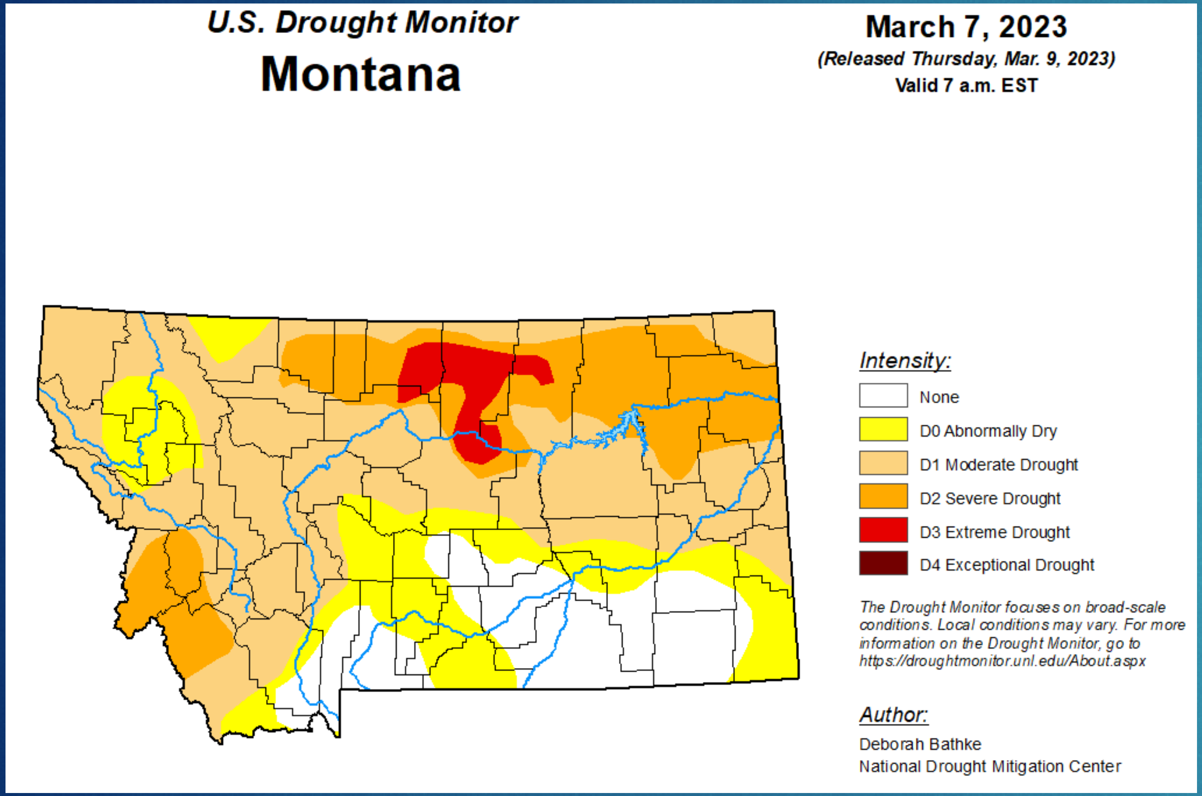
Winter Drought Update

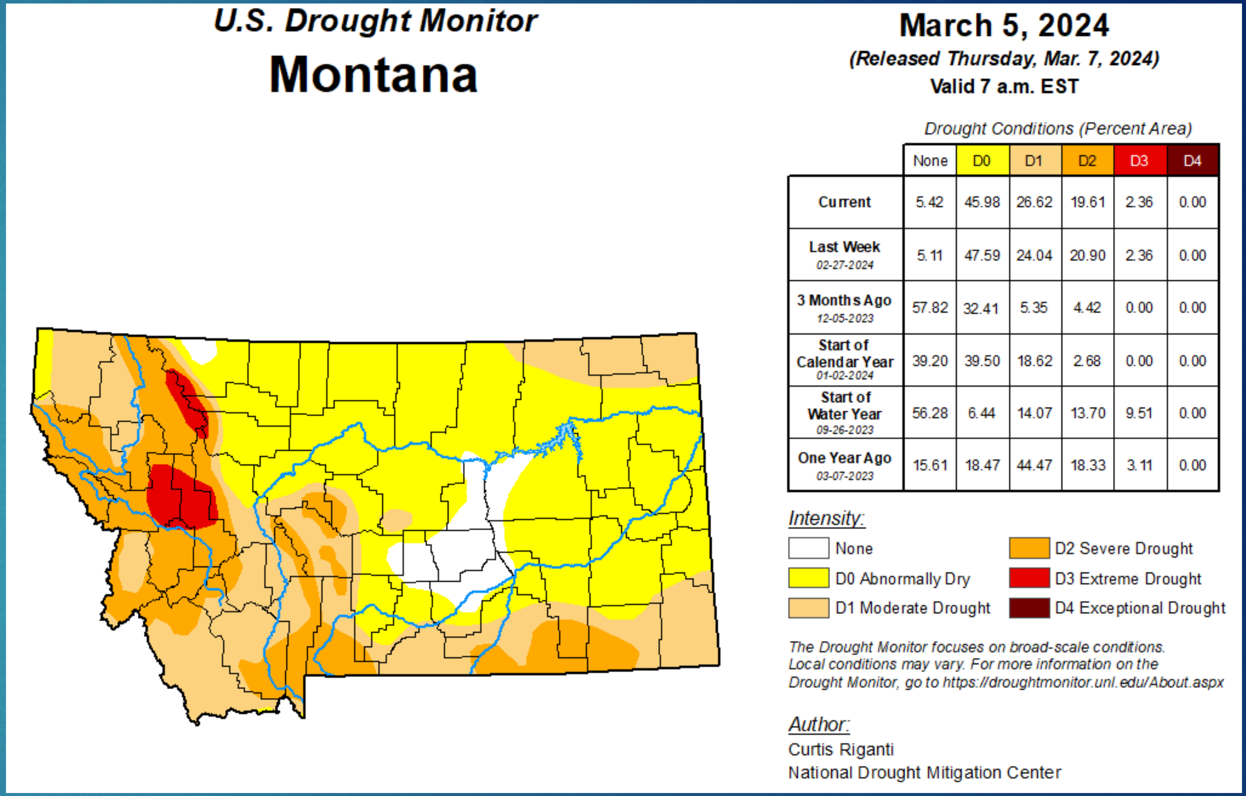
Budget Interim Committee, March 13, 2024

Michael Downey – DNRC, Water Resources Division

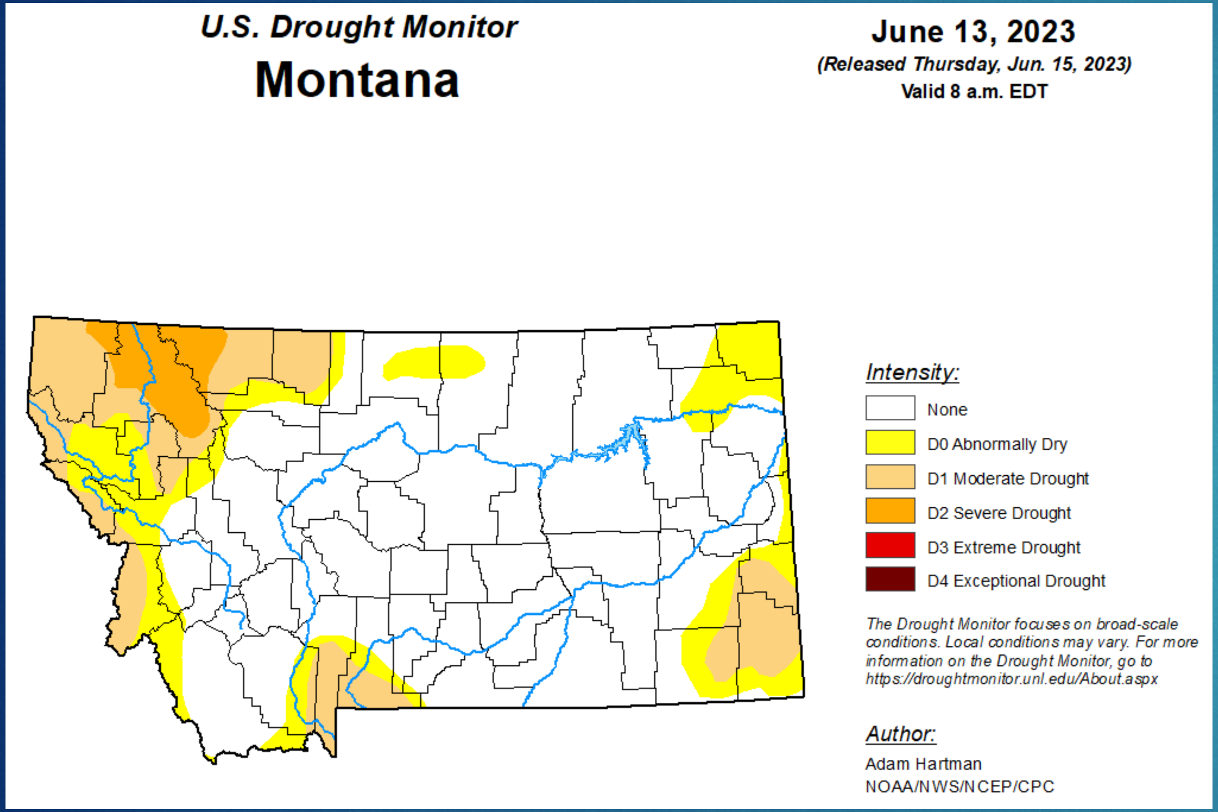
Current Conditions:

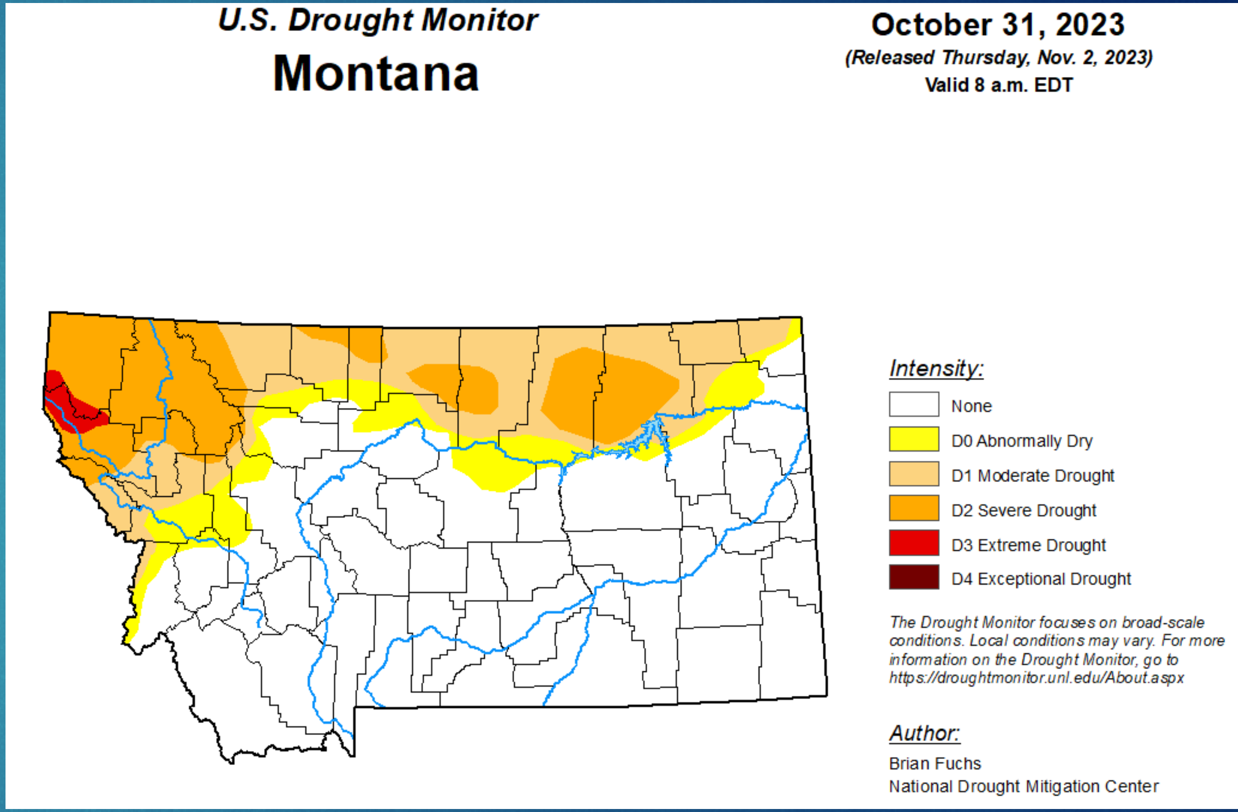
- Wet conditions in late August, September, and October in the eastern 2/3 of Montana improve drought conditions. Southern half drought free by early November, 2023.
- Severely dry conditions in November and December – 3rd and 4th driest on record for multiple counties.
- November & December snow drought and much above normal temperatures result in Severe (D2) and Extreme (D3) drought designations in NW, SW and SE.
- High February precipitation in Western 2/3 of state greatly improves snowpack.
- Over the last two weeks drought classification improvements in western half of state.





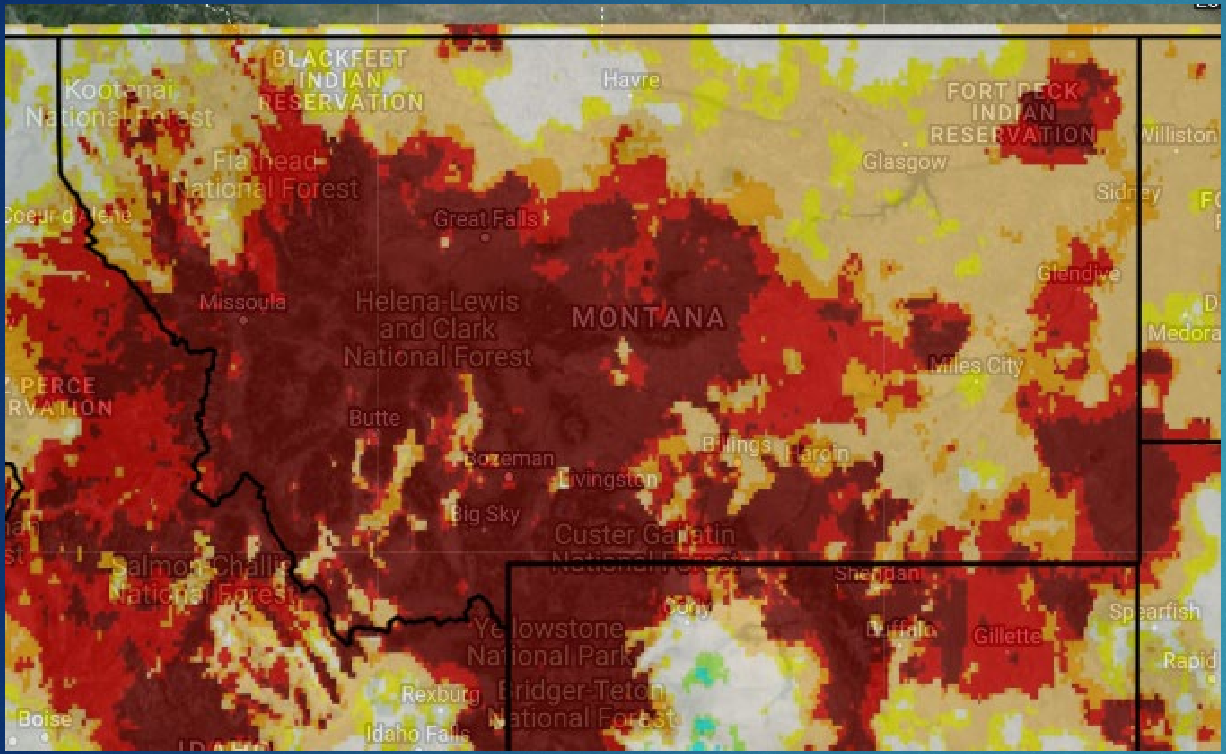
	None	D0	D1	D2	D3	D4
Current	5.42	45.98	26.62	19.61	2.36	0.00
Last Week 02-27-2024	5.11	47.59	24.04	20.90	2.36	0.00
3 Months Ago 12-05-2023	57.82	32.41	5.35	4.42	0.00	0.00
Start of Calendar Year 01-02-2024	39.20	39.50	18.62	2.68	0.00	0.00
Start of Water Year 09-26-2023	56.28	6.44	14.07	13.70	9.51	0.00
One Year Ago 03-07-2023	15.61	18.47	44.47	18.33	3.11	0.00


U.S. Drought Monitor
Montana
June 13, 2023
(Released Thursday, Jun. 15, 2023)
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
Author:
Adam Hartman
NOAA/NWS/NCEP/CPC

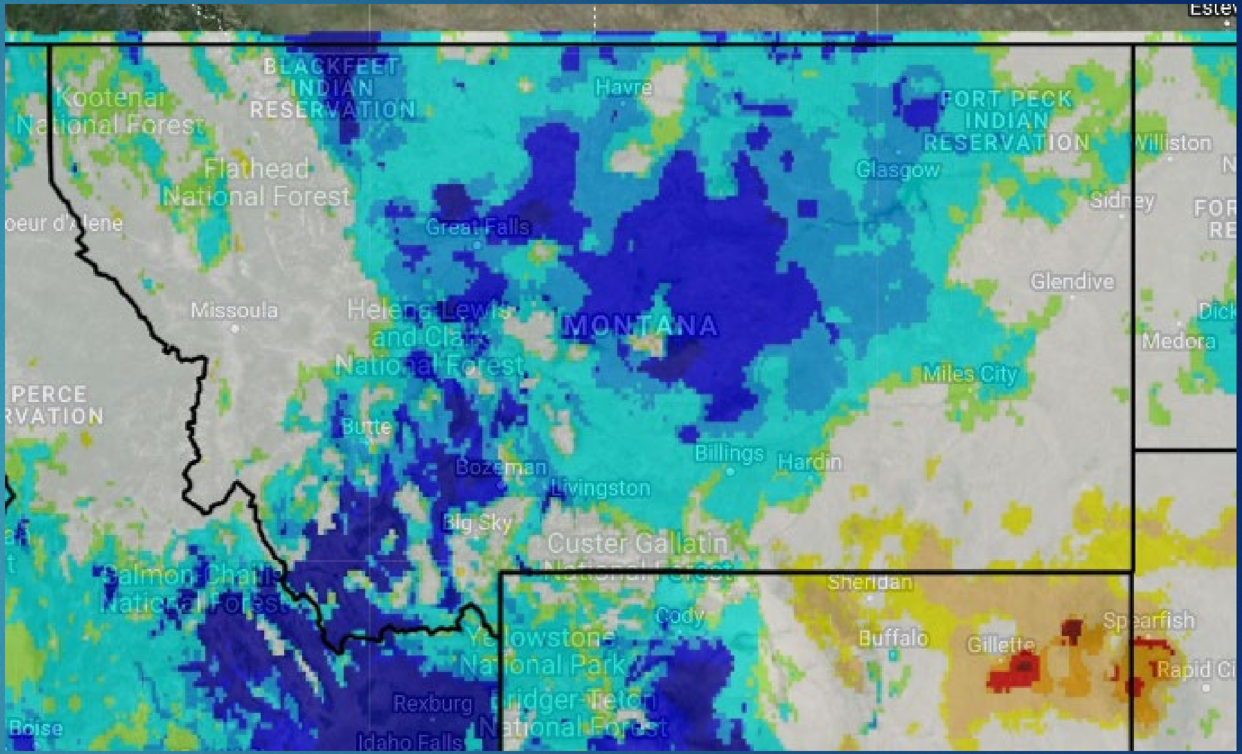

U.S. Drought Monitor
Montana
October 31, 2023
(Released Thursday, Nov. 2, 2023)
Valid 8 a.m. EDT
Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx
Author:
Brian Fuchs
National Drought Mitigation Center

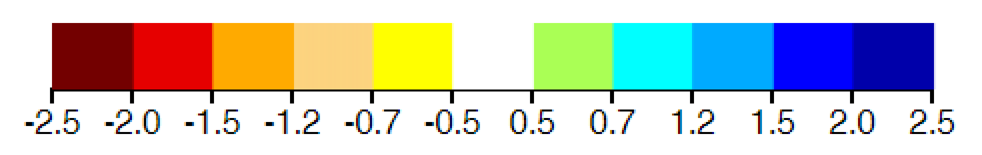
Standardized Precipitation Index

November 7 – January 7



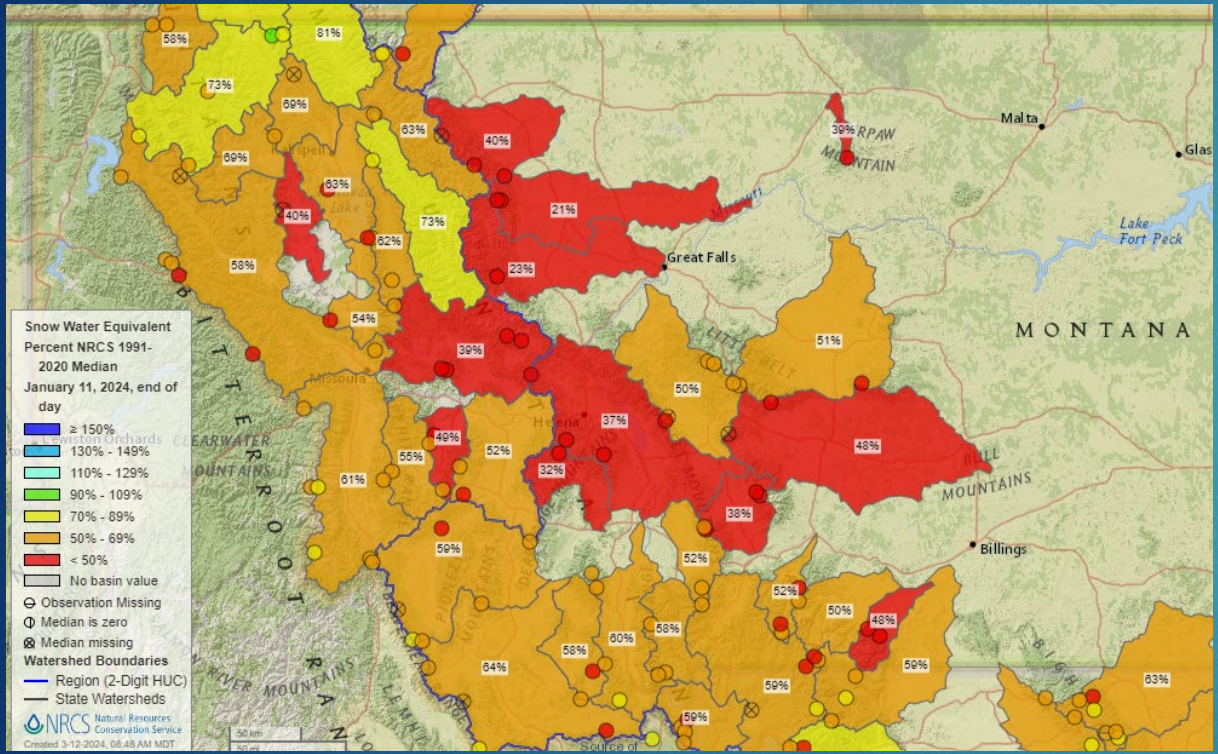
January 8 – March 8



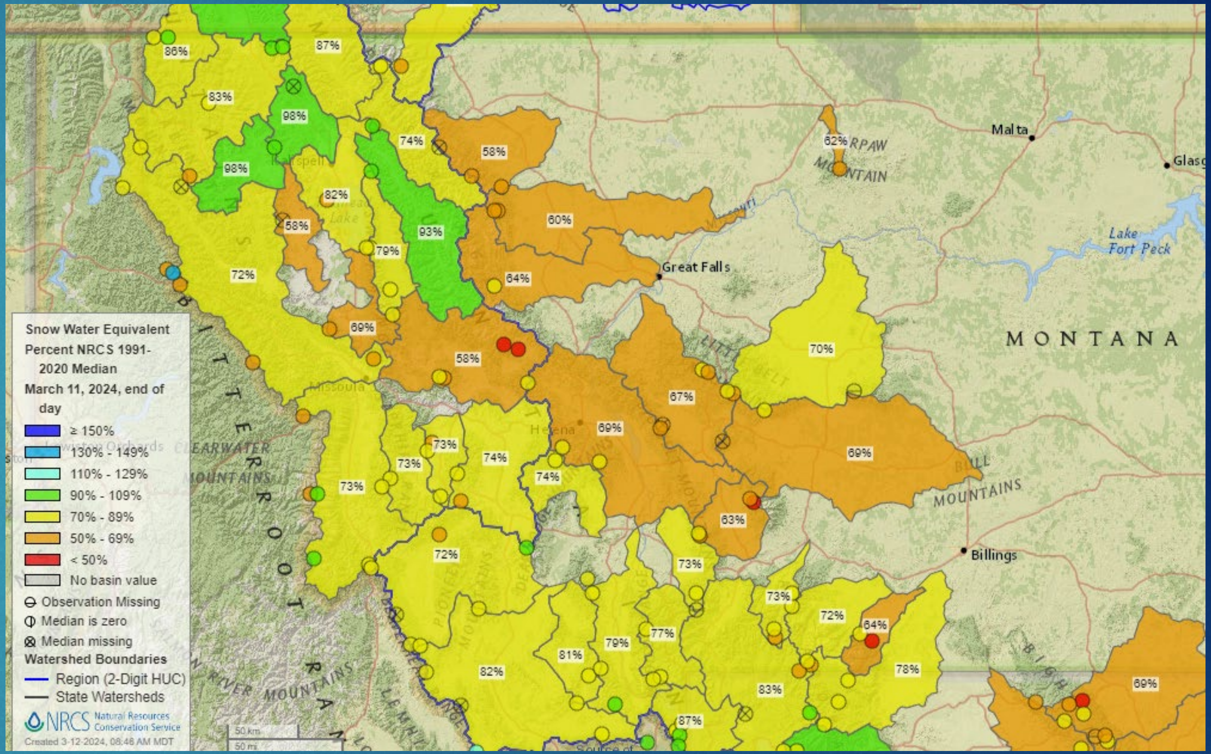


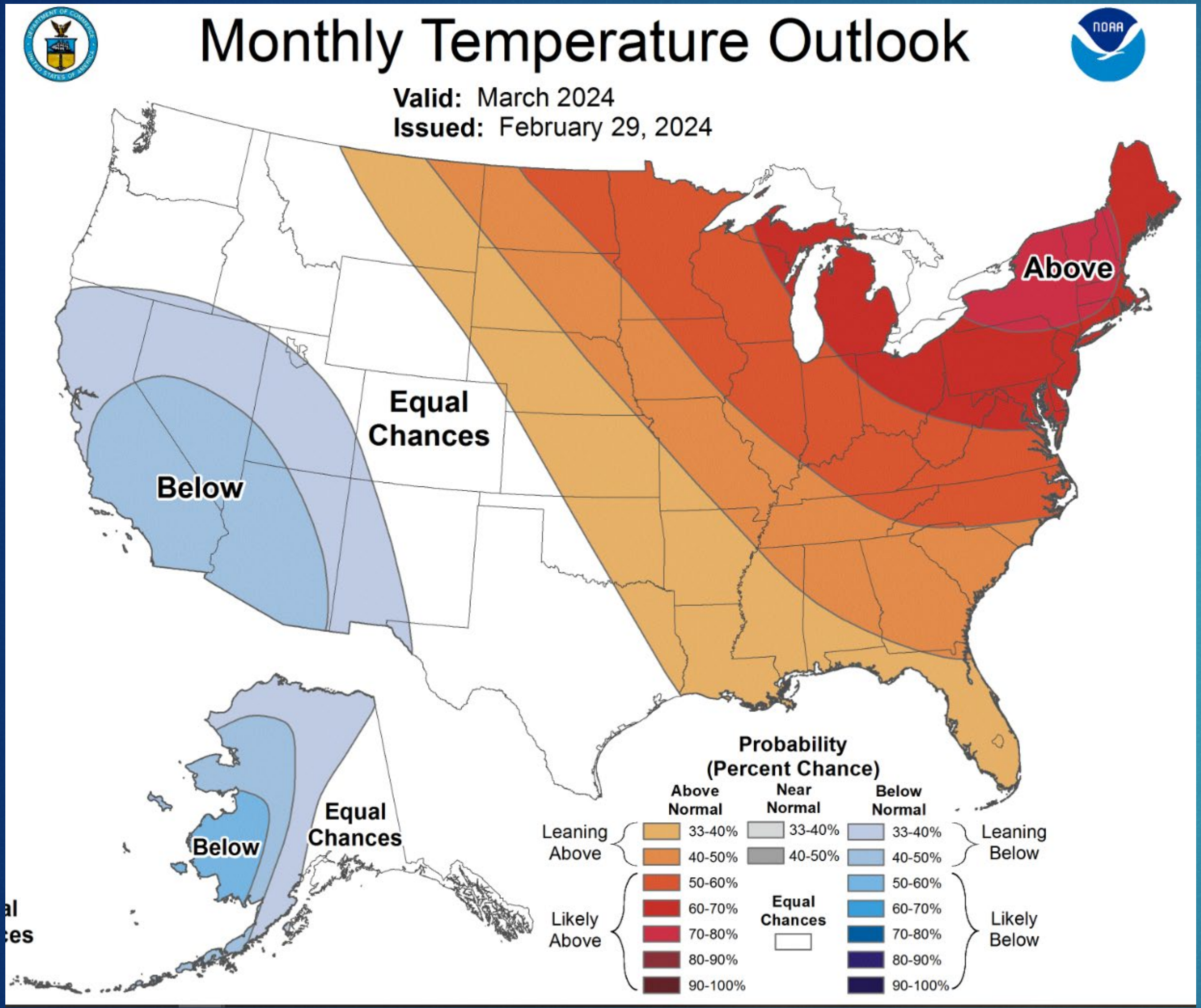
Median Snow Water Equivalent

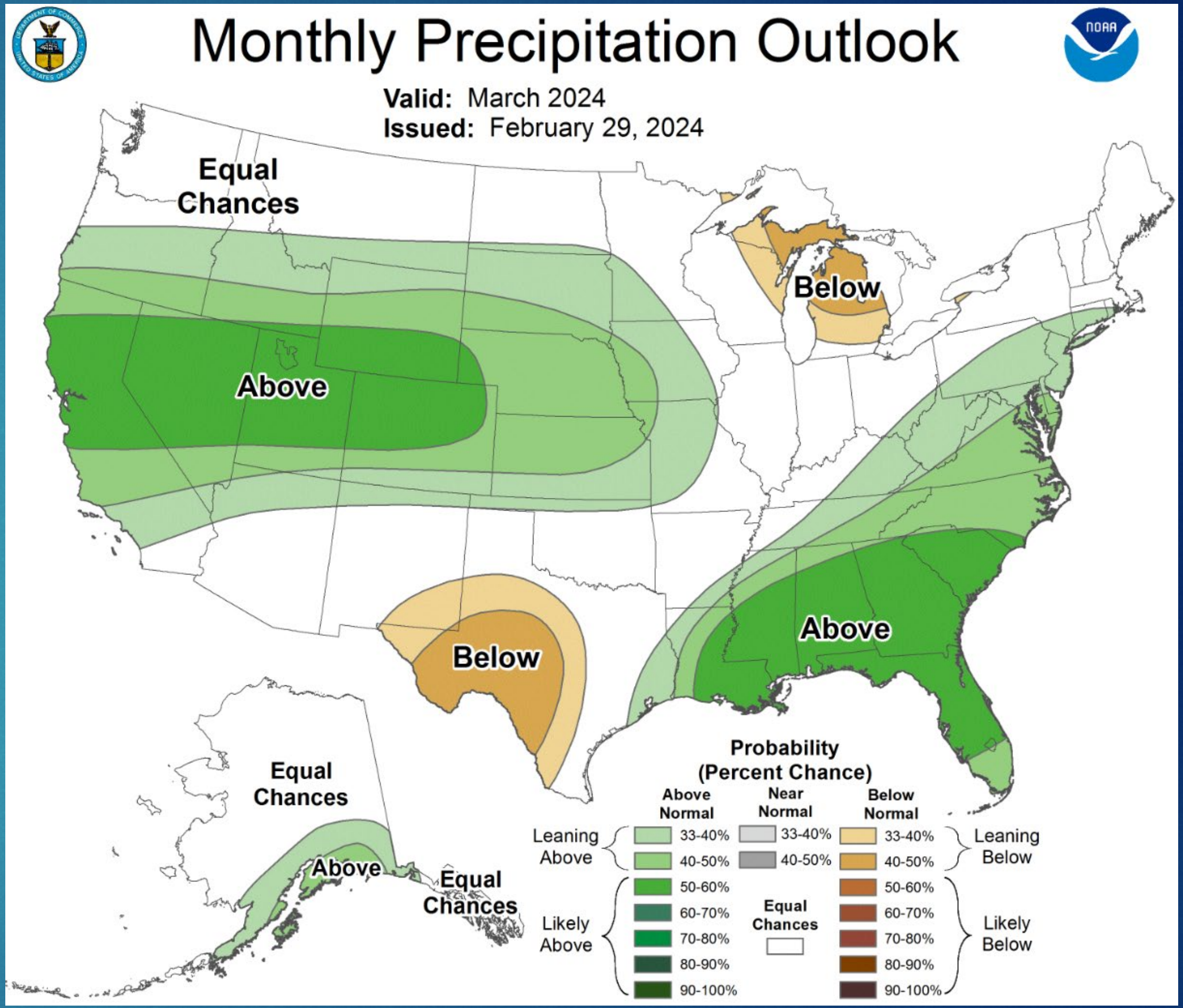
January 11, 2024

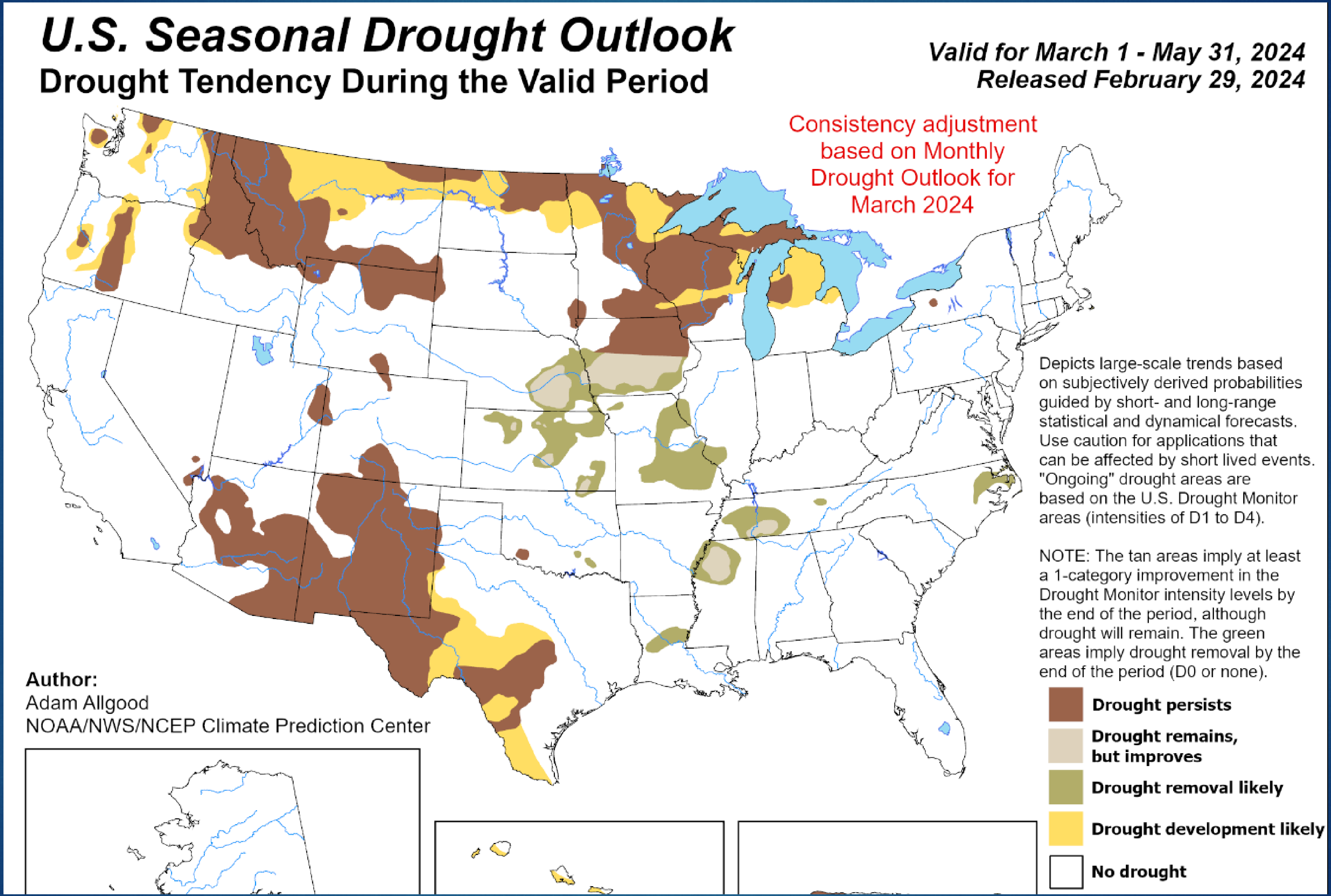


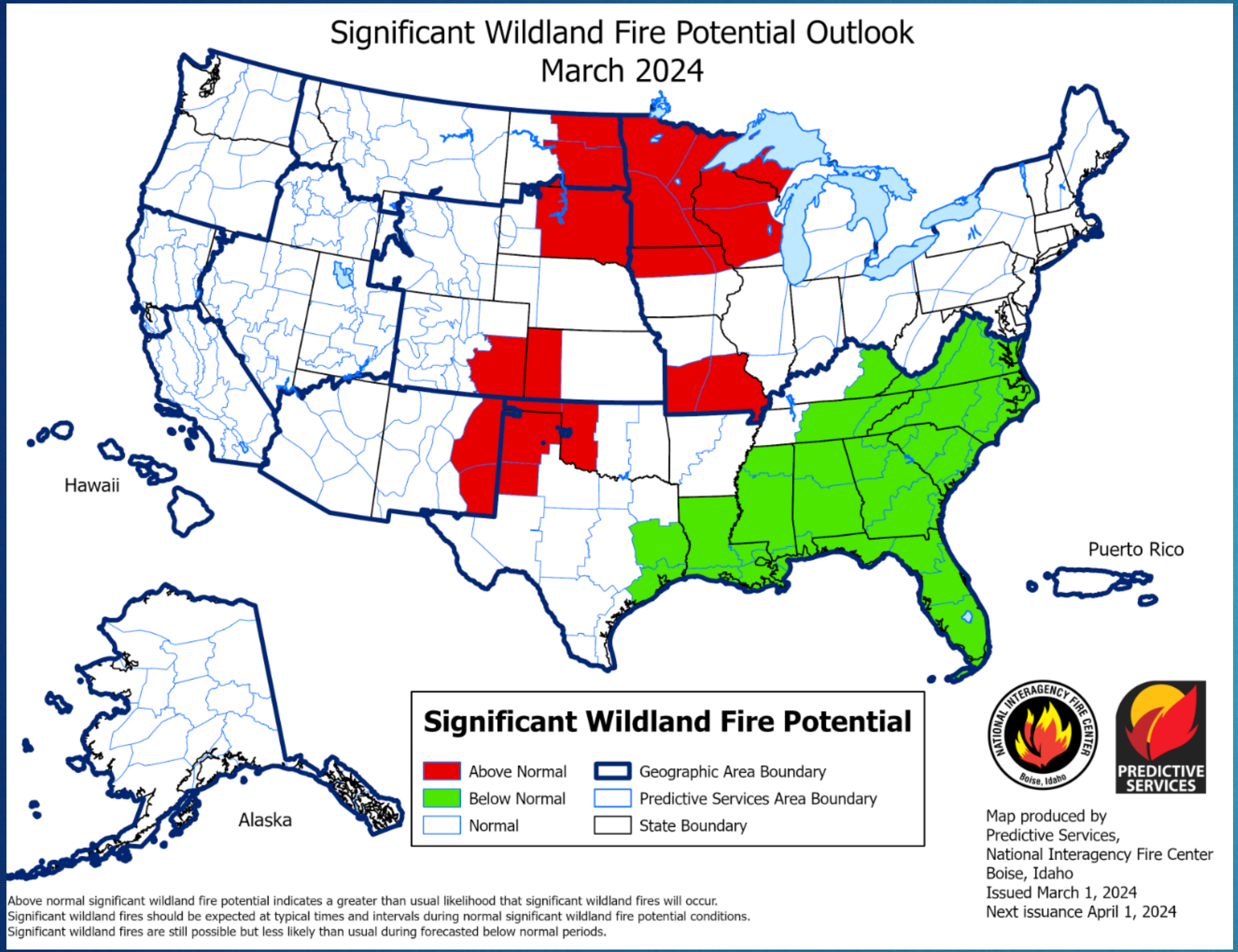
March 11, 2024

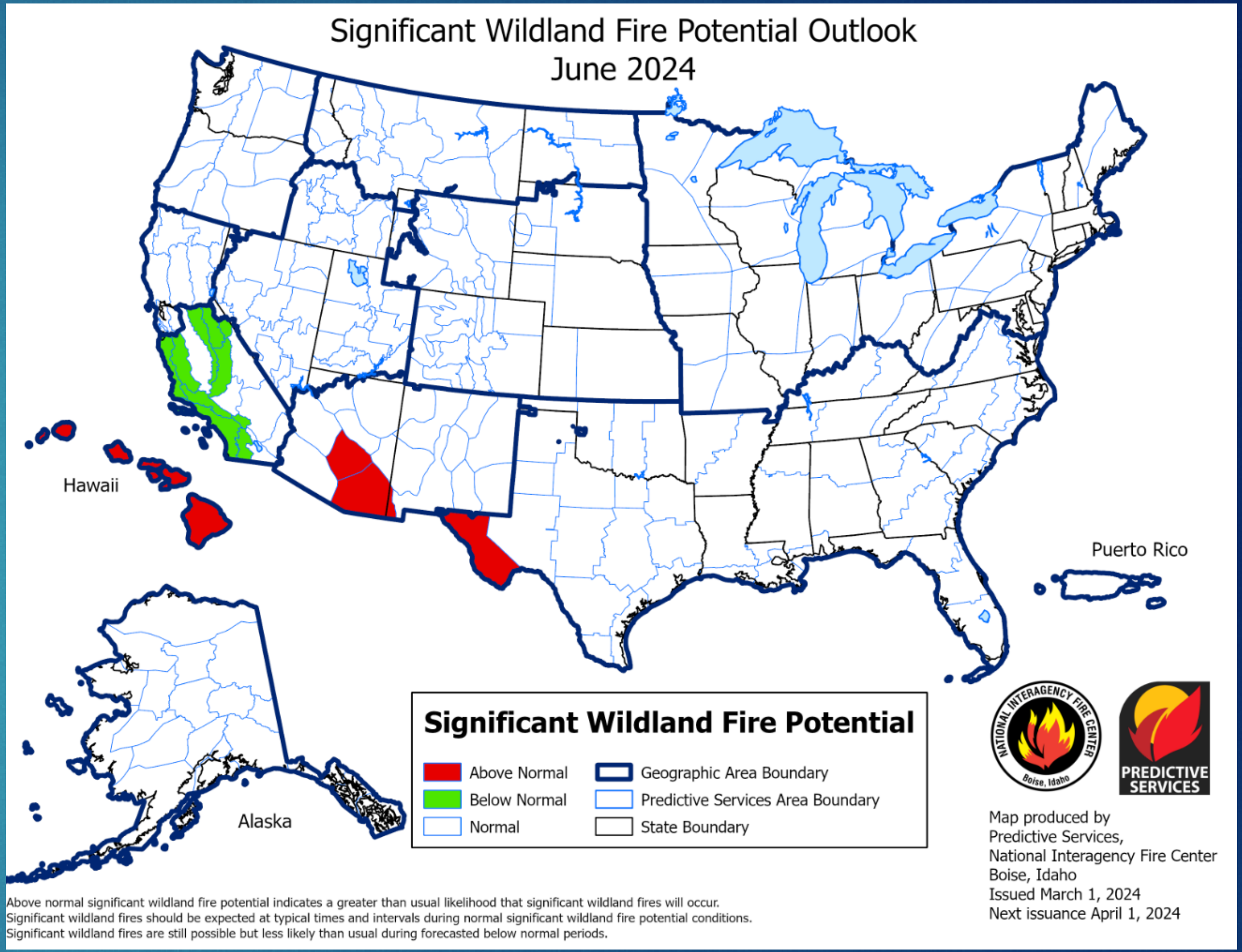



Monthly Temperature Outlook
Valid: March 2024
Issued: February 29, 2024
Above
Equal Chances
Below
Below
Equal Chances
Probability (Percent Chance)
Above Normal
Near Normal
Below Normal
Leaning Above
Leaning Below
Likely Above
Likely Below
33-40%
40-50%
50-60%
60-70%
70-80%
80-90%
90-100%
Equal Chances


Monthly Precipitation Outlook
Valid: March 2024
Issued: February 29, 2024
Equal Chances
Above
Below
Below
Above
Equal Chances
Above
Equal Chances
Probability (Percent Chance)
Above Normal
Near Normal
Below Normal
Leaning Above
Leaning Below
Likely Above
Likely Below
33-40%
40-50%
50-60%
60-70%
70-80%
80-90%
90-100%
Equal Chances


U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period
Valid for March 1 - May 31, 2024
Released February 29, 2024
Consistency adjustment based on Monthly Drought Outlook for March 2024
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


Significant Wildland Fire Potential Outlook
March 2024
Hawaii
Puerto Rico
Alaska
Significant Wildland Fire Potential
Above Normal
Below Normal
Normal
Geographic Area Boundary
Predictive Services Area Boundary
State Boundary
PREDICTIVE SERVICES
Map produced by
Predictive Services,
National Interagency Fire Center
Boise, Idaho
Issued March 1, 2024
Next issuance April 1, 2024
Above normal significant wildland fire potential indicates a greater than usual likelihood that significant wildland fires will occur.
Significant wildland fires should be expected at typical times and intervals during normal significant wildland fire potential conditions.
Significant wildland fires are still possible but less likely than usual during forecasted below normal periods.


Significant Wildland Fire Potential Outlook
June 2024
Hawaii
Puerto Rico
Alaska
Significant Wildland Fire Potential
Above Normal
Below Normal
Normal
Geographic Area Boundary
Predictive Services Area Boundary
State Boundary
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Questions/Comments?

Prairie Pothole near Jordan, Montana

Contact Information:
Michael Downey
mdowney2@mt.gov
406-444-9748