



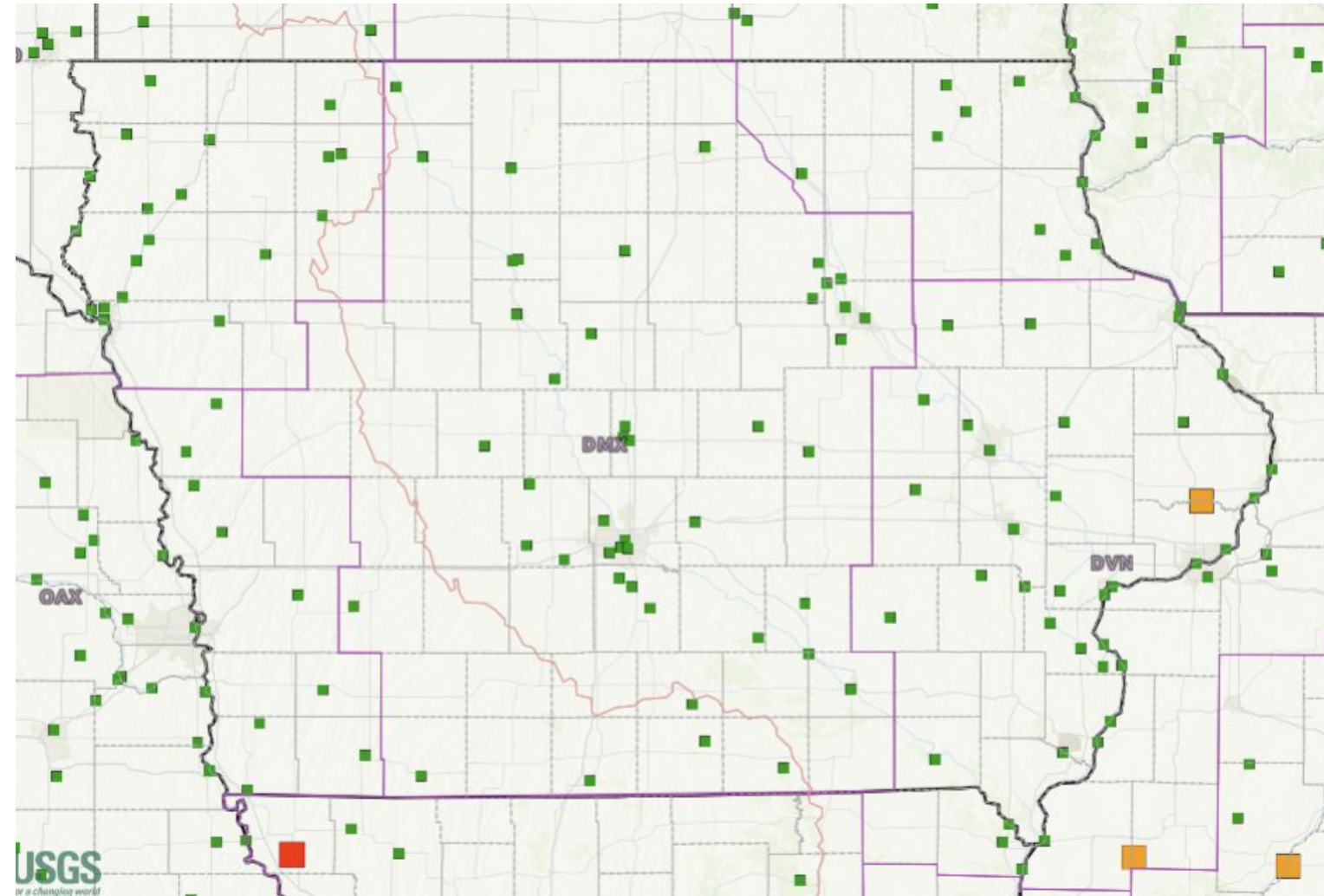
Overview

Key Messages

- Near to below normal spring flood threat for all rivers.
- A near to below normal risk of flooding does not necessarily mean that flooding will not occur.
- This outlook pertains mainly to rivers. Any flash flood risk can be highly localized.
- Seasonally moderate to heavy rainfall next week may lead to brief within-bank rises on eastern Iowa rivers.
- Drought conditions are expected to continue through the spring.
- Ice jams are not expected to result in significant flooding.
- Future weather—especially including amount and timing of precipitation—can be big factors in the spring flood threat.

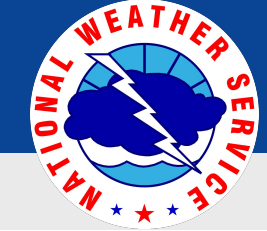
Next Scheduled Update

- This briefing is the only one planned for the season unless conditions significantly change.



Flood risk from early March through early June

[Click here for the latest map](#)



Spring 2025 Flood Outlook for Iowa

February 27, 2025

Spring flood element checklist

Below is the spring flood element checklist. The individual elements appear on the following slides. Future weather—including amount and timing of precipitation as well as rate of snowmelt—can be big factors in any spring flood threat. Heavy precipitation, rain on snow and a rapid snowmelt will increase the risk. Little precipitation or a slow snow melt will lessen the risk. Flooding from ice jams is a minimal risk this year. For your reference, here are links to the current [Drought Monitor](#) as well as the NWS/CPC [monthly](#) and [seasonal](#) drought outlooks.

Element	Impact on Potential Spring Flooding	Link to Latest Information
River levels	Neutral	USGS WaterWatch
Soil moisture	Decreased risk	NASA SPoRT Soil Moisture
Snowpack/snow water equivalent	Decreased risk	NWS National Snow Analysis NCRFC Ranked Snow Water Equivalent MBRFC Ranked Snow Water Equivalent
Frost depth	Increased risk	NWS Frost Depth Map Iowa Environmental Mesonet Soil Temps
Monthly temperature outlook	Neutral	CPC Outlooks
Monthly precipitation outlook	Neutral to increased risk	CPC Outlooks





Spring 2025 Flood Outlook for Iowa

February 27, 2025

Flood risk by river

Below is the spring flood risk for the rivers in and bordering Iowa.

River	Spring Flood Risk
Mississippi River—down to Davenport	Below normal
Mississippi River—downstream of Davenport	Below normal
Big Sioux River (far northwest Iowa)	Below normal
Missouri River—down to Platte River	Below normal
Missouri River—downstream of Platte River	Below normal
Tributaries to Mississippi River in Eastern Iowa	Near to below normal
Tributaries to Mississippi River in Central Iowa	Near to below normal
Tributaries to Big Sioux River	Below normal
Tributaries to Missouri River in Iowa	Near to below normal





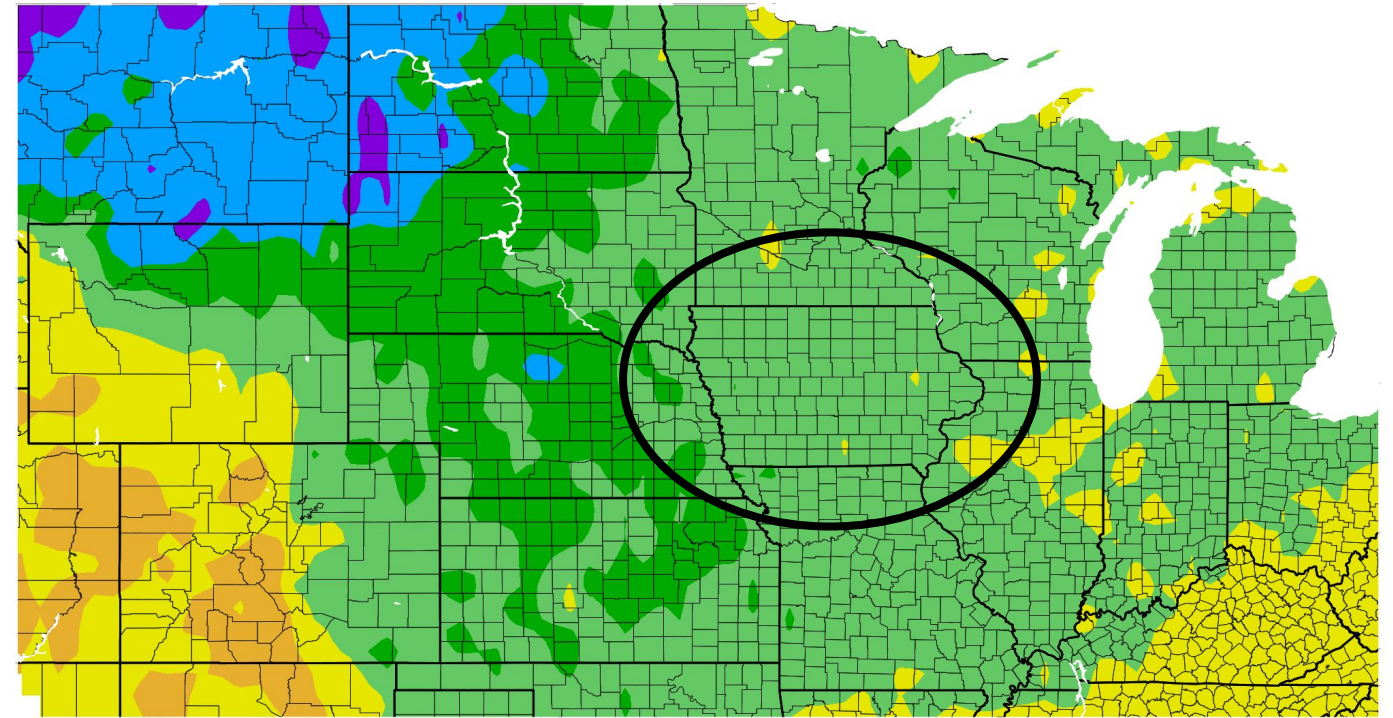
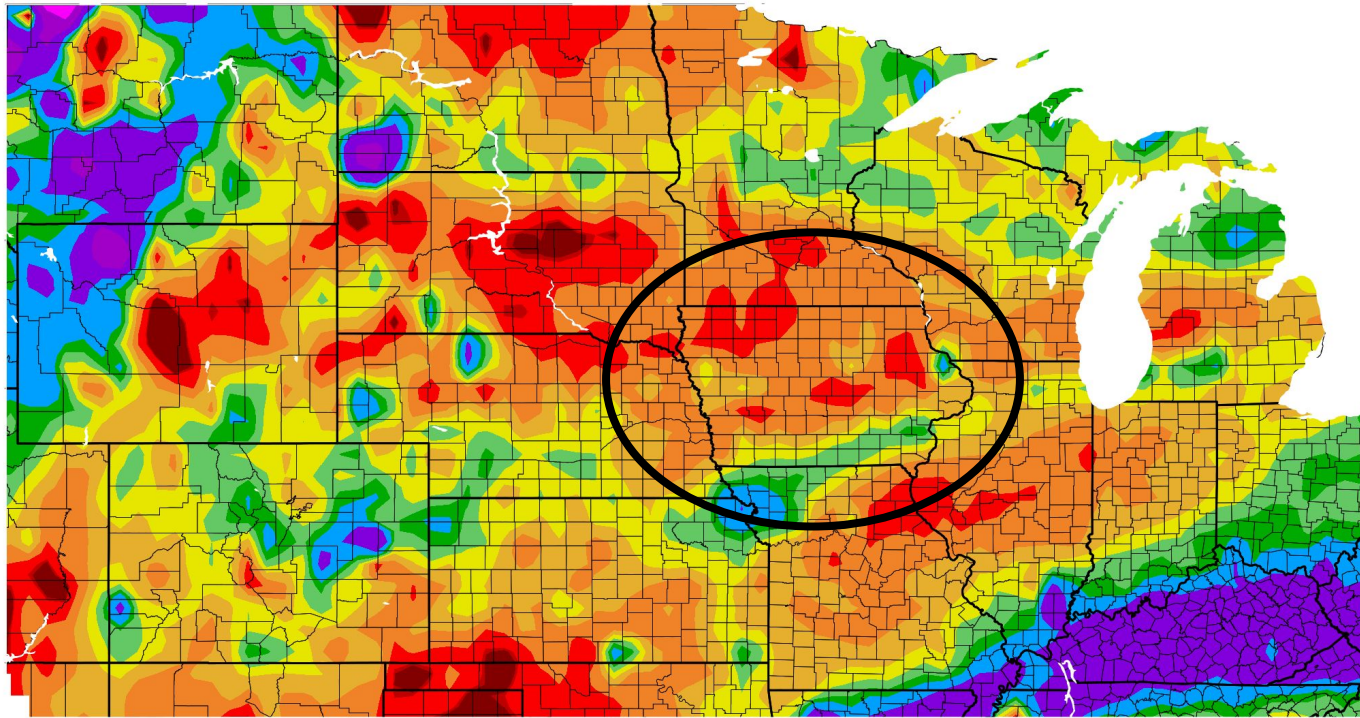
Spring 2025 Flood Outlook for Iowa

February 27, 2025

Percent of normal precipitation and departure from normal temperature, last 30 days

Percent of Normal Precipitation (%)
1/28/2025 – 2/26/2025

Departure from Normal Temperature (F)
1/28/2025 – 2/26/2025



Generated 2/27/2025 at HPRCC using provisional data.

NOAA Regional Climate Centers



Generated 2/27/2025 at HPRCC using provisional data.

NOAA Regional Climate Centers





Spring 2025 Flood Outlook for Iowa

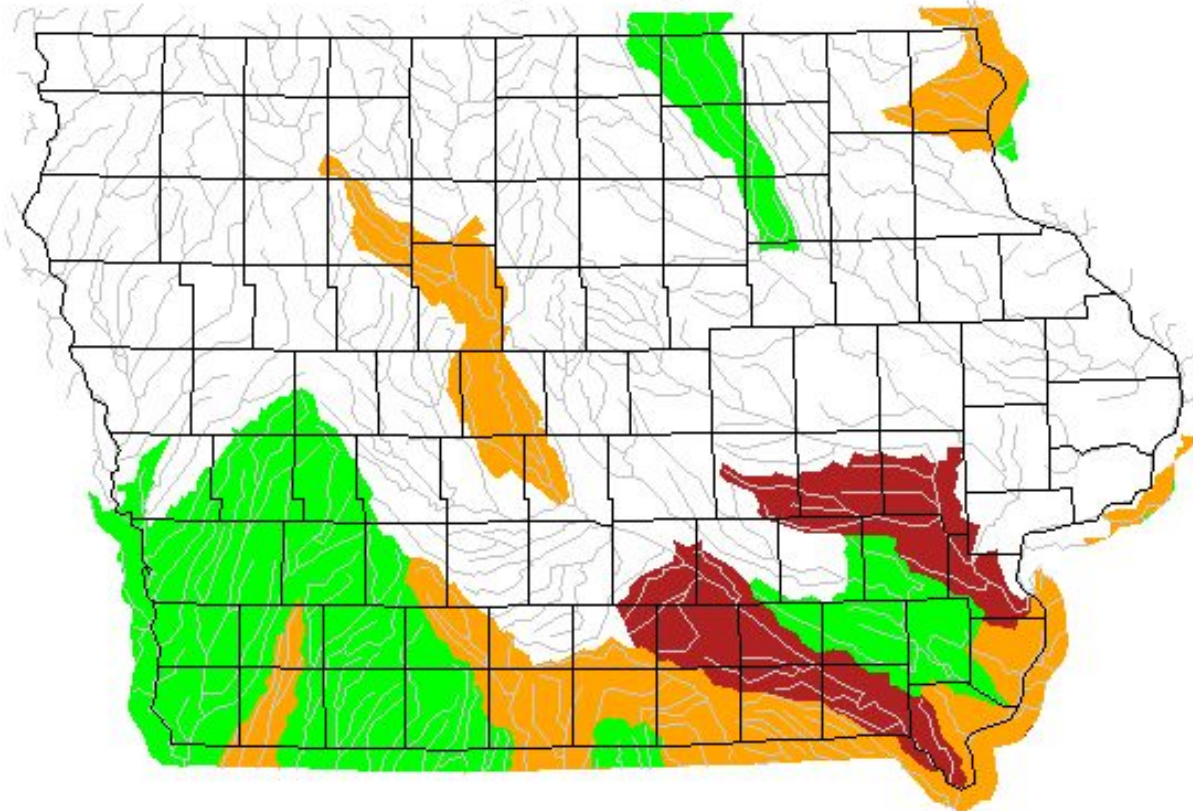
February 27, 2025

Streamflow percentiles and state duration hydrograph for runoff

Streamflow percentiles

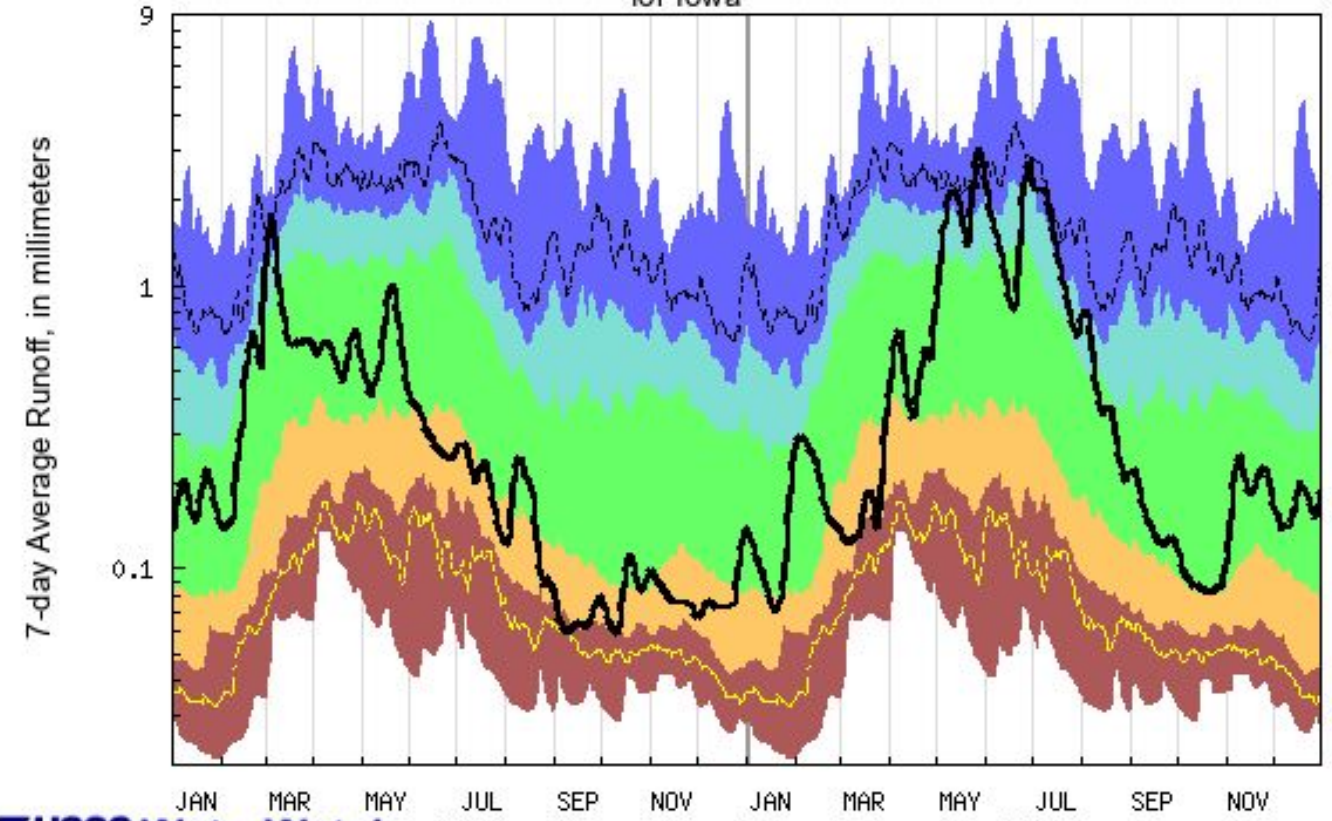
State duration hydrograph for runoff-weighted average

Wednesday, February 26, 2025



Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	No Data
	Much below normal	Below normal	Normal	Above normal	Much above normal		

Duration hydrograph of 7-day average runoff for Iowa



Last updated: 2025-02-27

Explanation - Percentile classes							
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile-highest	Runoff
Much below Normal		Below normal	Normal	Above normal	Much above normal		



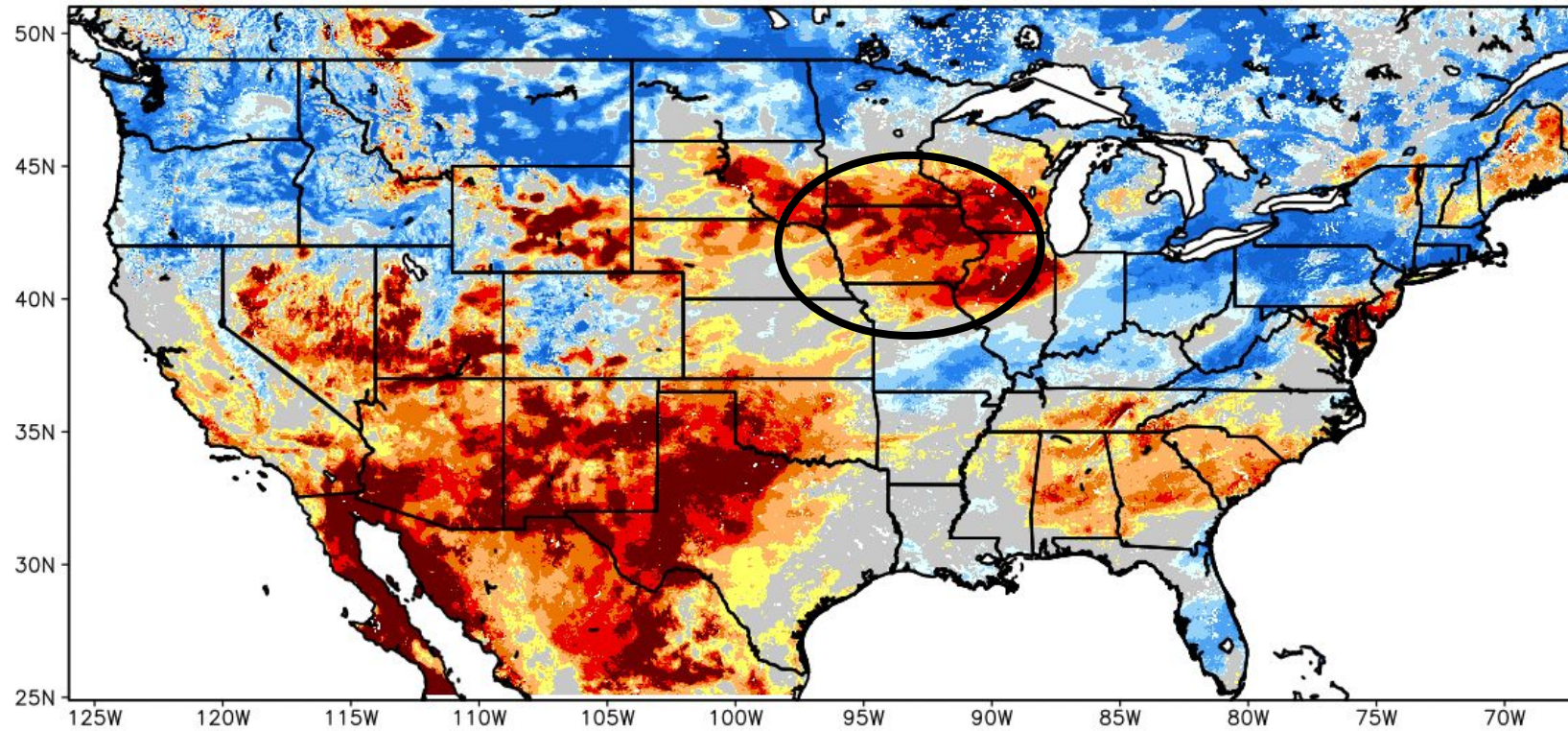


Spring 2025 Flood Outlook for Iowa

February 27, 2025

Soil moisture percentiles, top 4 inches

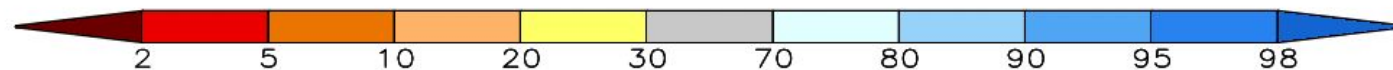
SPoRT-LIS 0-10 cm Soil Moisture percentile valid 26 Feb 2025



30th to 70th percentile is near normal (grey)
 >70th percentile is above normal (white/blue)
 <30th percentile is below normal (brown/red)

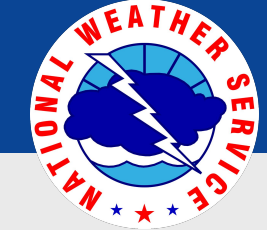
To convert centimeters (cm) to inches:
 approximately 2.5 cm equals one inch
 10 cm = ~4 inches

Generally below to much below normal across the state



****NOTE****
****Experimental****



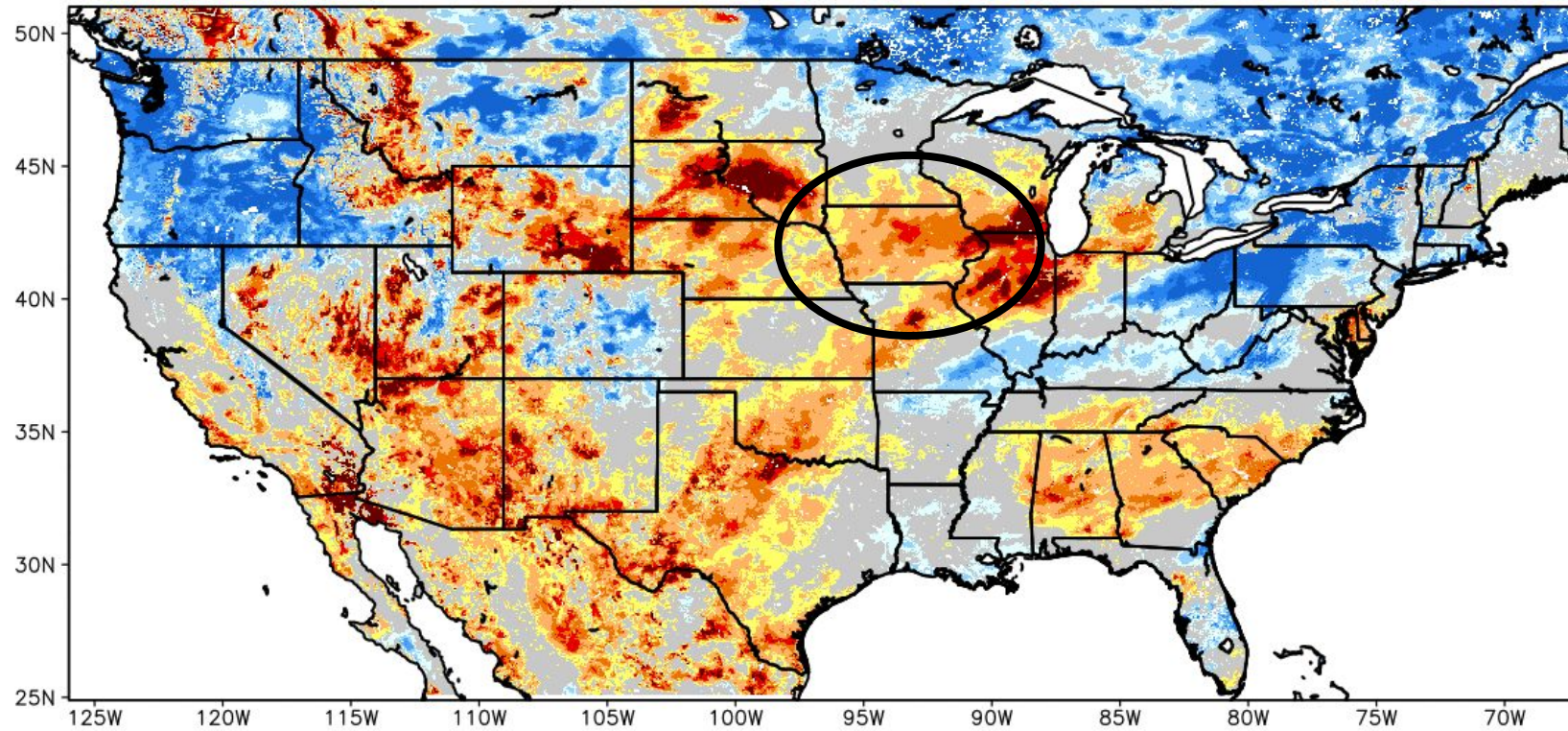


Spring 2025 Flood Outlook for Iowa

February 27, 2025

Soil moisture percentiles, top 15 inches

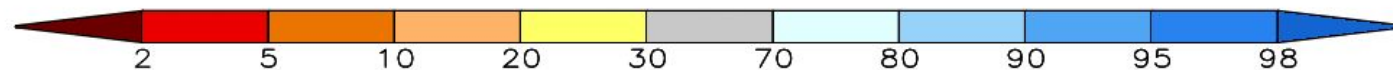
SPoRT-LIS 0-40 cm Soil Moisture percentile valid 26 Feb 2025



30th to 70th percentile is near normal (grey)
 >70th percentile is above normal (white/blue)
 <30th percentile is below normal (brown/red)

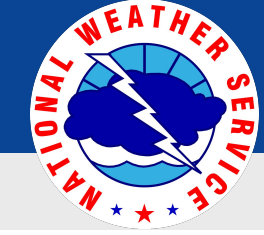
To convert centimeters (cm) to inches:
 approximately 2.5 cm equals one inch
 40 cm = ~16 inches

Generally below to much below normal across the state



****NOTE****
****Experimental****





Spring 2025 Flood Outlook for Iowa

February 27, 2025

Drought Monitor and Drought Monitor class change, 3 months and 1 year

U.S. Drought Monitor Iowa

February 25, 2025
(Released Thursday, Feb. 27, 2025)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	14.46	85.54	72.65	1.30	0.00	0.00
Last Week 02-18-2025	14.46	85.54	61.42	1.30	0.00	0.00
3 Months Ago 11-26-2024	6.83	93.17	60.23	1.30	0.00	0.00
Start of Calendar Year 01-07-2025	20.41	79.59	57.13	1.30	0.00	0.00
Start of Water Year 10-01-2024	6.02	93.98	23.20	1.29	0.00	0.00
One Year Ago 02-27-2024	0.78	99.22	79.04	56.37	18.58	0.00

Intensity:

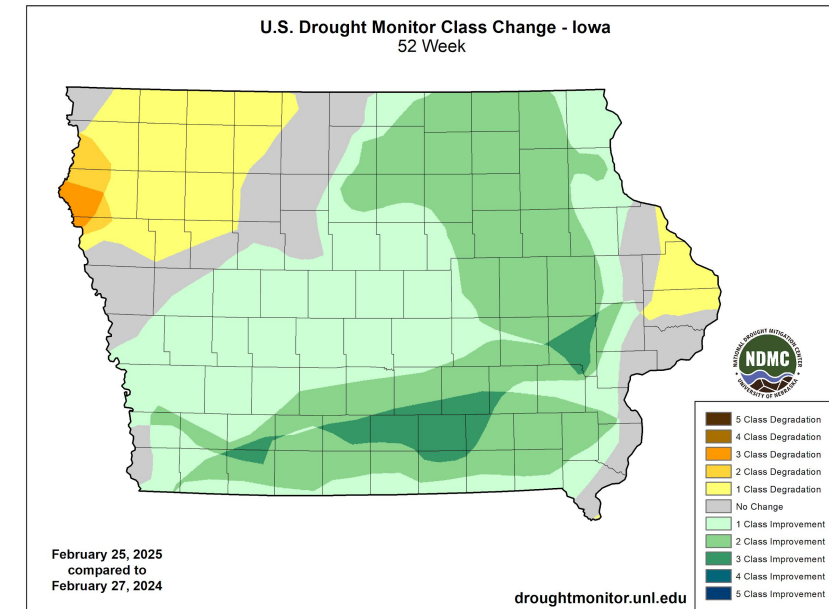
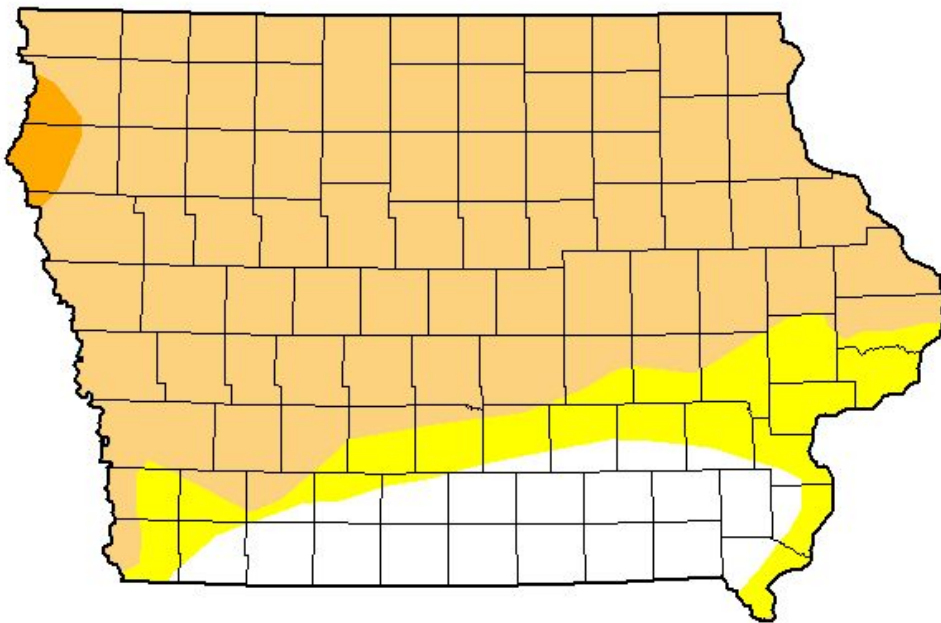
- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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>

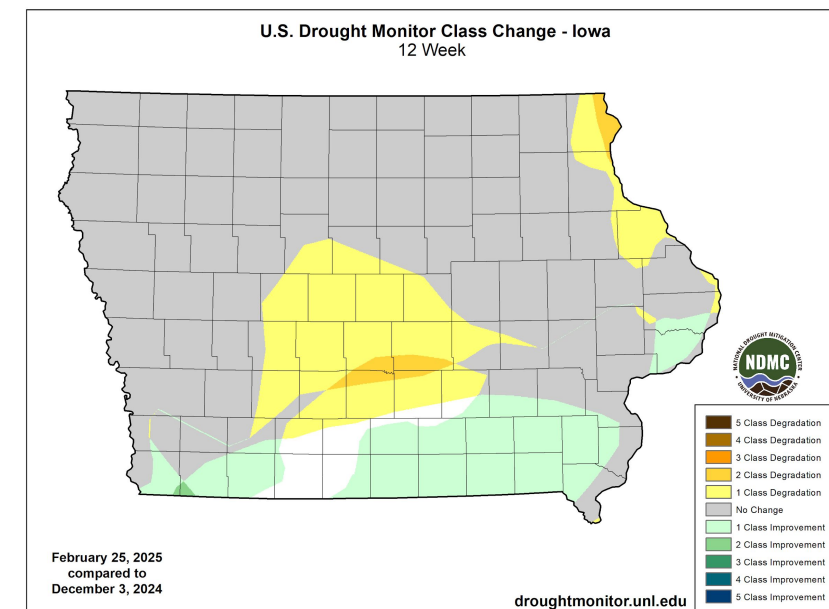
Author:
Brian Fuchs
National Drought Mitigation Center



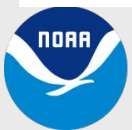
droughtmonitor.unl.edu



3-month change



1-year change



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National Weather Service
Iowa



Spring 2025 Flood Outlook for Iowa

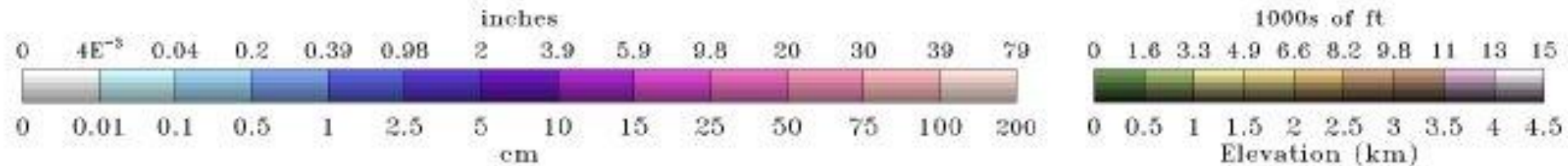
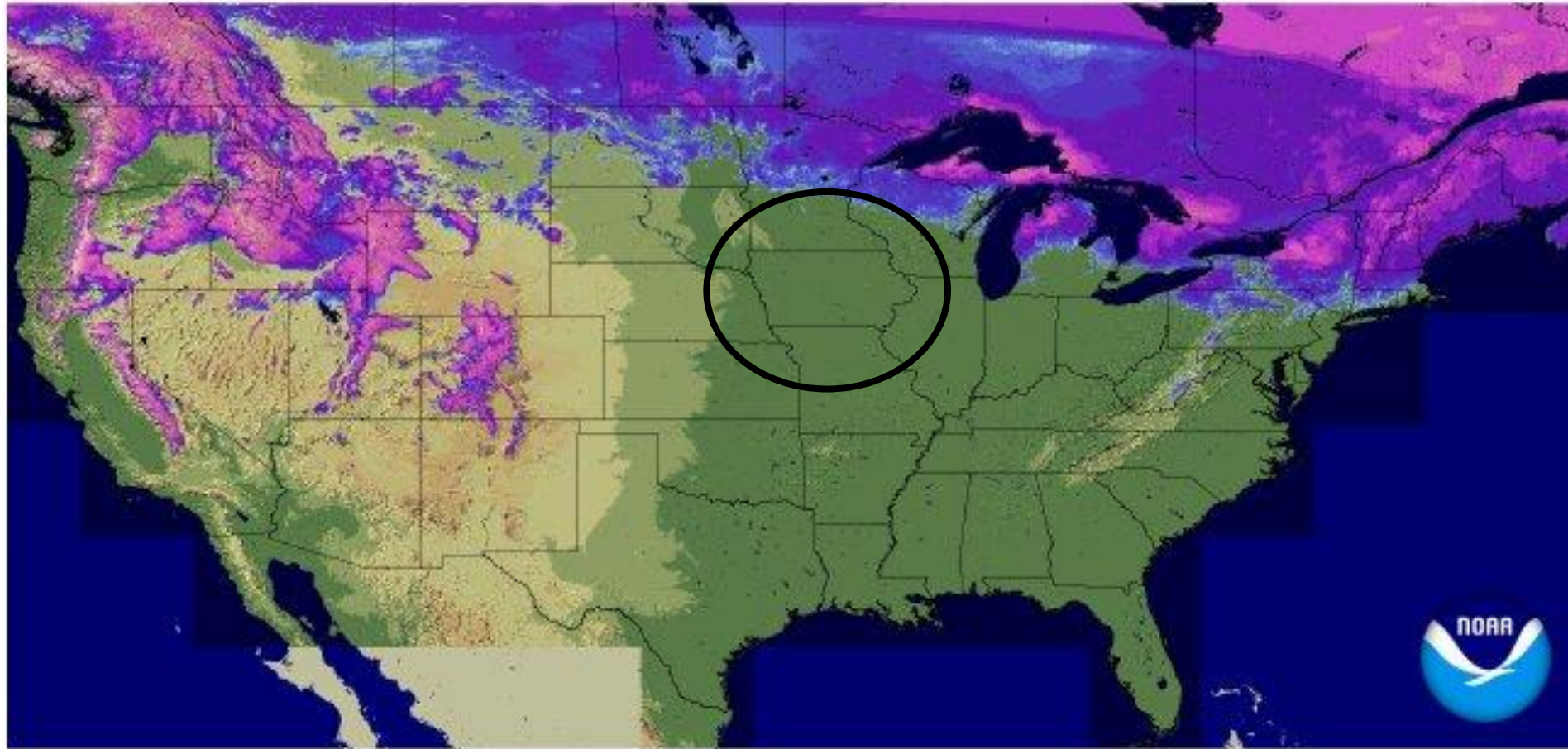
February 27, 2025

Snow water equivalent

National Snow Analysis

Snow Water Equivalent

2025-02-26 06 UTC



OFFICE OF WATER PREDICTION
OWP



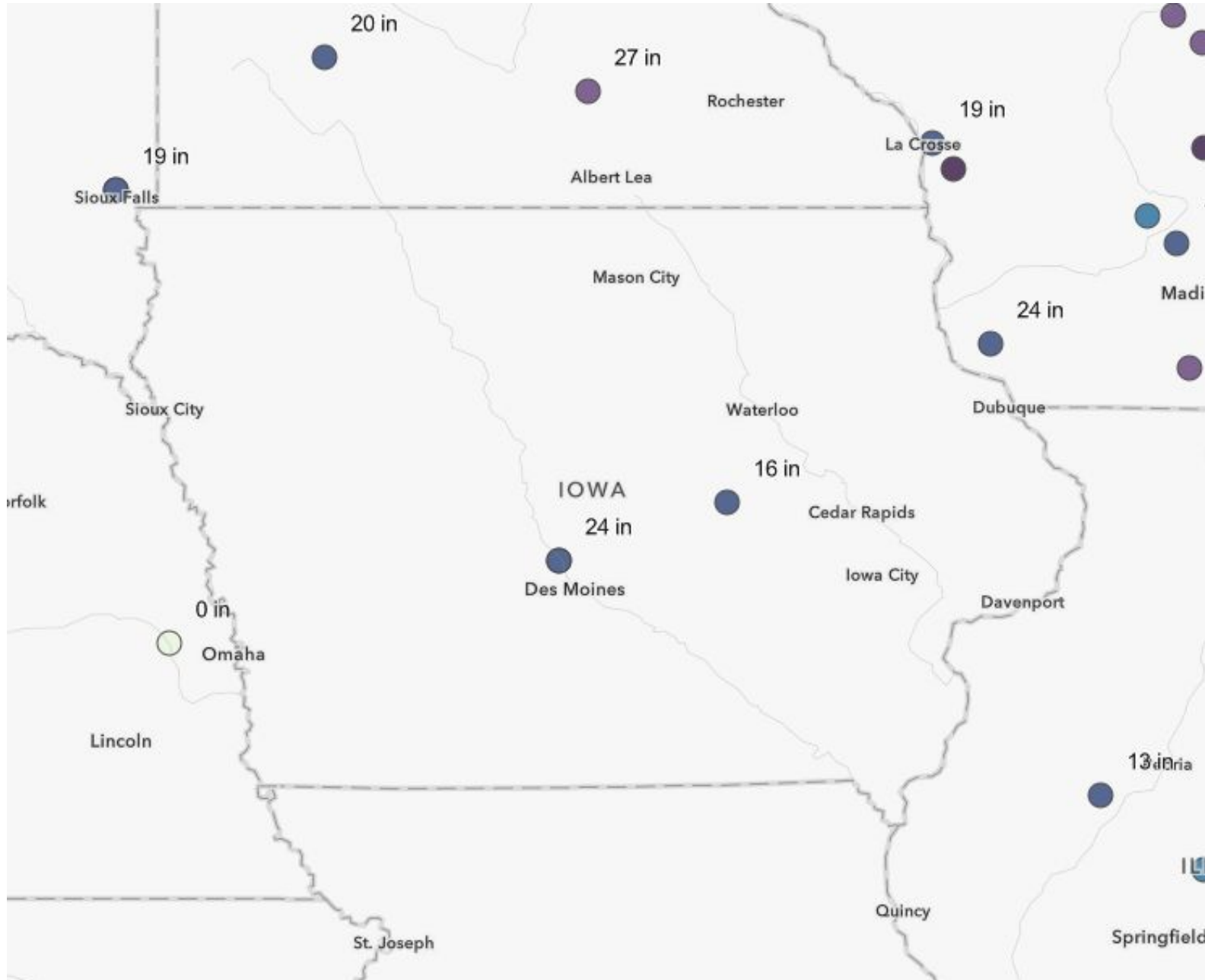
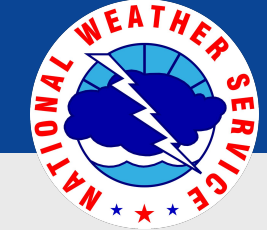
National Oceanic and Atmospheric Administration

U.S. Department of Commerce

National Weather Service
Iowa

Spring 2025 Flood Outlook for Iowa

Frost depth



Soil Frost Depth (Inches)

FrostDepth

- > 36" - 60"
- > 24" - 36"
- > 12" - 24"
- > 6" - 12"
- > 0" - 6"
- 0"

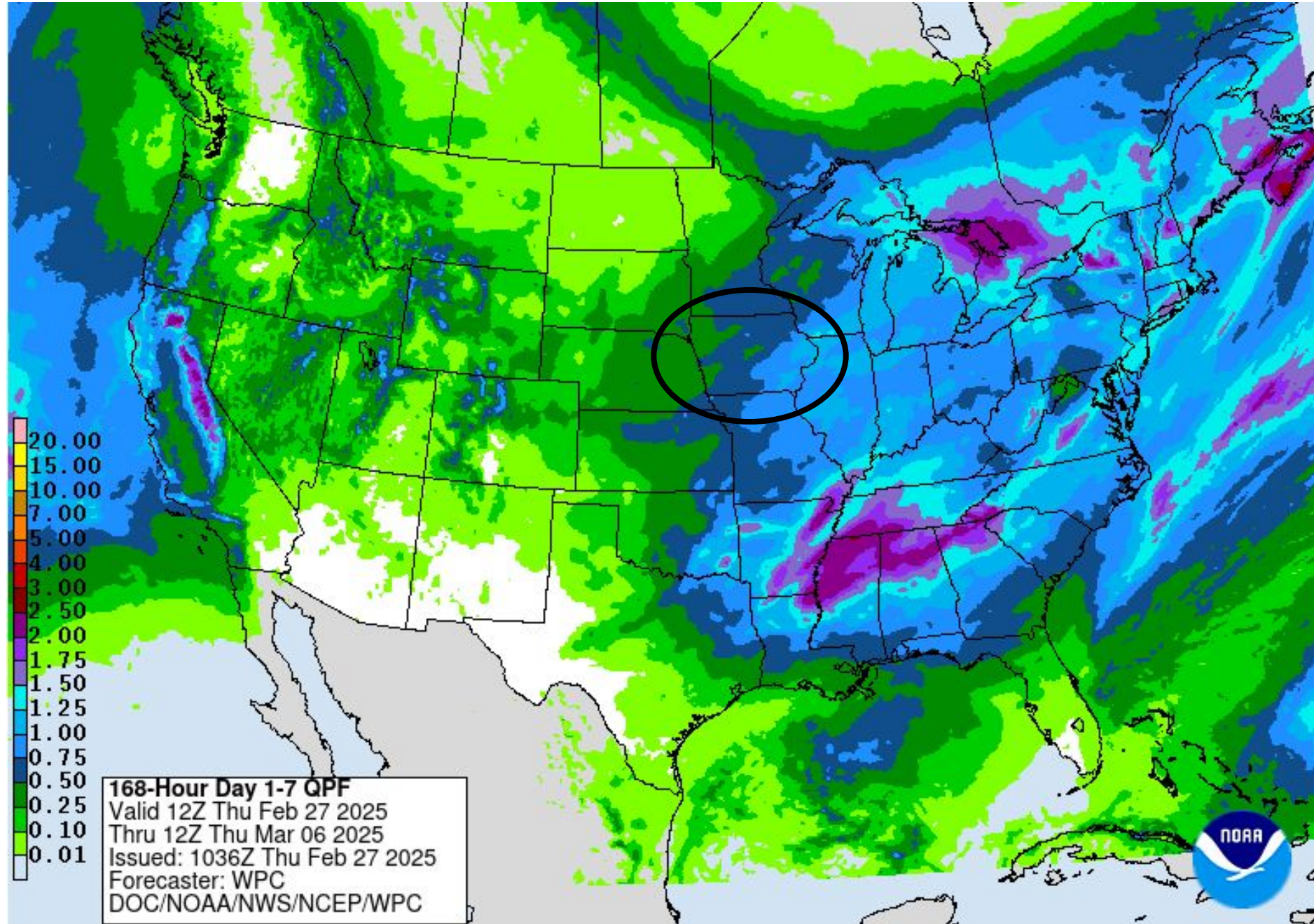




Spring 2025 Flood Outlook for Iowa

February 27, 2025

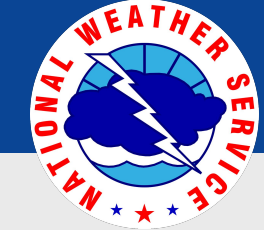
7-day forecast precipitation



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National Weather Service
Iowa



Spring 2025 Flood Outlook for Iowa

February 27, 2025

6-10 day temperature and precipitation outlooks



6-10 Day Temperature Outlook

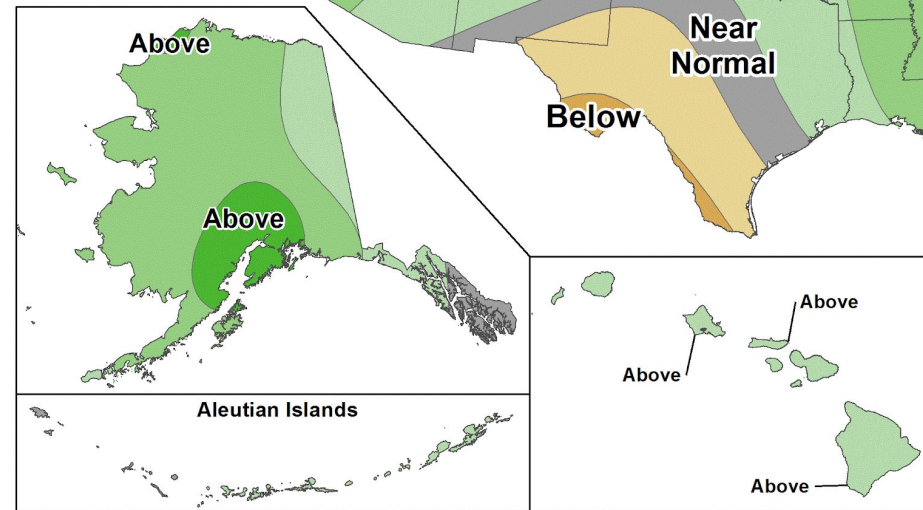
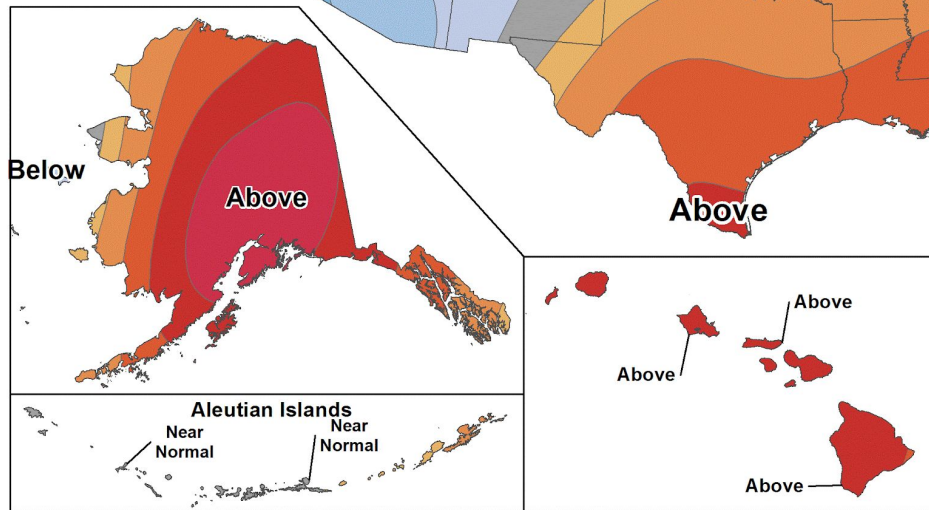
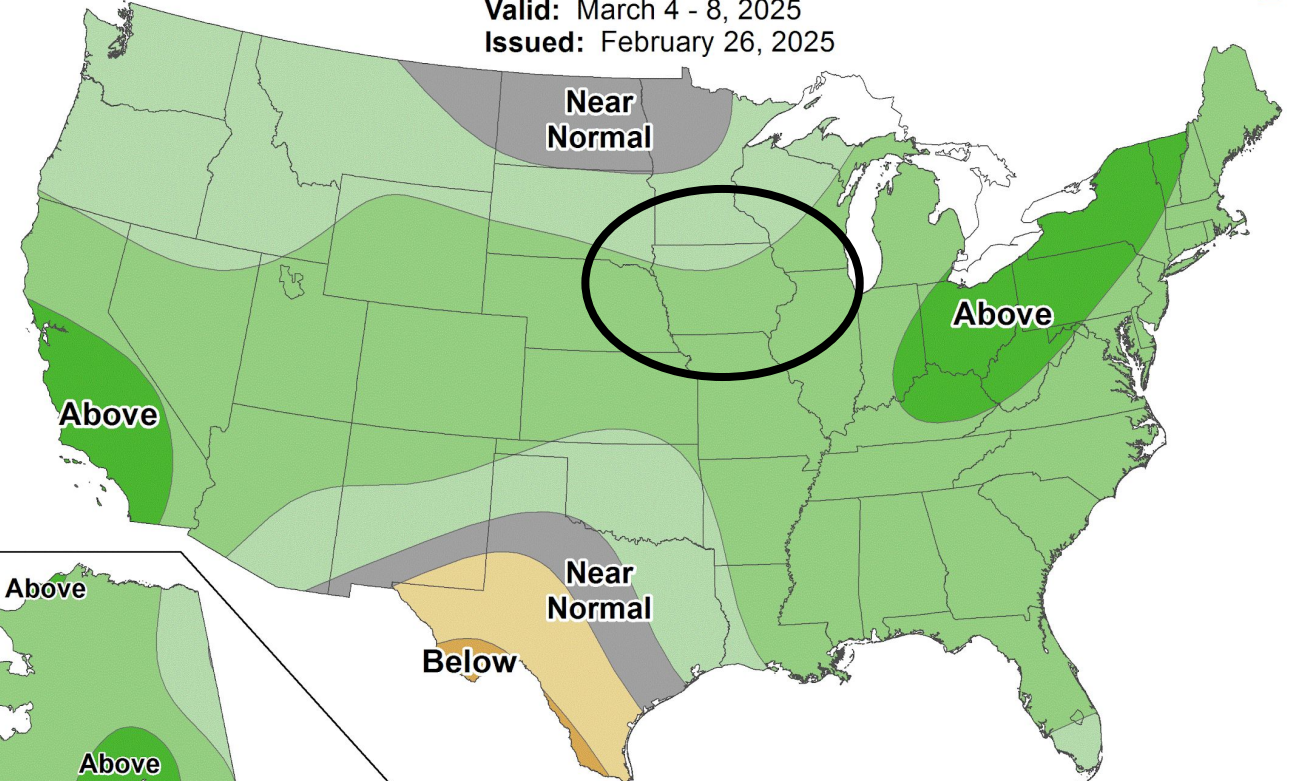
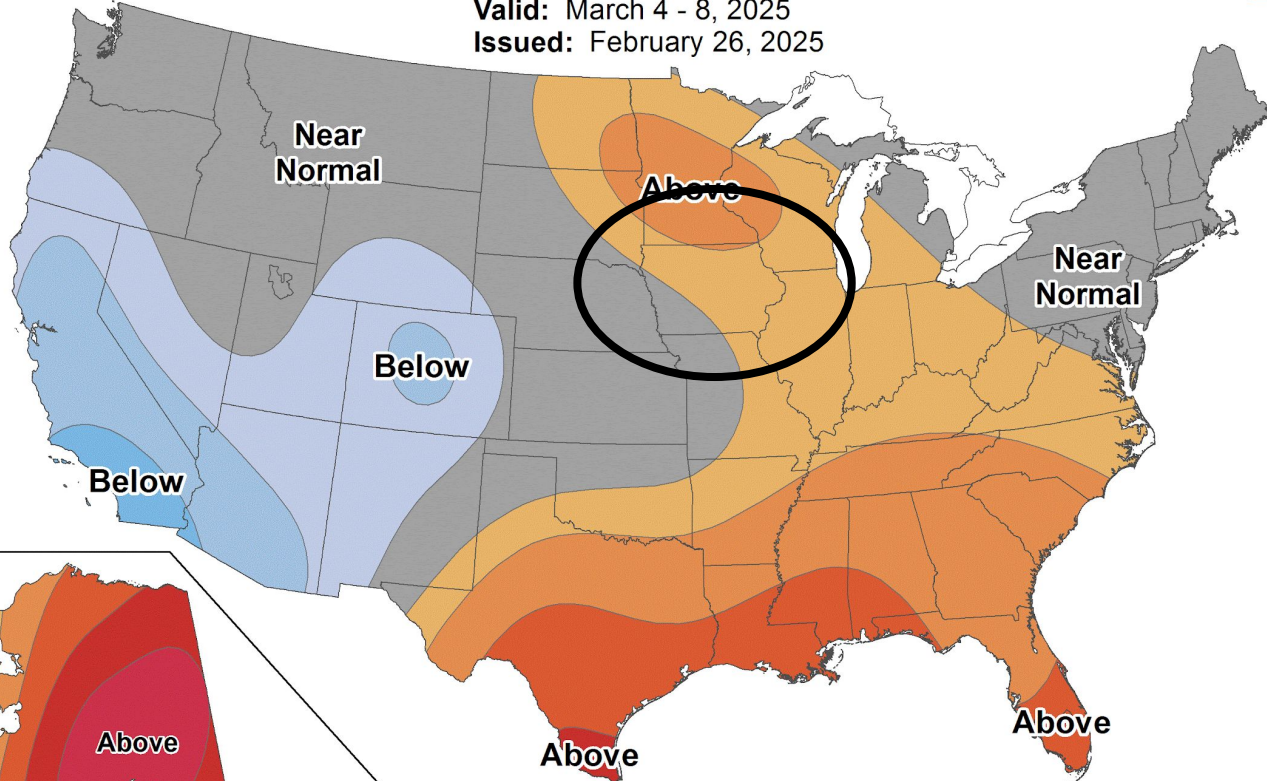


Valid: March 4 - 8, 2025
Issued: February 26, 2025

6-10 Day Precipitation Outlook



Valid: March 4 - 8, 2025
Issued: February 26, 2025



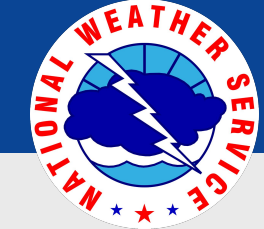
Probability (Percent Chance)

Above Normal		Below Normal	
Leaning Above	33-40%	33-40%	Leaning Below
	40-50%	40-50%	
	50-60%	50-60%	
Likely Above	60-70%	60-70%	Likely Below
	70-80%	70-80%	
	80-90%	80-90%	
	90-100%	90-100%	
Near Normal		Near Normal	

Probability (Percent Chance)

Above Normal		Below Normal	
Leaning Above	33-40%	33-40%	Leaning Below
	40-50%	40-50%	
	50-60%	50-60%	
Likely Above	60-70%	60-70%	Likely Below
	70-80%	70-80%	
	80-90%	80-90%	
	90-100%	90-100%	
Near Normal		Near Normal	





Spring 2025 Flood Outlook for Iowa

February 27, 2025

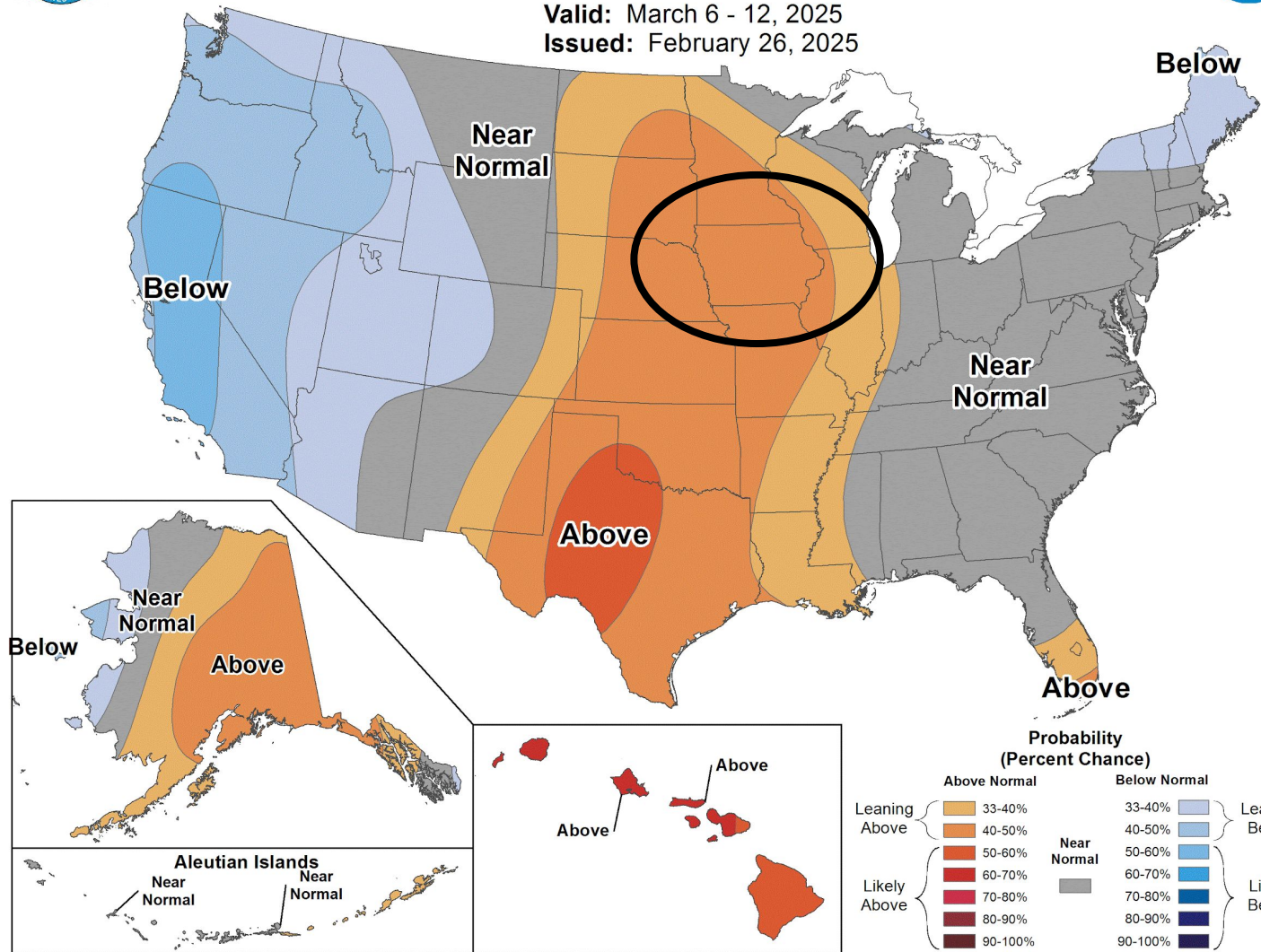
8-14 day temperature and precipitation outlooks



8-14 Day Temperature Outlook



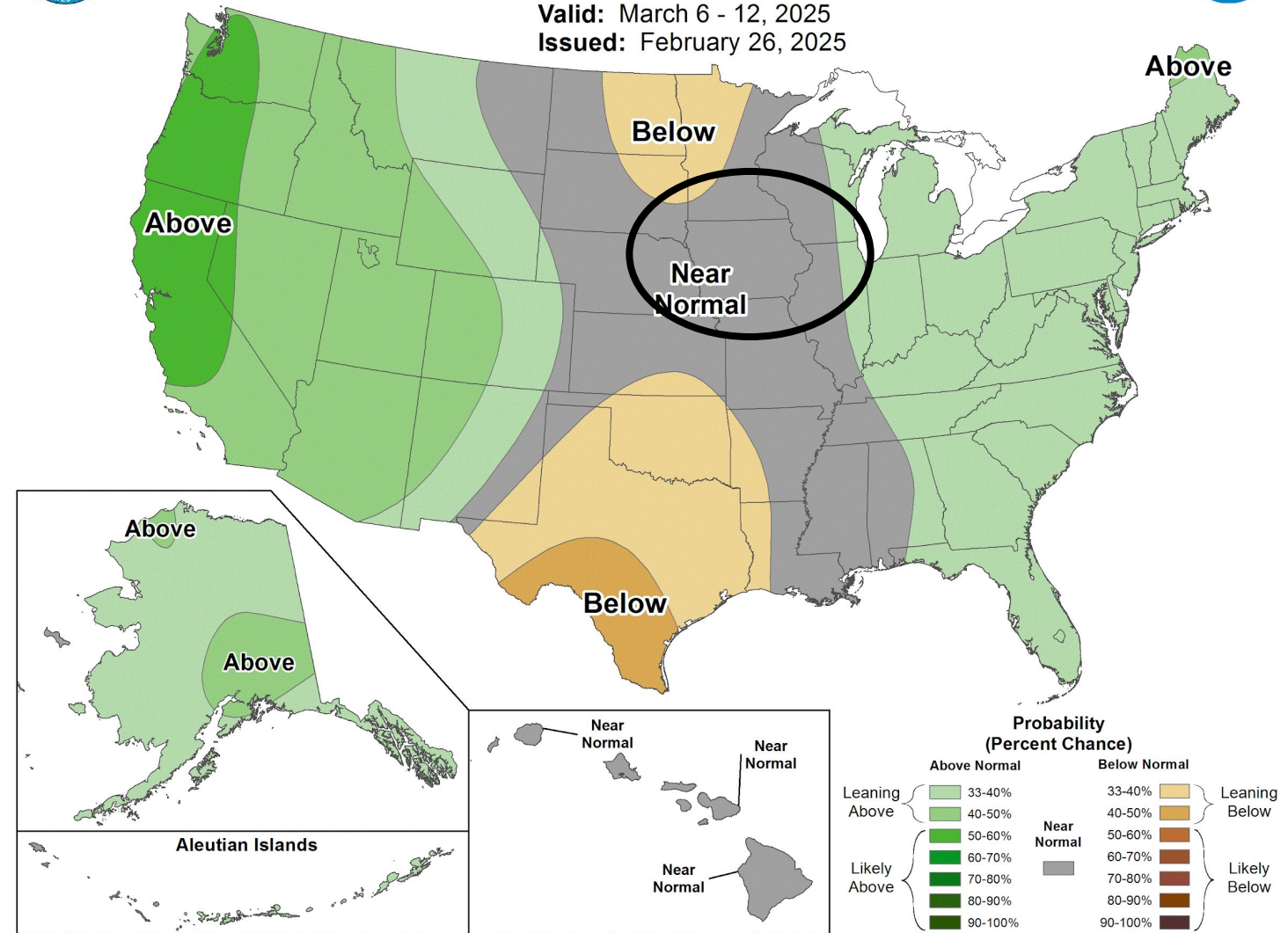
Valid: March 6 - 12, 2025
Issued: February 26, 2025



8-14 Day Precipitation Outlook



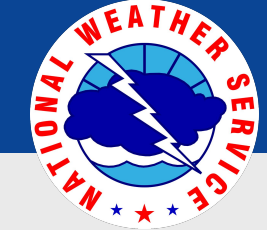
Valid: March 6 - 12, 2025
Issued: February 26, 2025



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Iowa



Spring 2025 Flood Outlook for Iowa

February 27, 2025

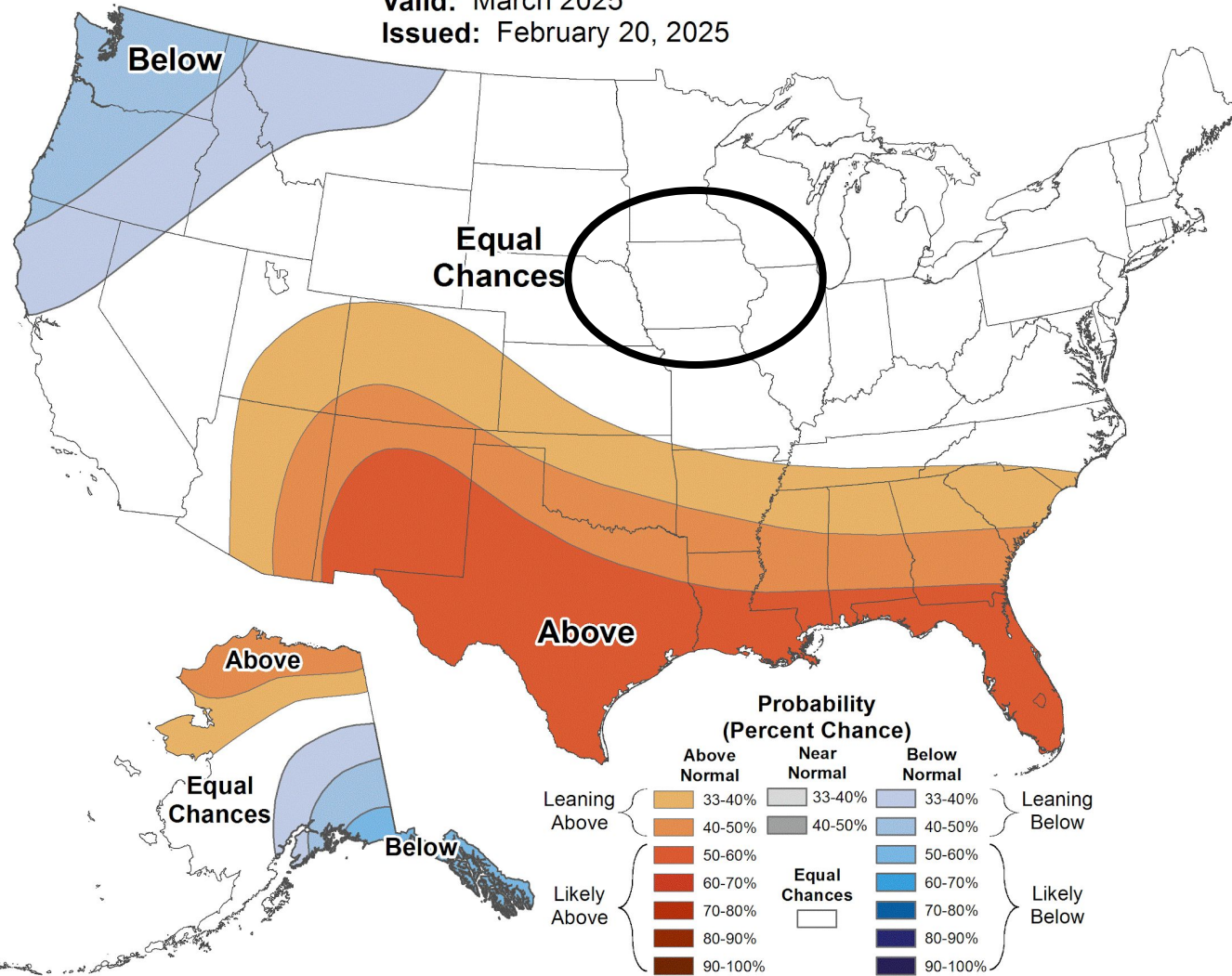
Monthly temperature and precipitation outlooks



Monthly Temperature Outlook



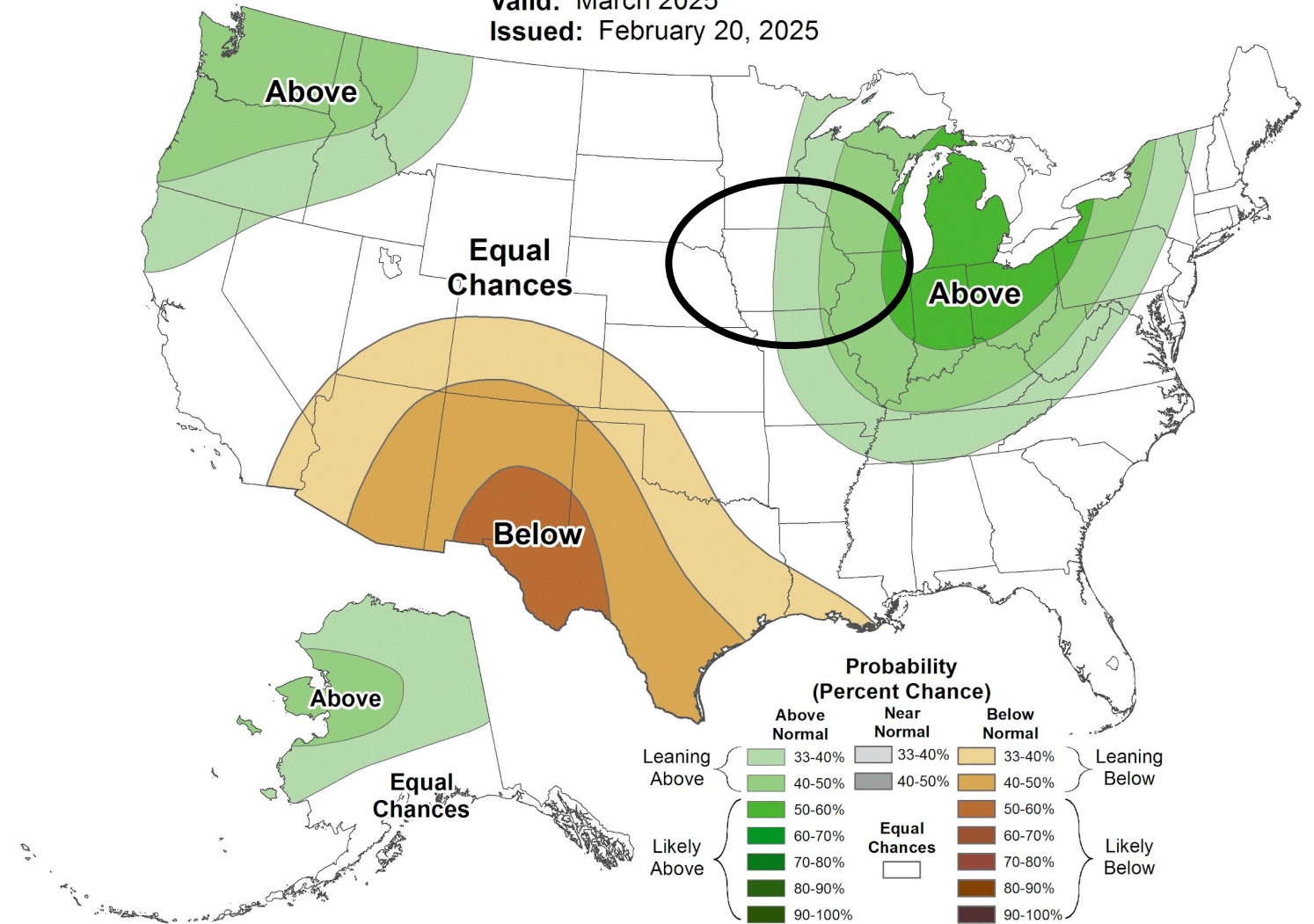
Valid: March 2025
Issued: February 20, 2025

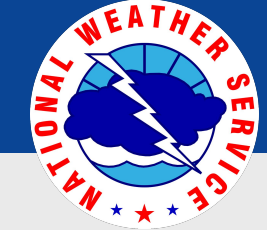


Monthly Precipitation Outlook



Valid: March 2025
Issued: February 20, 2025





Spring 2025 Flood Outlook for Iowa

February 27, 2025

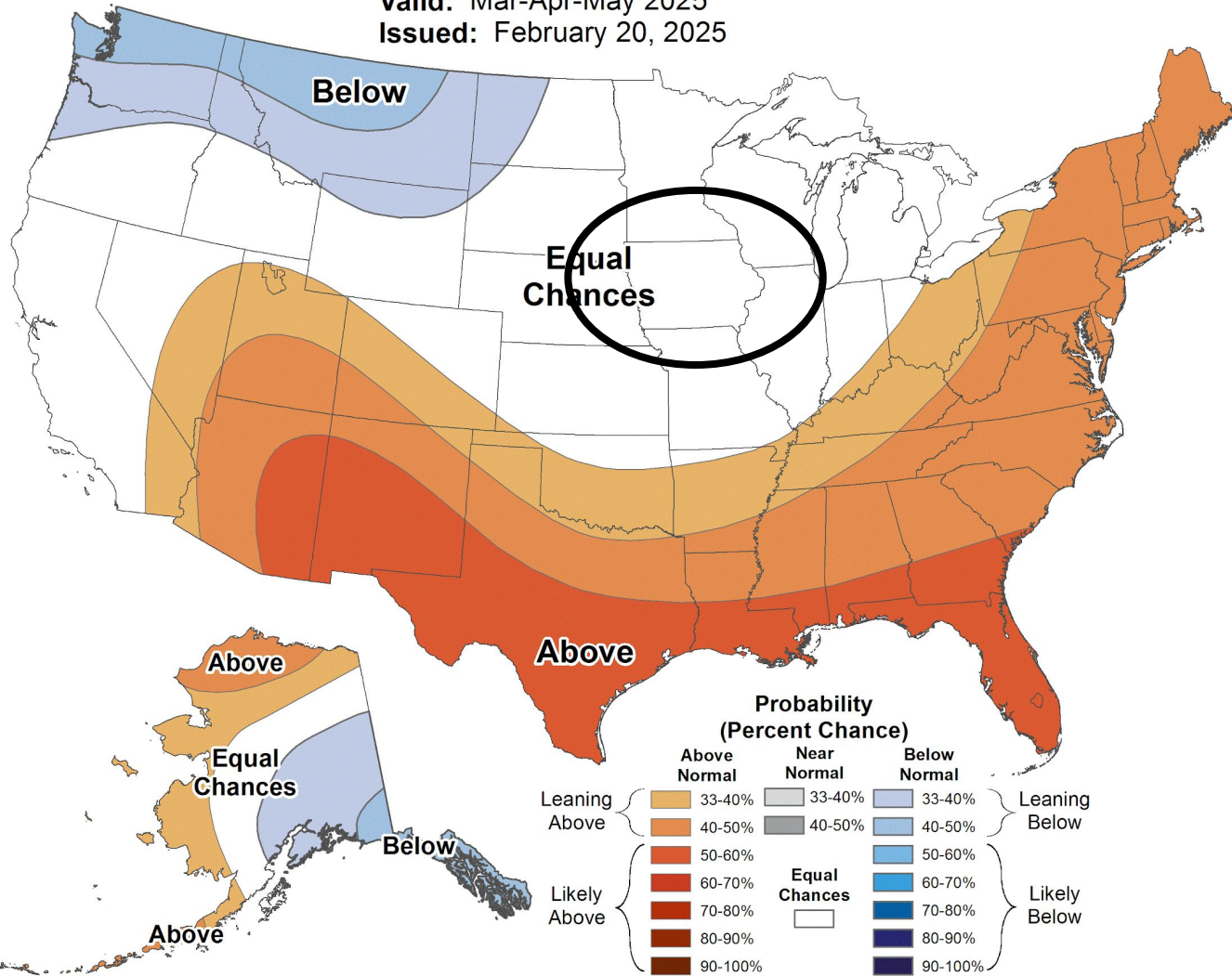
Seasonal temperature and precipitation outlooks



Seasonal Temperature Outlook



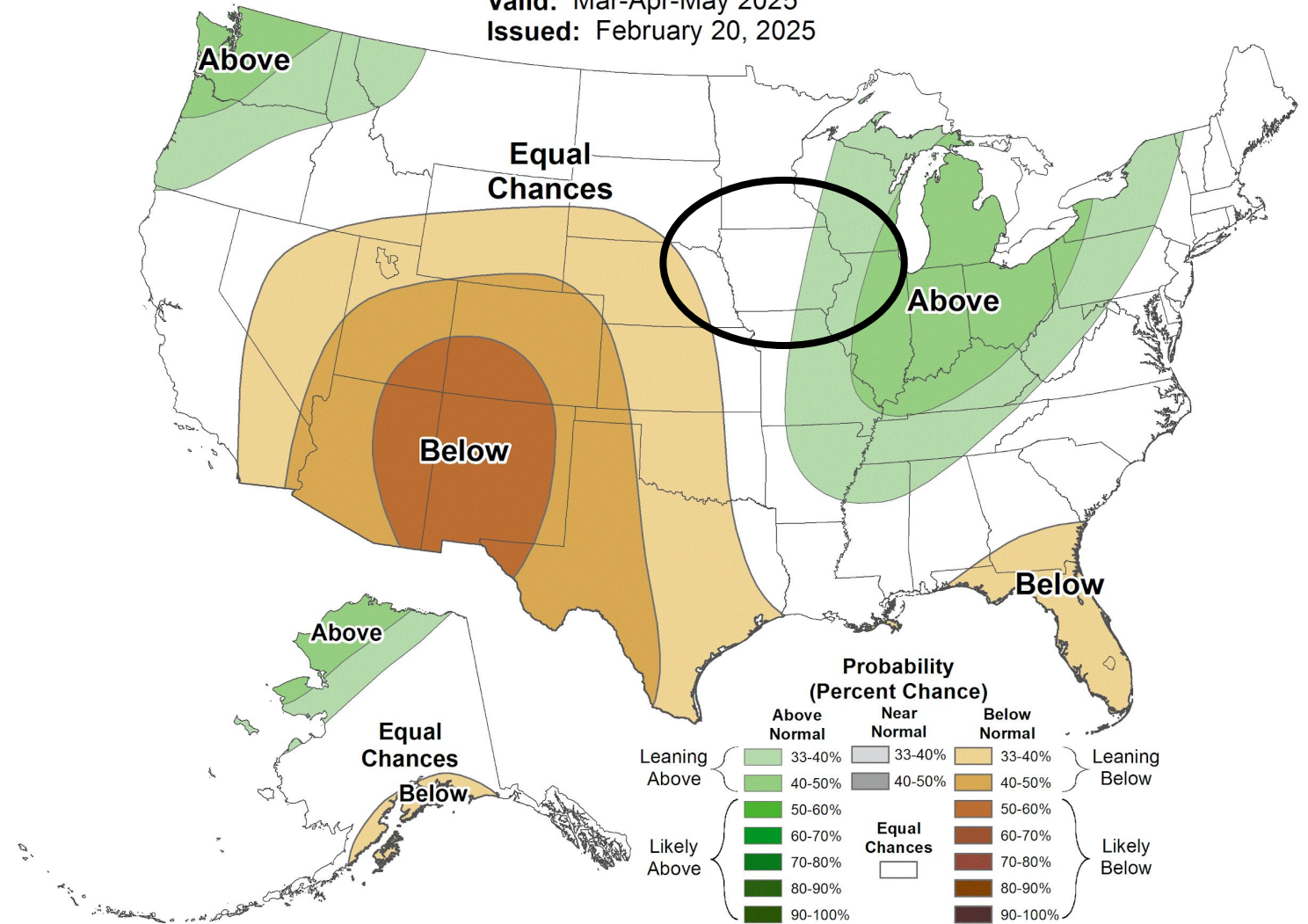
Valid: Mar-Apr-May 2025
Issued: February 20, 2025



Seasonal Precipitation Outlook



Valid: Mar-Apr-May 2025
Issued: February 20, 2025



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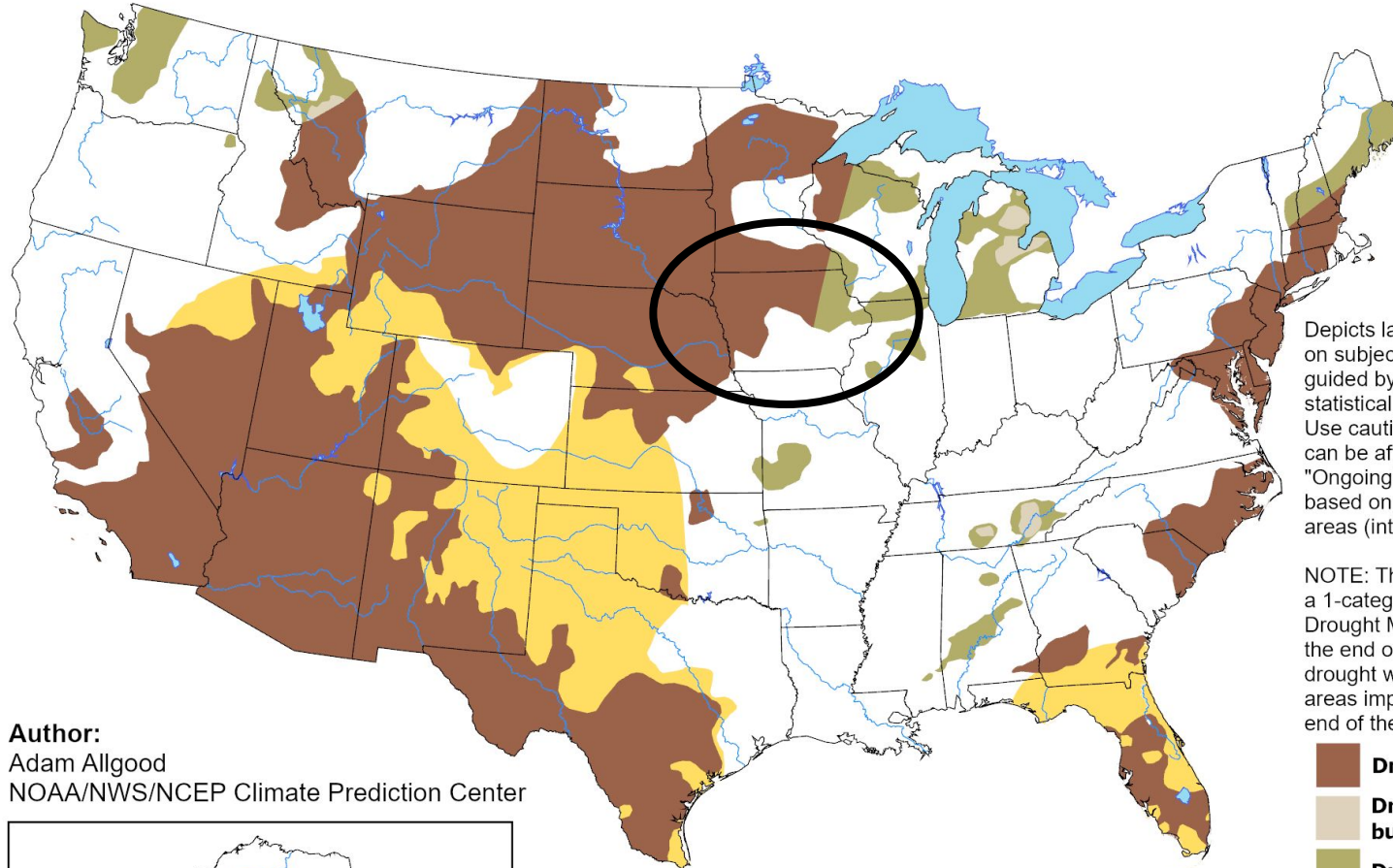
Spring 2025 Flood Outlook for Iowa

February 27, 2025

Seasonal drought outlook

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for February 20 - May 31, 2025
Released February 20, 2025



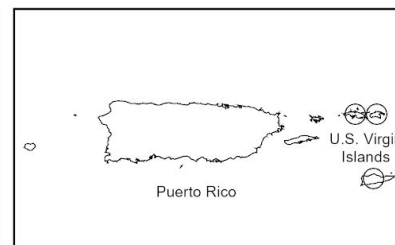
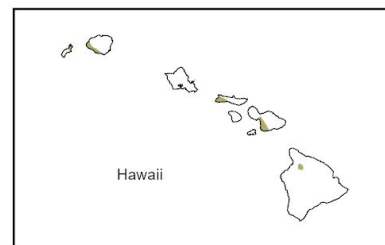
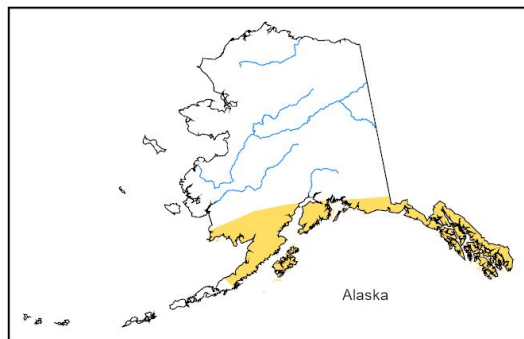
Drought conditions expected to persist or improve across Iowa

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

- Drought persists
- Drought remains, but improves
- Drought removal likely
- Drought development likely
- No drought

Author:
Adam Allgood
NOAA/NWS/NCEP Climate Prediction Center



<https://go.usa.gov/3eZ73>





Spring 2025 Flood Outlook for Iowa

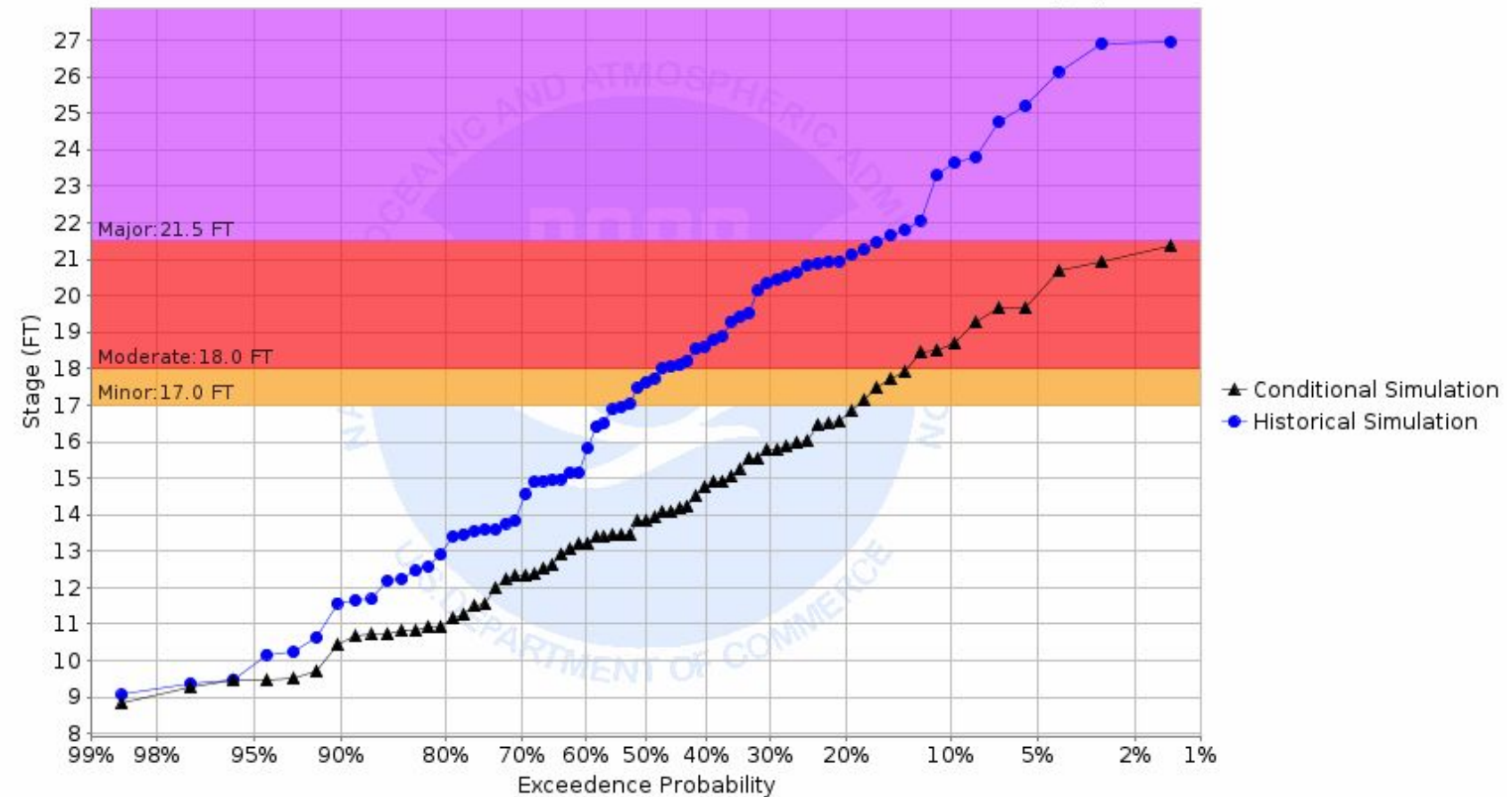
February 27, 2025

Long-range probabilistic information–90-day period

Long-Range Flood Risk (90-day period)

- Available on NWPS > Layers > River Gauge > Long Range Flood Outlook.
- The graph to the right represents the exceedance probabilities during the 90-day period.
- Blue line is considered the normal chance (i.e., climatology)–the historical simulation.
- Black line is based on current conditions (e.g., river levels, snow pack, etc.)–the conditional simulation.
- When the black line is left of the blue line, chances for higher river levels and flooding are higher than normal.
- Conversely, when the black line is to the right of the blue line, chances for higher river levels and flooding are lower than normal.
- A near to below normal risk of flooding does not necessarily mean that flooding will not occur.

Chance of Exceeding River Stage at Mississippi River at Dubuque (DBQI4)
 Forecast for the period 03/03/2025 - 06/01/2025
 This is a conditional simulation based on the conditions as of 02/24/2025



Example–Mississippi River at Dubuque

- Black line is right of the blue line (lower than normal chances).
- ~25% chance of exceeding minor flood stage (normal is ~45%).
- ~7% chance of exceeding major flood stage (normal is ~12%).





Spring 2025 Flood Outlook for Iowa

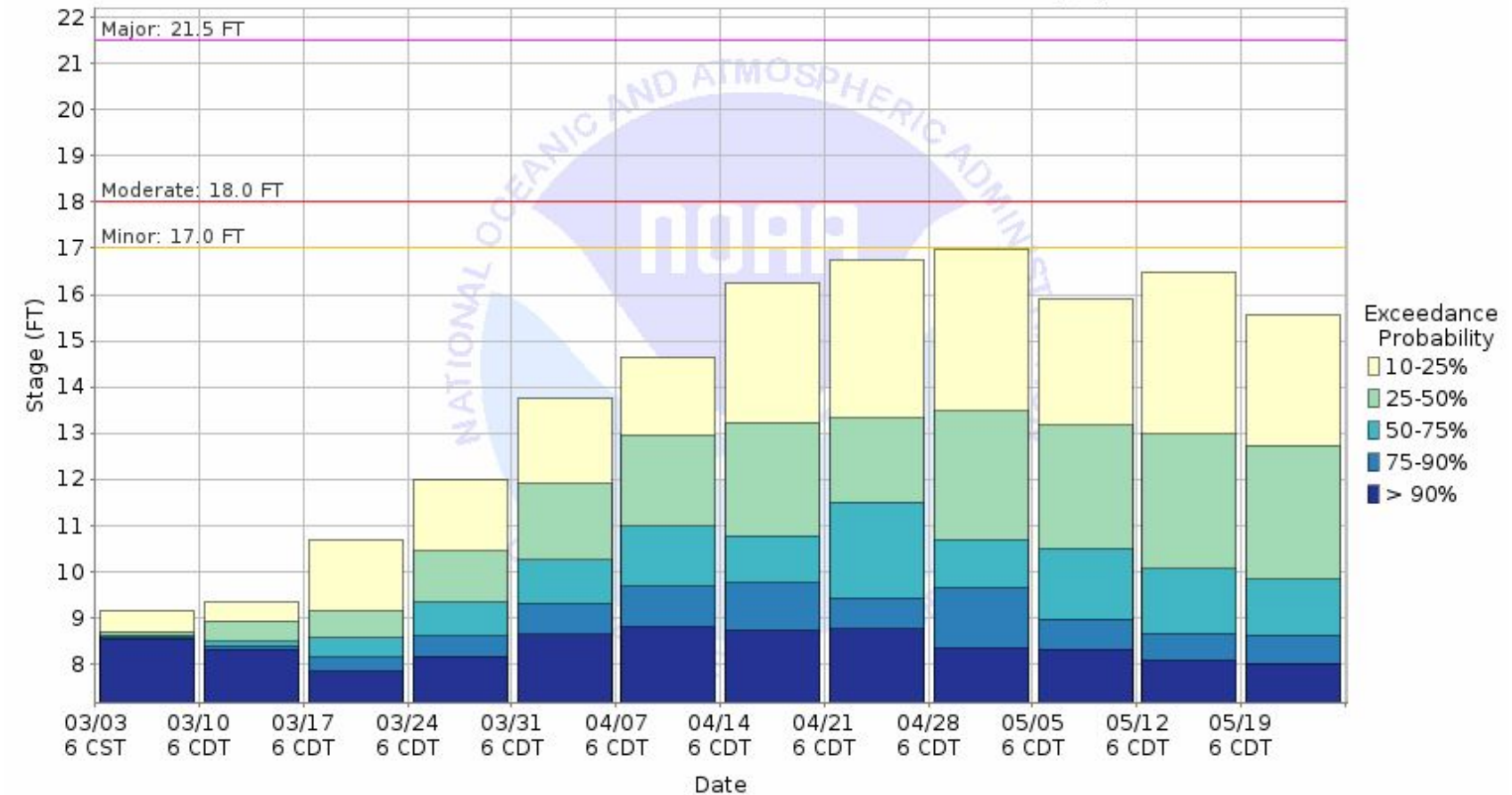
February 27, 2025

Long-range probabilistic information—weekly chances during 90-day period

Long-Range Flood Risk (weekly chances during 90-day period)

- Available on NWPS > Layers > River Gauge > Long Range Flood Outlook.
- The graph to the right represents the exceedance probabilities each week during the 90-day period.
- Yellow color of the bar graph represents the 10-25% exceedance probability. Essentially, there is a 10-25% chance that the river will reach that particular level during that particular week.
- The exceedance probabilities increase as colors become more blue—25-50% (light green), 50-75% (teal), 75-90% (light blue) and >90% (dark blue).

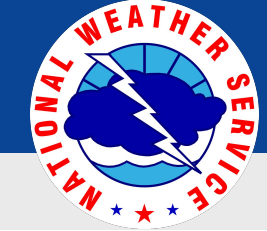
Weekly Chance of Exceeding River Stage at Mississippi River at Dubuque (DBQI4)
 Forecast for the period 03/03/2025 - 06/01/2025
 This is a conditional simulation based on the conditions as of 02/24/2025



Example—Mississippi River at Dubuque

- Higher chances of flooding begin in mid April.





Spring 2025 Flood Outlook for Iowa

February 27, 2025

What could increase the chances or decrease the chances for significant flooding?

Future weather—especially the weather conditions leading up to, during and immediately after the snowmelt period—is the biggest factor for significant spring flooding.

Factors leading to increased chances

- Slower than normal warm-up leading up to the snowmelt period—keeps the snowpack longer
- Fast warm-up during the snowmelt period—leads to rapid snowmelt
- Above normal precipitation leading up to the snowmelt period—adds more water to the system
- Moderate to heavy precipitation (rainfall) during the snowmelt period—including rain on snow—adds more water to the system
- Above normal precipitation immediately after the snowmelt period—prolongs the higher river stages and may result in secondary crests

Factors leading to decreased chances

- Normal warm-up leading up to the snowmelt period
- Slow and steady snowmelt—introduces water to the system more slowly
- Little to no additional precipitation during the snowmelt period—adds little if any additional water to the system
- Normal to below normal precipitation immediately after the snowmelt period—allows the river levels to fall back to normal levels





Spring 2025 Flood Outlook for Iowa

February 27, 2025

Where to find more details

Each NWS office serving Iowa provides its own spring flood outlook information for its own service area. Below are the websites for the NWS offices serving Iowa.

- NWS Des Moines: weather.gov/desmoines
- NWS Quad Cities, IA/IL: weather.gov/quadcities
- NWS Sioux Falls, SD: weather.gov/siouxfalls
- NWS Omaha, NE: weather.gov/omaha
- NWS La Crosse, WI: weather.gov/lacrosse

A series of **three spring flood outlooks** will be provided by each NWS office serving Iowa. Each outlook will be a text product, with possibly additional information. Below is the schedule for the outlooks. Refer to each office's website for further details.

- Thursday, February 13, 2025 - Outlook #1
- Thursday, February 27, 2025 - Outlook #2
- Thursday, March 13, 2025 - Outlook #3

For the latest river stage and forecast information, along with quantitative river flood outlook information, refer to the [NWS National Water Prediction Service \(NWPS\) website](https://www.weather.gov/nwps).

NWS office service areas

