



# National Weather Service Spring Flood Outlook #2

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National Weather Service – Des Moines, IA

February 25, 2021





# Spring Flood Outlook

As of 2/22



River	Spring Flood Risk
Mississippi River above Rock River	Near Normal
Mississippi River below Rock River	Above Normal
Missouri River	Near Normal
Tributaries to Mississippi River in Iowa	Above Normal (esp. eastern Iowa)
Tributaries to Missouri River in Iowa	Below Normal

Ice jams are also a risk

Amount, frequency and extent of future precipitation will be very important

## National Weather Service 2021 Spring Flood Outlook Schedule

Thursday, February 11, 2021; Thursday, February 25, 2021 & Thursday, March 11, 2020

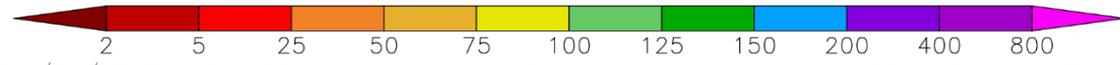
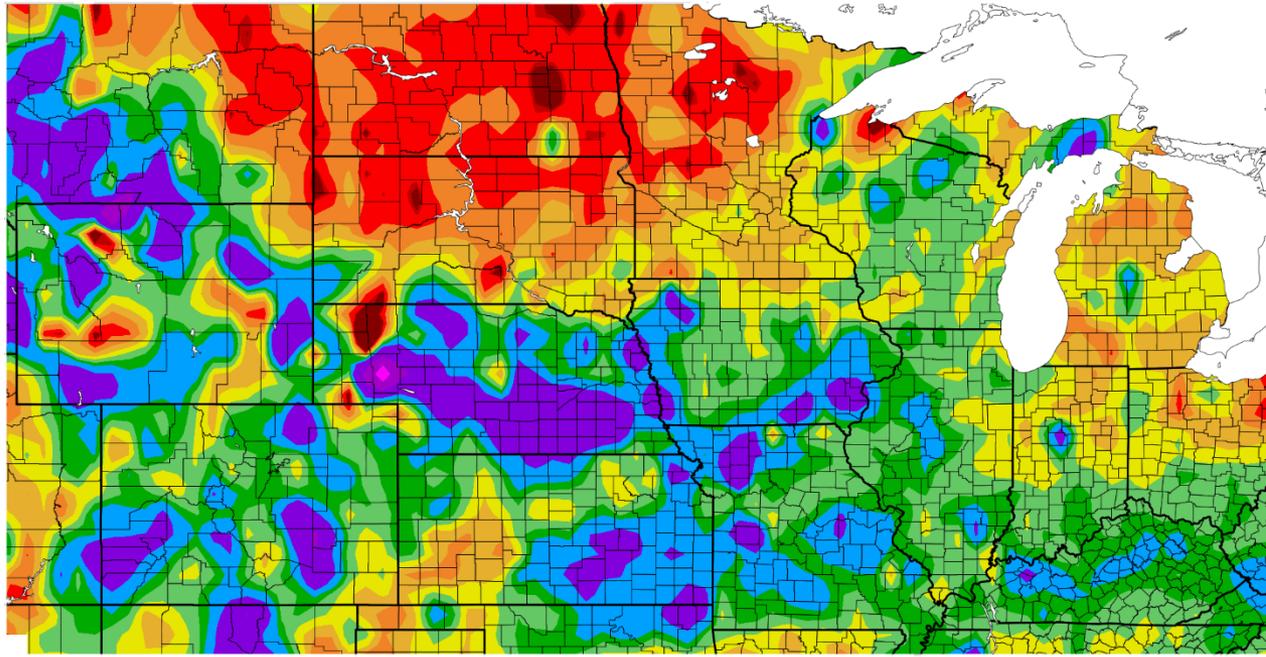




# Precipitation % of Normal Past 30 Days



Percent of Normal Precipitation (%)  
1/23/2021 - 2/21/2021



Generated 2/22/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers

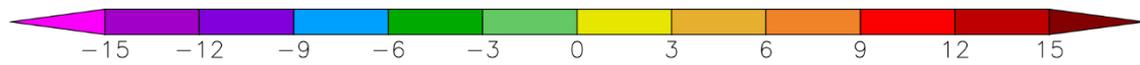
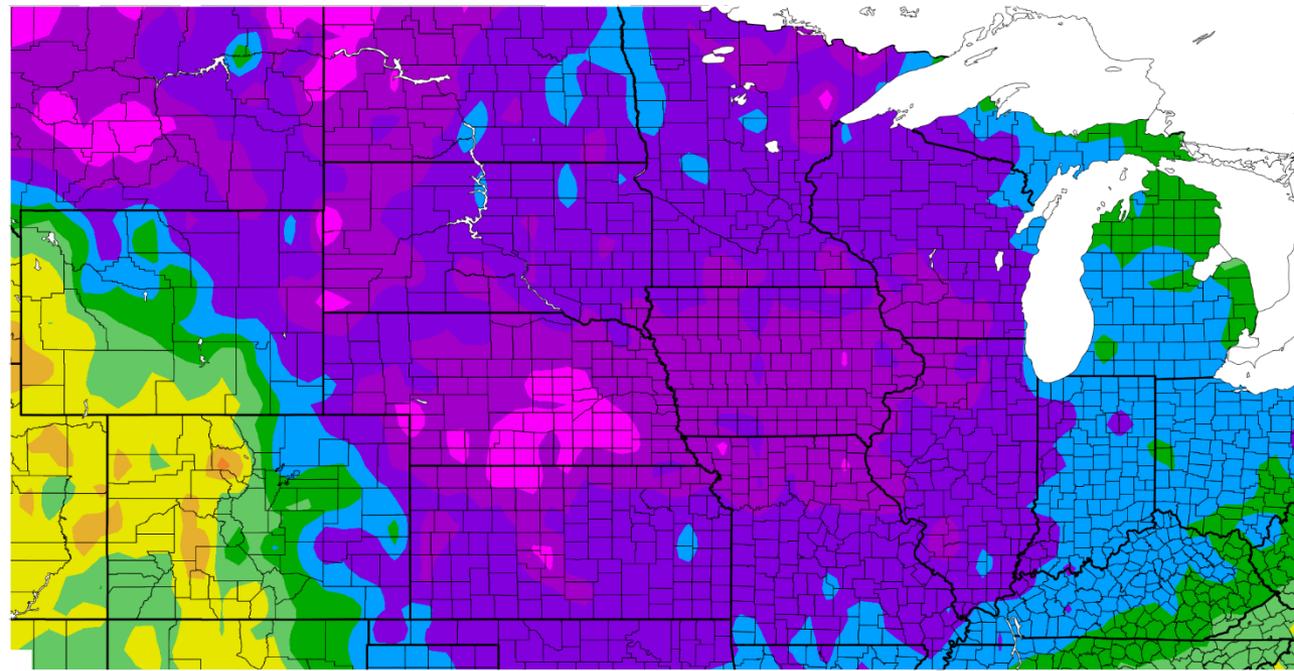




# Temperature Dep from Normal Past 30 Days



Departure from Normal Temperature (F)  
1/23/2021 - 2/21/2021



Generated 2/22/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers





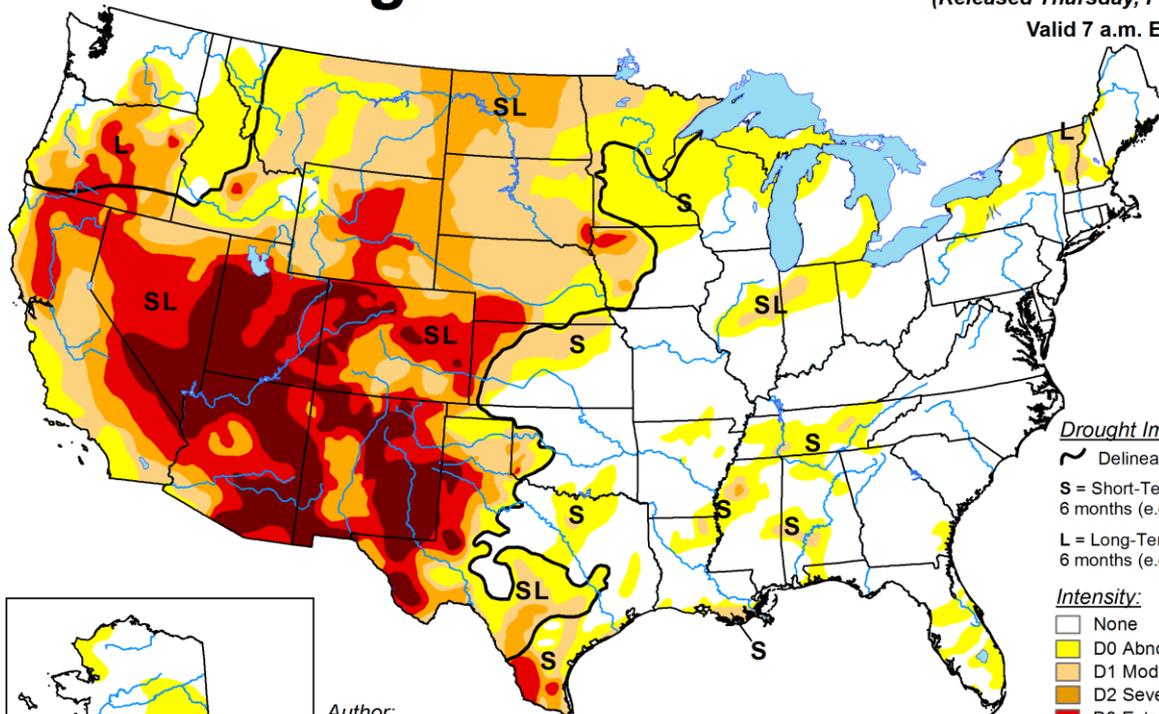
# Drought Monitor—Current Status



## As of 2/16

### U.S. Drought Monitor

February 16, 2021  
(Released Thursday, Feb. 18, 2021)  
Valid 7 a.m. EST

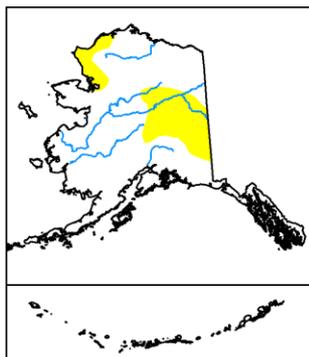


#### Drought Impact Types:

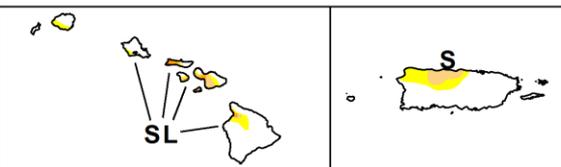
- Delineates dominant impacts
- S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

#### Intensity:

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



Author:  
David Miskus  
NOAA/NWS/NCEP/CPC



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>



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

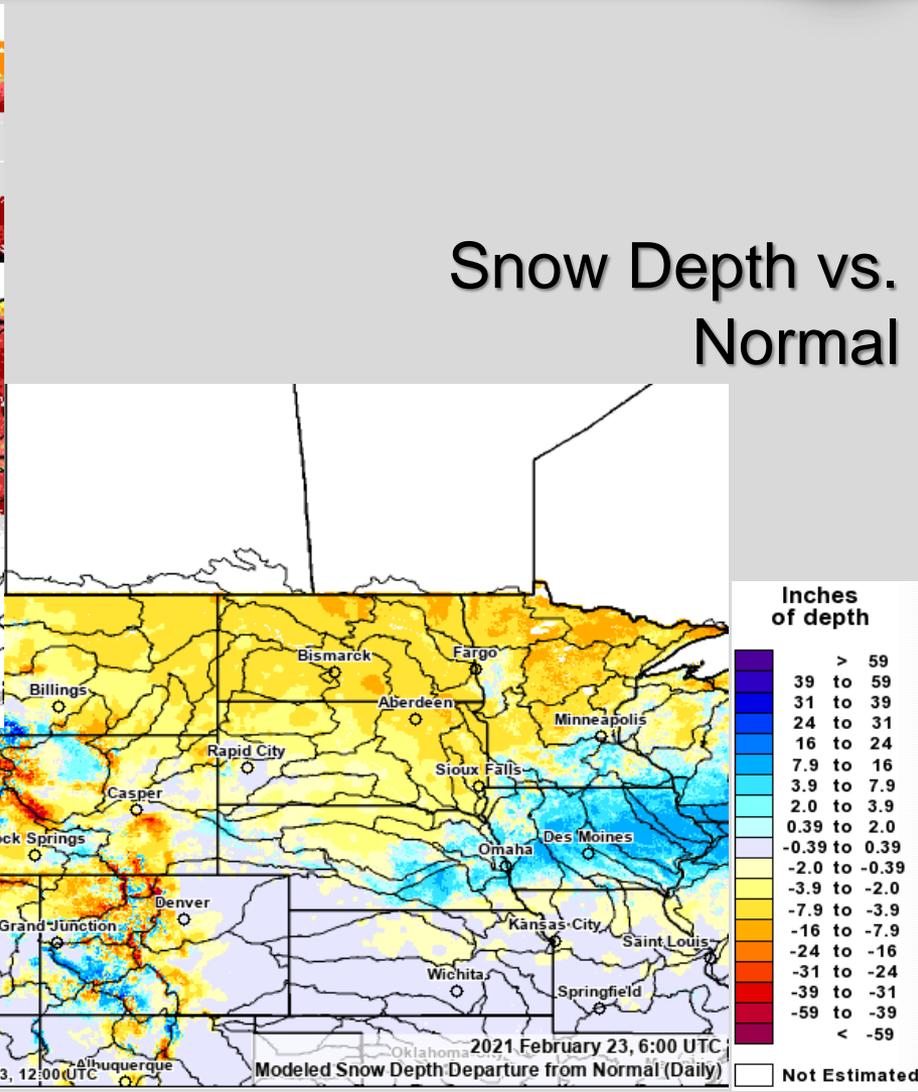
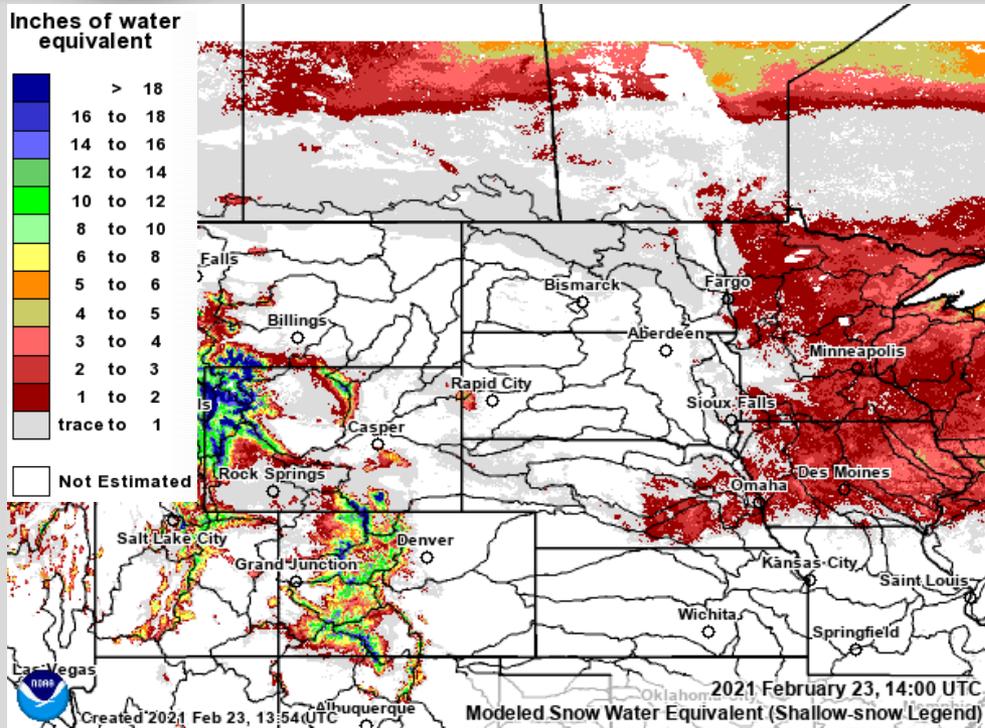




# Snowpack



## Water Equiv & Depth vs. Normal, 2/23



### Snow Water Equivalent



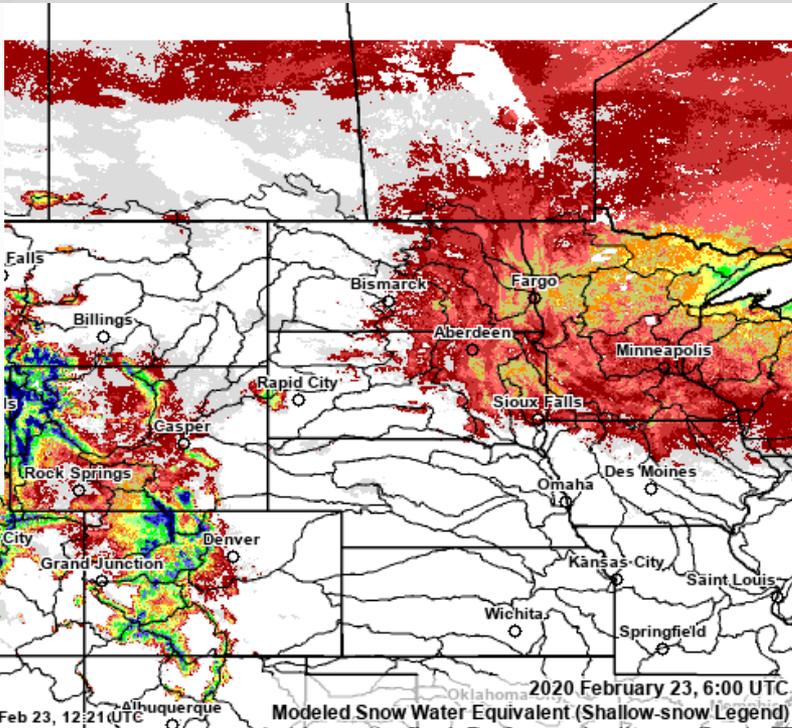


# Snowpack



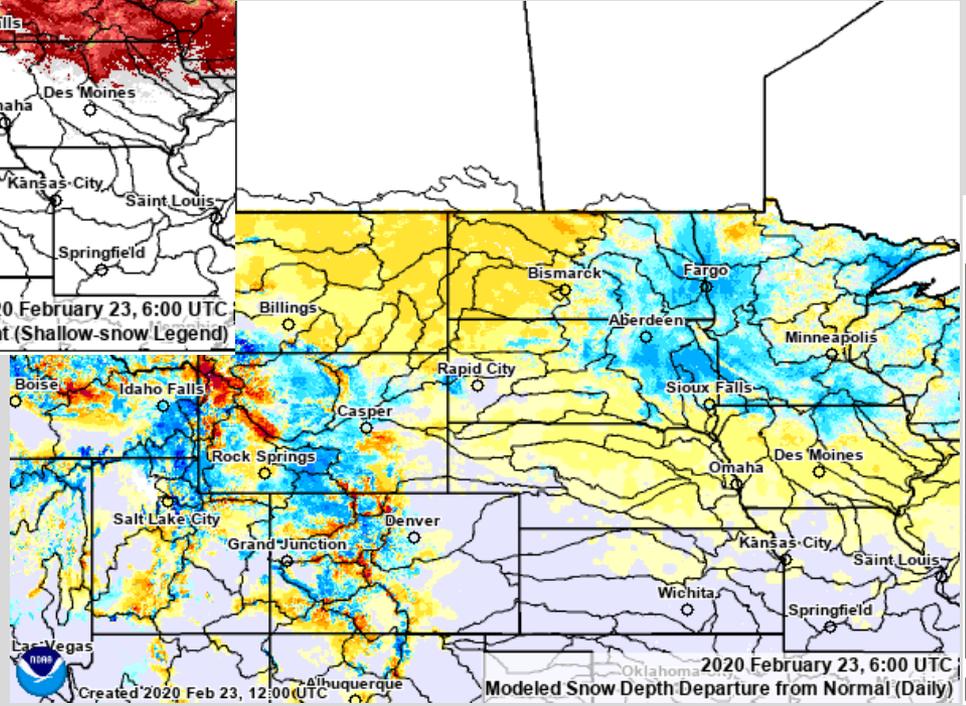
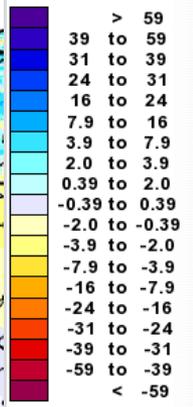
## Water Equiv & Depth vs. Normal, 2/23/2020

Inches of water equivalent



## Snow Depth vs. Normal

Inches of depth



## Snow Water Equivalent



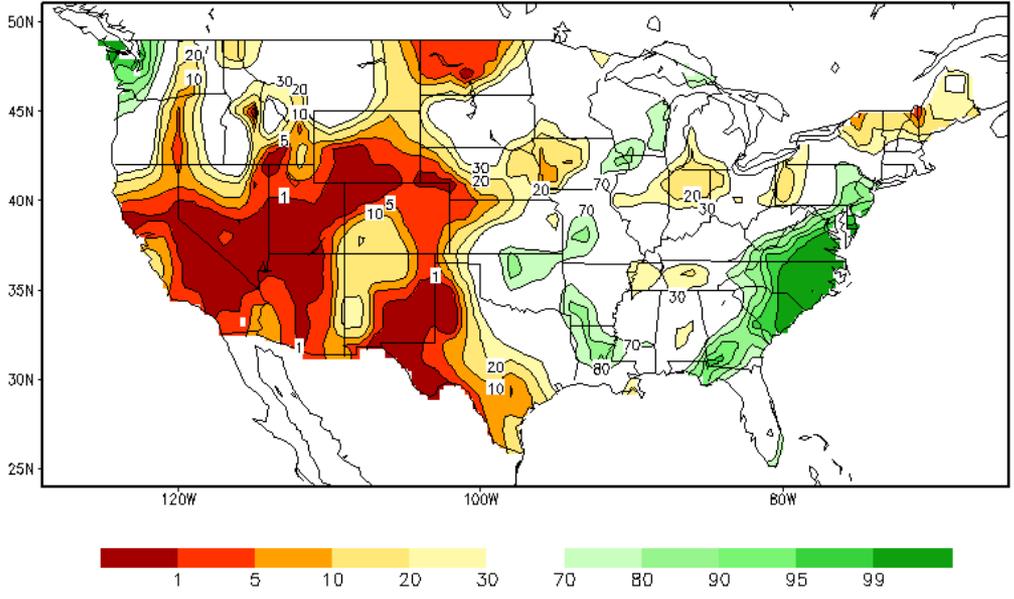


# Soil Moisture Percentile

## Current Values & Change, 2/22



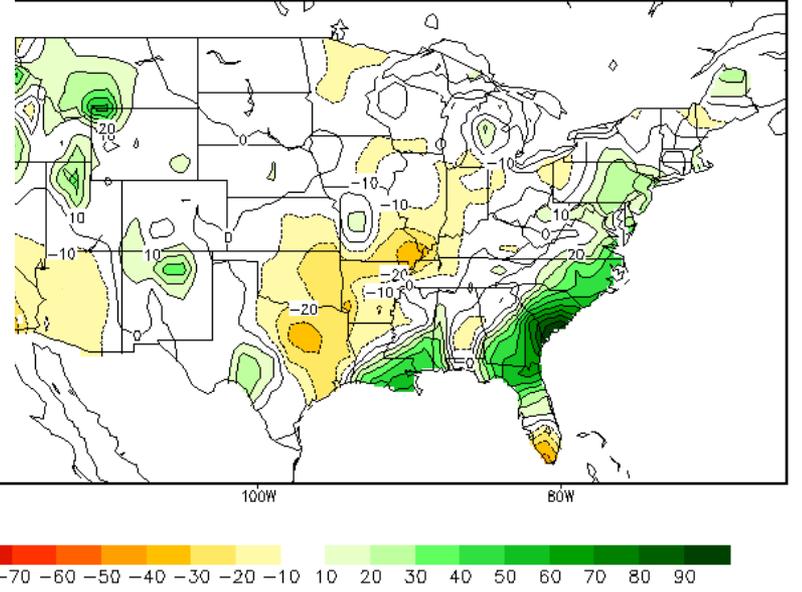
Calculated Soil Moisture Ranking Percentile  
FEB 22, 2021



Current Percentiles

Change

Calculated Soil Moisture Anomaly Change  
FEB 22, 2021 from JAN.31





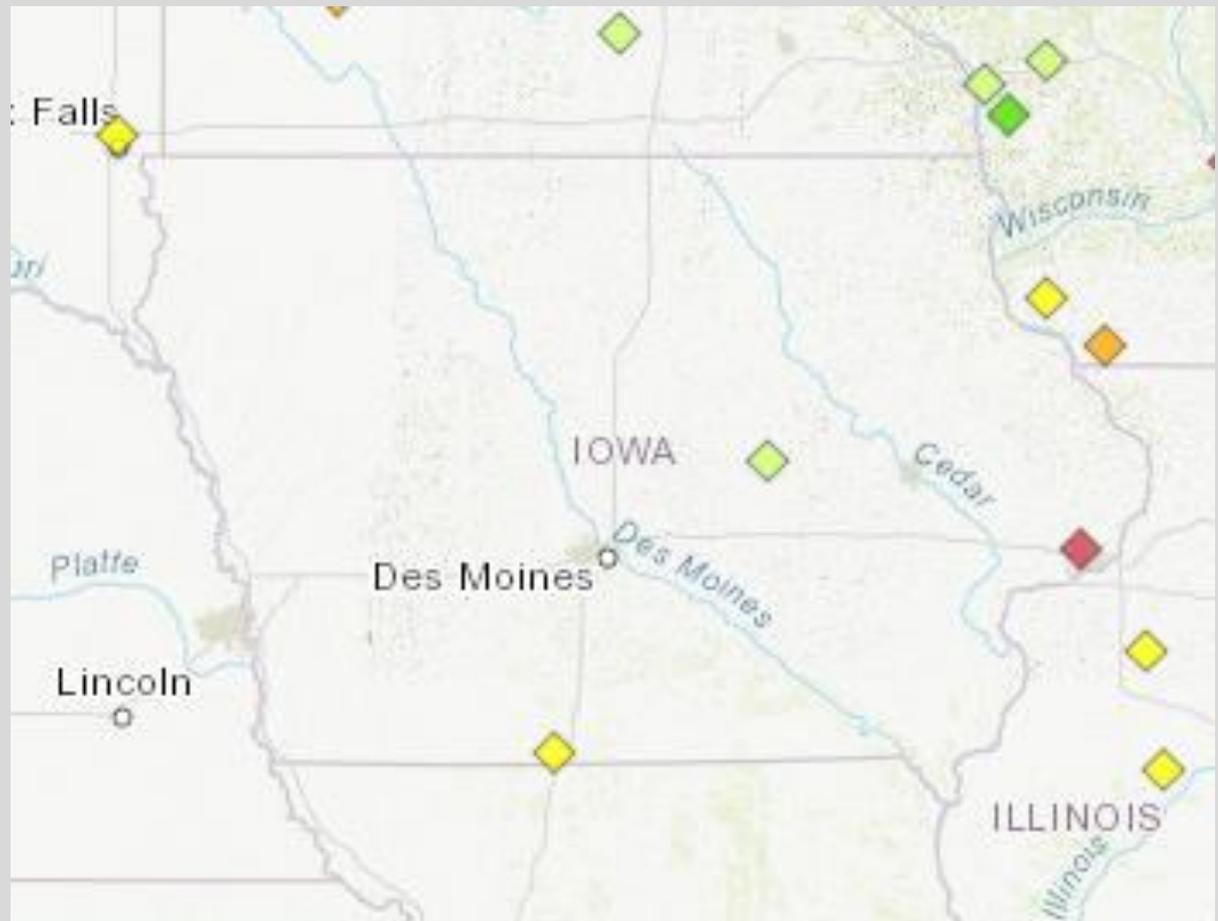
# Soil Temperatures/Ground Frost



## Temperatures in F, 2/23

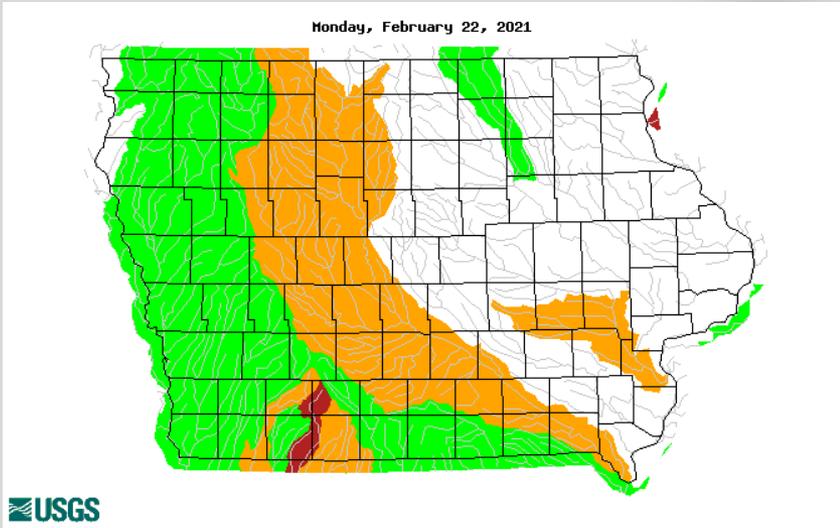
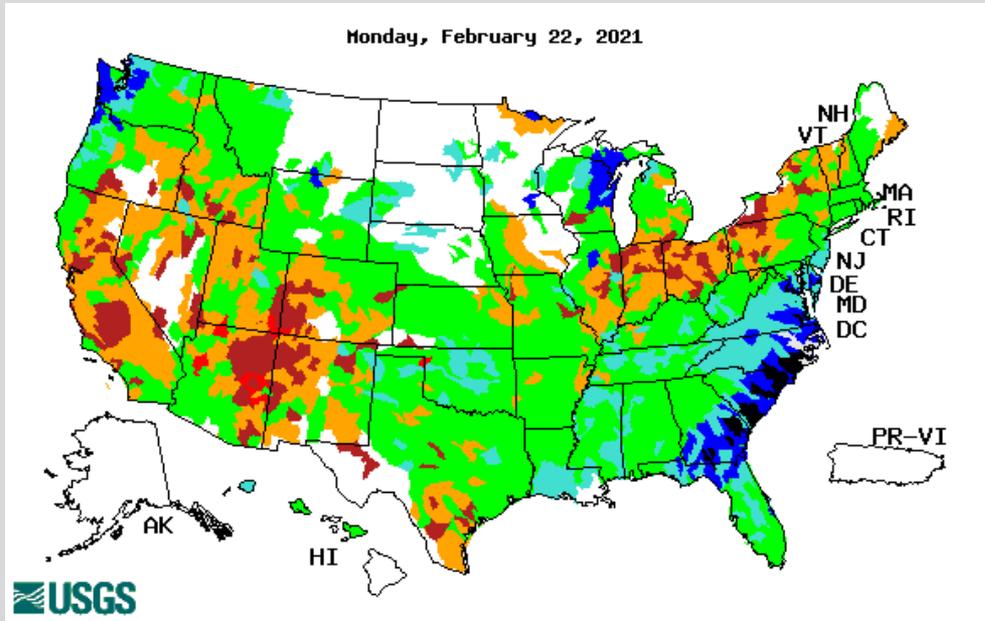
FrostDepth

◆	> 60 - 80 (in)
◆	> 48 - 60 (in)
◆	> 36 - 48 (in)
◆	> 24 - 36 (in)
◆	> 18 - 24 (in)
◆	> 12 - 18 (in)
◆	> 6 - 12 (in)
◆	> 3 - 6 (in)
◆	0 - 3 (in)



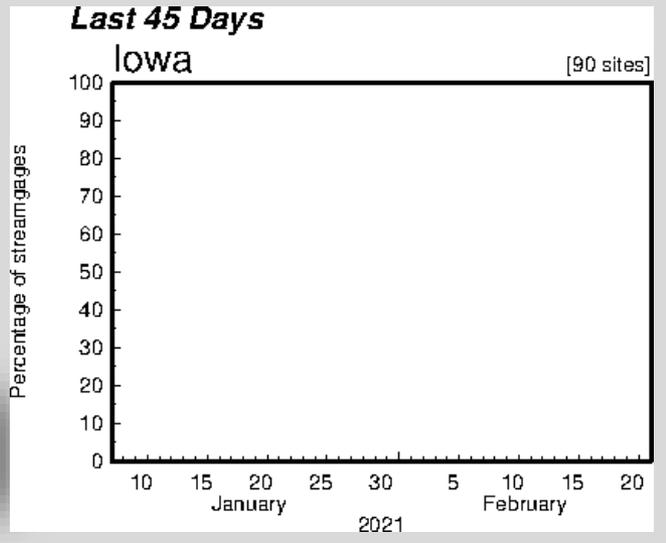


# Current Streamflow Values vs. Normal (Percentiles), 2/22



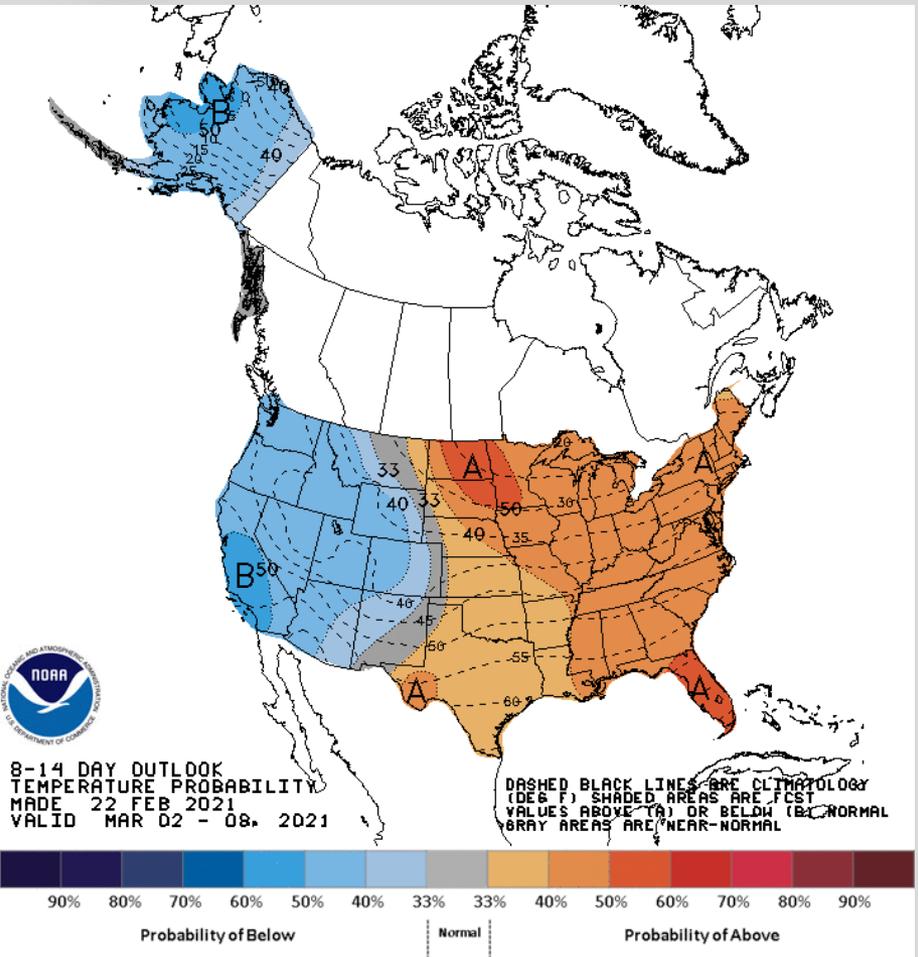
Explanation - Percentile classes

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

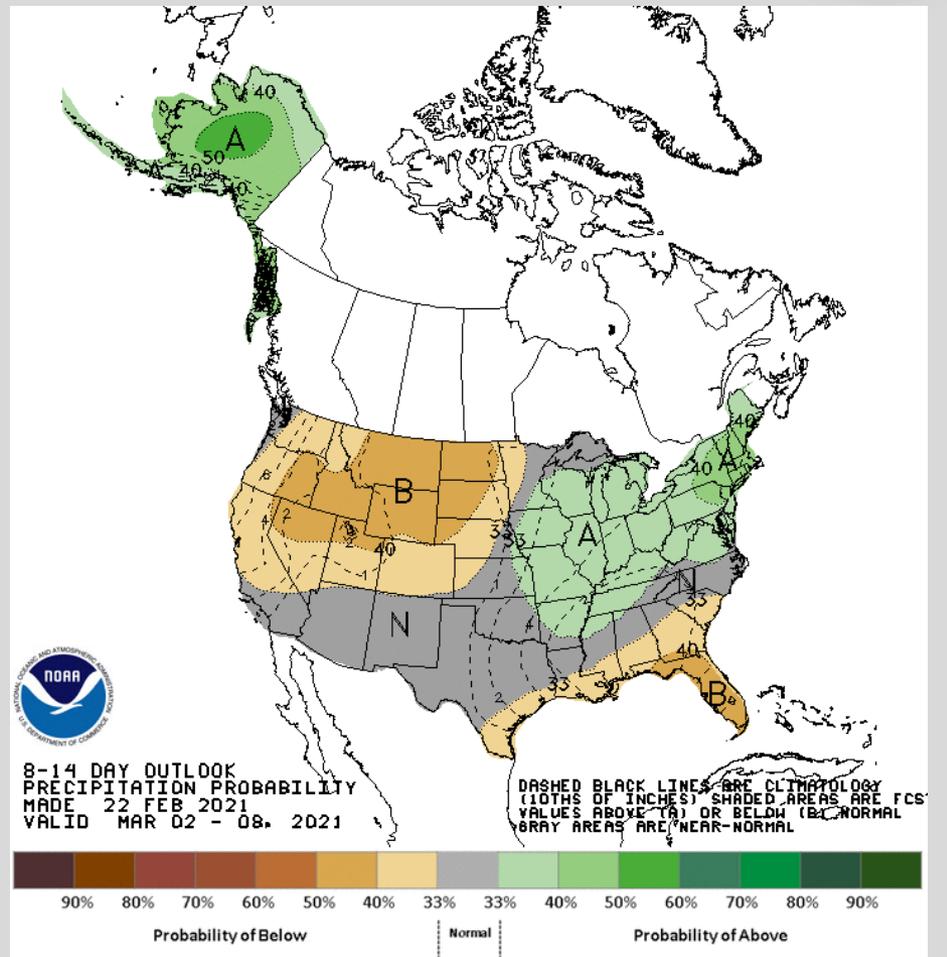




# 2-Week Temp/Precip Outlooks



## Temperature



## Precipitation



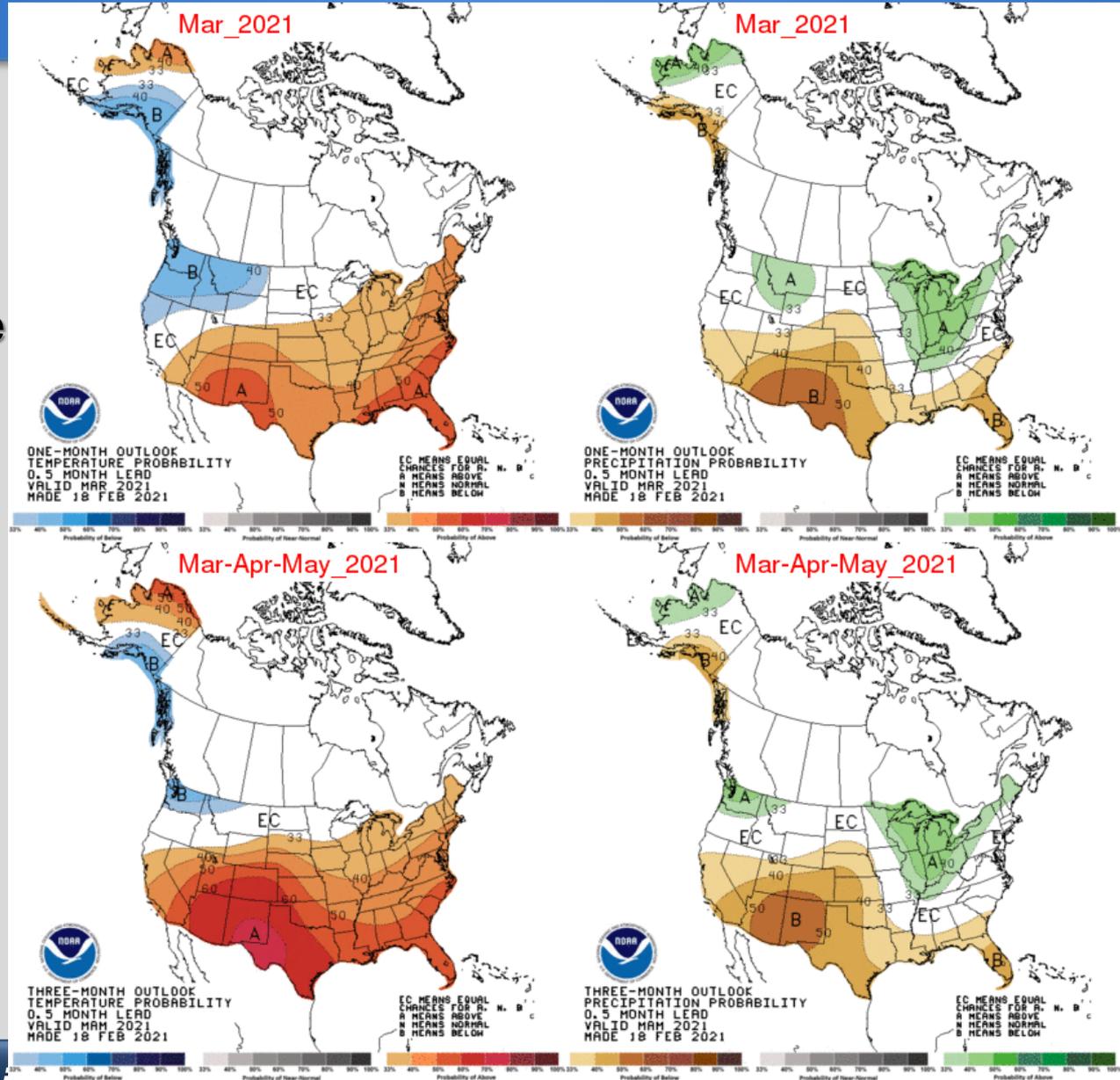


# Temp/Precip Outlooks



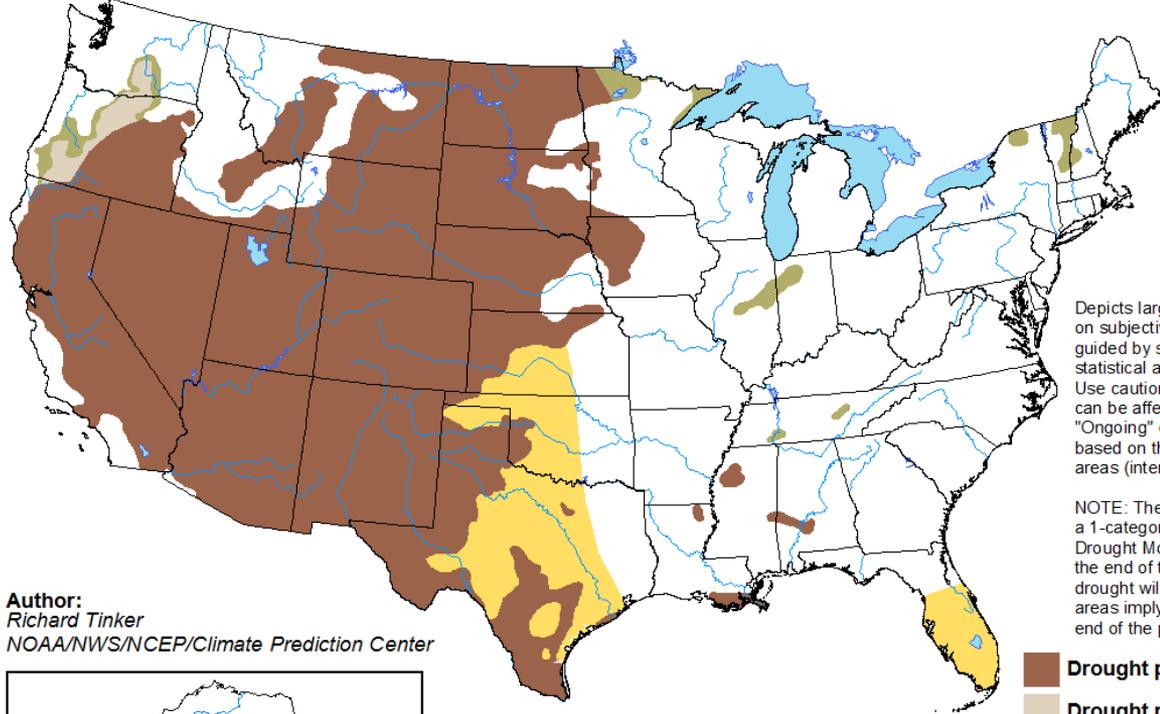
Temperature  
on Left

Precipitation  
on Right



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

Valid for February 18 - May 31, 2021  
Released February 18

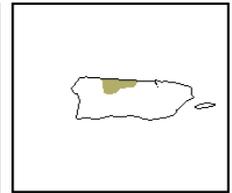
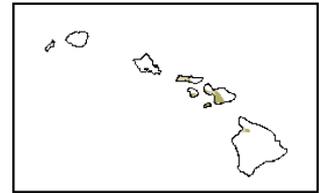
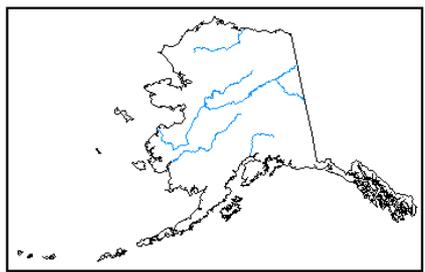


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to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

Author:  
Richard Tinker  
NOAA/NWS/NCEP/Climate Prediction Center

- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely



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



# Spring Flood Outlook Factors



As of 2/23

Factor	Contribution to Flood Risk
Snowpack	Increased Risk
Soil Moisture	Neutral
Frost Depth	Neutral
Streamflow/Stream Levels	Neutral
Precipitation Outlook	Neutral



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As of 2/22



River	Spring Flood Risk
Mississippi River above Rock River	Near Normal
Mississippi River below Rock River	Above Normal
Missouri River	Near Normal
Tributaries to Mississippi River in Iowa	Above Normal (esp. eastern Iowa)
Tributaries to Missouri River in Iowa	Below Normal

Ice jams are also a risk

Amount, frequency and extent of future precipitation will be very important

## National Weather Service 2021 Spring Flood Outlook Schedule

Thursday, February 11, 2021; Thursday, February 25, 2021 & Thursday, March 11, 2020





# Thank You



## ➤ NWS Office Contacts

- Des Moines – 515-270-4501
  - Jeff Zogg (Hydrologist): [jeff.zogg@noaa.gov](mailto:jeff.zogg@noaa.gov)
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