



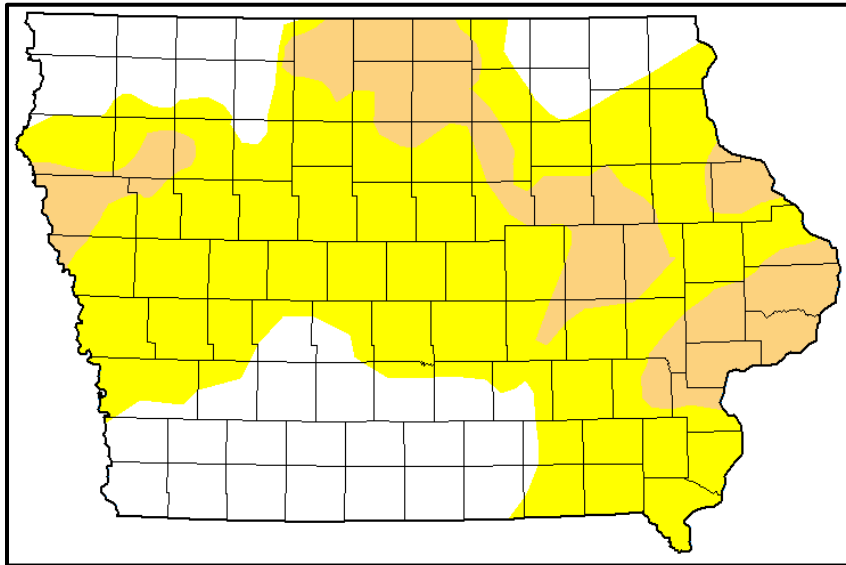
WATER SUMMARY UPDATE

Published Date February 10, 2022 | Issue 128

A snapshot of water resource trends for January, 2022

Drought Monitor - Conditions as of January 10, 2022

National Drought Mitigation Center and partners

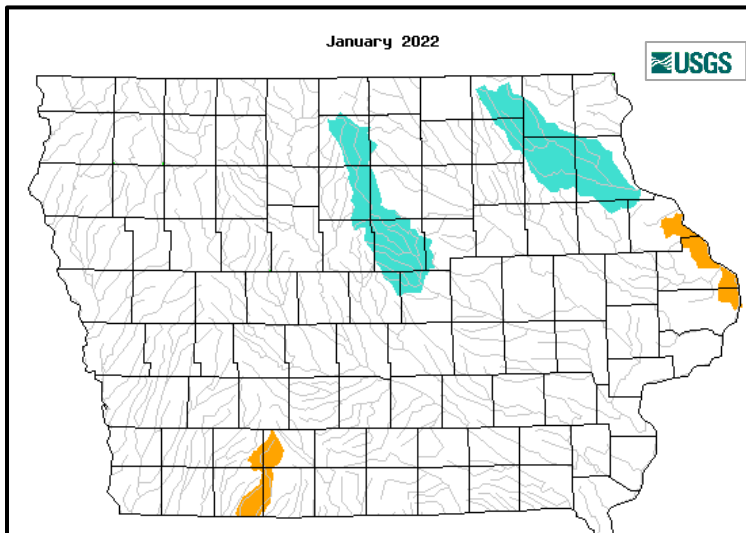


Intensity:

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

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

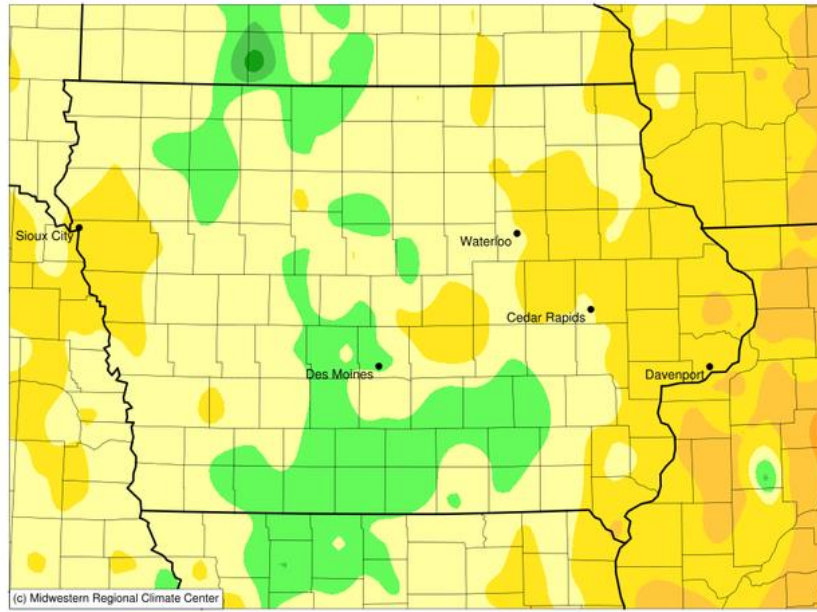
Stream Flow – January, 2022



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

Accumulated Precipitation (in): Departure from 1991-2020 Normals

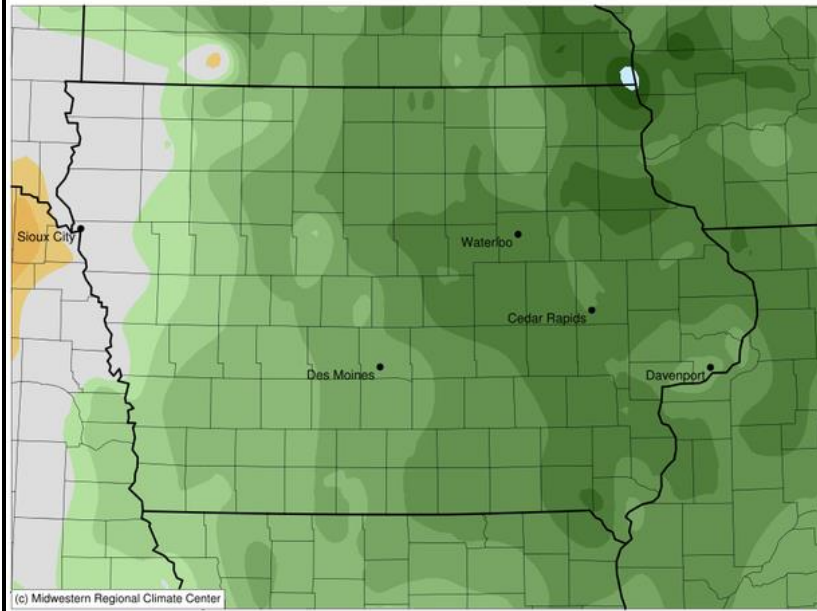
January 01, 2022 to January 31, 2022



-2 -1.5 -1 -0.5 0 0.5 1
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: 2/9/2022 1:47:13 PM CST

Average Temperature (°F): Departure from 1991-2020 Normals

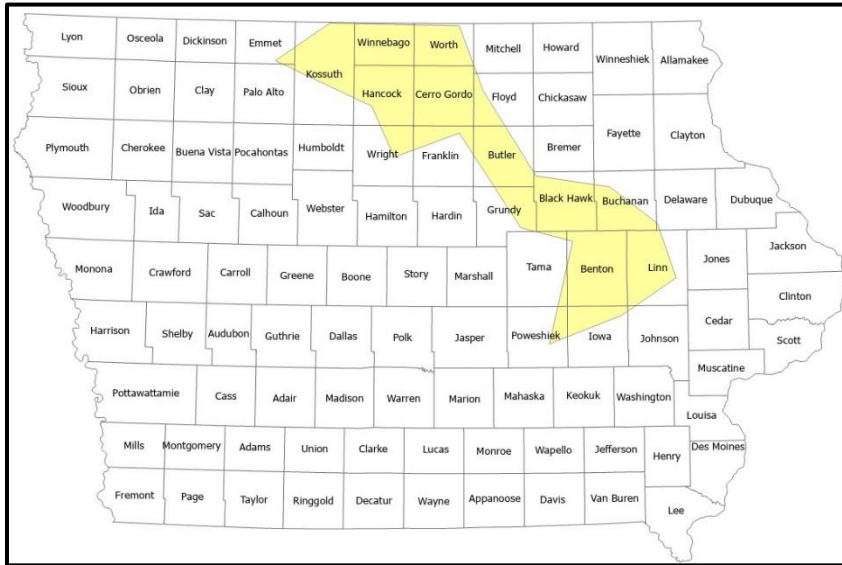
January 01, 2022 to January 31, 2022



-10 -5 0
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: 2/9/2022 1:45:42 PM CST

Shallow Groundwater - Conditions for January, 2022

Iowa DNR and IIHR-Hydroscience and Engineering



RECENT DEVELOPMENTS AND CHANGES

SUMMARY

January was colder and drier than normal in Iowa, with temperatures averaging 14.7 degrees, or 4.8 degrees below normal. January ranked as the 38th coldest January in 150 years of statewide records. Meanwhile, precipitation averaged just 0.68 inches or 0.29 inches below normal. Drought conditions remained steady in January, but have deteriorated in early February, with over 70 percent of the state now in some form of dryness or drought. Shallow groundwater conditions remain normal, benefitting from low water demand during the winter months. Streamflow is normally lowest in January, and are now generally in that normal range across the state.

DROUGHT MONITOR

Abnormally dry (D0) and drought conditions remained generally status quo through January with 49% D0-D1 (Moderate Drought) coverage at the start of the month – but have deteriorated in early February. Northwest Iowa continued to see a lack of snowfall, which allowed for warmer temperatures than across the rest of the state. With longer-term dryness continuing, a small swath of D1 was introduced during the second week of January. Abnormally dry conditions also slightly expanded across eastern Iowa towards the end of the month. As of the first week of February, D0 covered 53% of the state with nearly 19% covered by D1.

JANUARY PRECIPITATION AND TEMPERATURE

Much of Iowa's eastern quarter experienced precipitation deficits between 0.50 inch to 1.00 inch through January. Many stations in the central portion of Iowa, especially south-central Iowa, observed above-average totals of around 0.50 inch. Overall, a majority of Iowa's reporting stations were near to slightly below normal for the month.

Monthly precipitation (melted snow and sleet plus rain) totals ranged from 0.05 inches in Sioux City to 1.76 inches in Sigourney. Above-average snowfall also blanketed much of Iowa with the preliminary average snowfall

of 8.5 inches, 0.8 inch above average. January 2022 ties 1949 as the 13th snowiest on record. Des Moines International Airport reported the highest monthly snow total of 18.7 inches.

Negative temperature departures were observed across a majority of Iowa through January with averages of up to eight degrees below normal in northeastern Iowa. A lack of snowpack in northwestern Iowa allowed for relatively warmer temperatures, with near-normal readings observed along the Iowa-Nebraska border.

Sioux City Airport reported the month's high temperature of 62 degrees on the 18th, 33 degrees above normal. Elkader reported the month's low temperature of -30 degrees on the 26th, 35 degrees below normal.

JANUARY STREAM FLOW

During the month of January, streamflow conditions remained normal for the majority of the state. The Turkey River and a portion of the Iowa River moved into the much above normal range and a portion of the Platte River moved into the below normal condition.

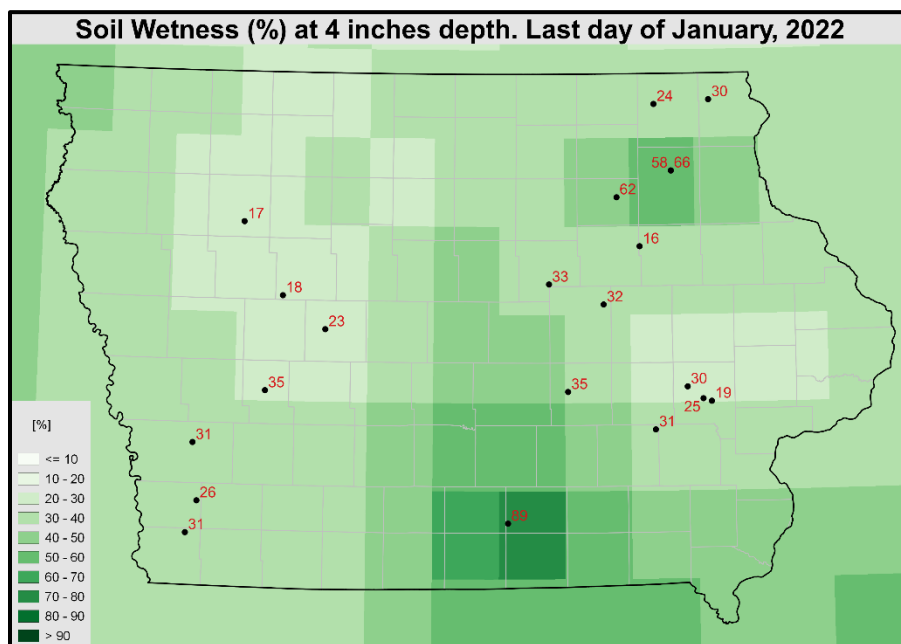
It should be noted that during the winter season, USGS streamflow data may be impacted by ice formation and backwater. This information should be used as preliminary information only.

JANUARY SHALLOW GROUNDWATER

Shallow groundwater conditions remain normal across the state with no reported water level issues or observations to indicate otherwise. Shallow groundwater conditions should remain stable throughout the winter months.

JANUARY SOIL MOISTURE

Frozen soil conditions across the state have led to generally stable soil moisture levels. The WSU includes a new map produced by Iowa Flood Center developed from measured soil moisture values collected across the state. The current map of 4 inch depth soils indicates the wettest conditions in south central Iowa, with soil wetness near 90% in Monroe and Appanoose Counties. Most of the rest of the state shows soil moisture levels at 30 to 50 percent of capacity. Normal spring rains falling onto thawed soils will increase soil moisture levels in the months ahead. IFC staff will provide updated soil moisture information in future published WSUs.



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 515-452-6633
- Drought Monitor and Precipitation. Justin.Glisan@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. greg-brennan@uiowa.edu 319-335-4465

Earlier this week, the NWS had a Red Flag (Fire Weather) Warning active for a few counties in far western Iowa. These warnings mean that ignited fires could uncontrollably spread due to low humidity, combustible ground surface, and strong winds. As the featured chart shows, it is an early start to the fire weather season. The chart depicts the period each year between the first and last such warning for somewhere in Iowa. The average start date is still some six weeks from now. For areas of the state without any snow cover, the recent dryness, windy and warmer conditions have increased the fire spreading threat. The near term forecast continues to be very dry and perhaps some of these warnings will again be necessary next week with expected warmer and windy conditions.