.

Drought Region	3-month SPI	6-month SPI	IDP Classification ↑ = improving ↓ = degrading ↔ = no trend
1	+ 1.0	+ 2.0	Normal ↓
2	+ 1.2	+ 1.9	Normal ↓
3	+ 1.7	+ 1.8	Normal ↔
4	+ 0.3	+ 0.7	Normal ↓
5	+ 0.7	+ 1.2	Normal ↔

### Standardized Streamflow Index (SSI) and Streamflow

SSI is a metric that compares current streamflow against the historical record to determine how far away the current streamflow value is from the river’s historical mean observed on the same date. SSI values in all five drought regions are steady or improving, reflecting the continued favorable conditions across the state

According to the US Geological Survey, during July, precipitation events across the northern and eastern parts of the state kept stream flows in those areas above-normal or much-above-normal. The Chariton river remains in below-normal condition. The rest of the state is in normal conditions.

Water levels at Saylorville Reservoir, just north of Des Moines, have dropped about 30 feet over the last month as the US Army Corps of Engineers releases water through the Saylorville Dam.

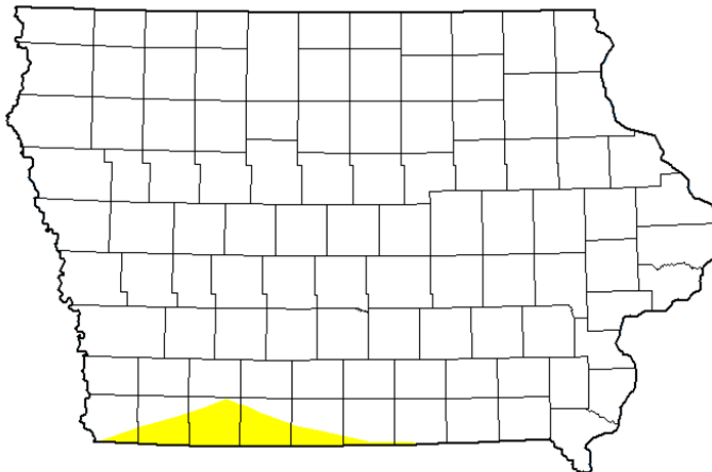
### US DROUGHT MONITOR AND DROUGHT CONDITIONS

The current US Drought Monitor (USDM) reflects the continued improvement in conditions that started in the spring. Beginning with the July 18 USDM, the entire State of Iowa is shown to be free from dryness or drought for the first time since May 5, 2020. On August 1, 2023 – exactly one year ago, 100 percent of the state was rated in some form of dryness or drought, with 82 percent of Iowa in D1 – Moderate Drought or worse. Drought is nearly gone from all of the states that surround Iowa as well, with only small areas of D1 – Moderate Drought present in western North and South Dakota as well as western Nebraska.

Over the last week, rainfall deficits in northern Missouri and southwest Iowa resulted in the introduction of a small area of D0 Abnormally Dry conditions in the state. This is reflected in the USDM map released on August 8.

**U.S. Drought Monitor**  
**Iowa**

**August 6, 2024**  
(Released Thursday, Aug. 8, 2024)  
Valid 8 a.m. EDT



**Intensity:**

- None
- 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. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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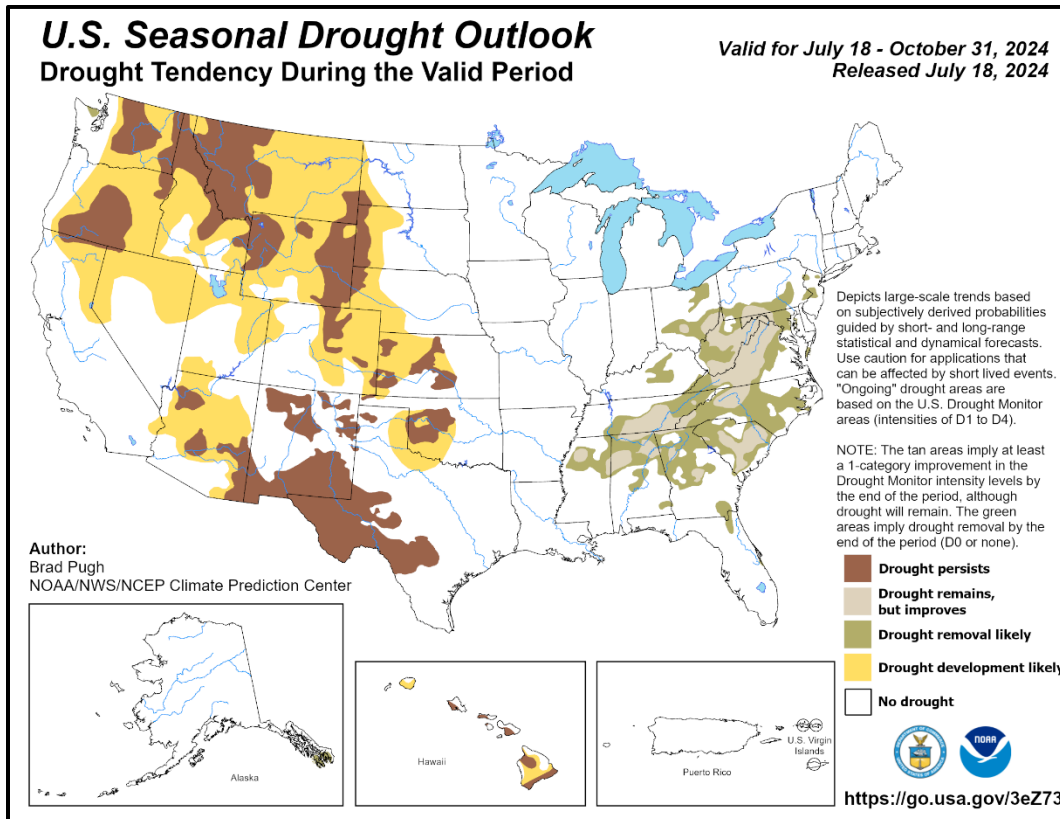
David Simeral  
Western Regional Climate Center



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

On a national scale, about half of the United States is free from drought or dryness. Small areas of D3 - Extreme Drought, or D4 - Exceptional Drought, are present in New Mexico, and Texas, western Montana, and parts of the mid-Atlantic states. These areas represent about one percent of area of US.

The Seasonal Drought Outlook issued on July 18 by the Climate Prediction Center (CPC), valid through October 31, shows drought remaining or worsening the western US, and drought improving in the eastern states. The middle part of the country, Iowa included, is predicted to remain free from drought.



## **OTHER WATER RESOURCE INFORMATION**

### **Border River Conditions**

Current conditions on both the Missouri and Mississippi Rivers have returned to near normal conditions. show above normal flows and flood conditions. On the Missouri River the US Army Corps of Engineers reports that the calendar year runoff forecast for the Missouri River Basin above Sioux City, IA as of August 1<sup>st</sup>, is 23.9 million acre-feet (MAF), or 93% of normal. For the month of July runoff in the Basin was 85% of normal above Sioux City, and only 55% of normal above Gavins Point. Drought conditions in the western portion of the Basin are expected to persist or worsen through the end of October.

### **June Soil Moisture**

Current soil moisture is near normal across most of the state, with some areas in northern and eastern Iowa showing wetter than normal conditions, and portions of southwest Iowa moving into drier than normal soil moisture conditions.

### **ADDITIONAL INFORMATION**

This edition of the Water Summary Update continues to reflect use of the 2023 Iowa Drought Plan (IDP), which was developed as a collaborative effort between the Department of Natural Resources, the Department of Agriculture and Land Stewardship, and the Department of Homeland Security and Emergency Management. The IDP can be seen in its entirety on the DNR's website: [The Iowa Drought Plan](#).

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