



*Picture submitted to the Montana Drought Impact Reporter, May 29, 2025
Sheridan County.*

MT Drought Status: Current Conditions and Outlook

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June 4, 2025

Prepared for the Montana Drought and Water Supply Advisory Committee



February

is the lowest precipitation month for most counties



March

Many counties east of the divide receive more precipitation in May or June than January, February, and March combined.



April

Quarter 2 (April, May, June) accounts for 35-45% of annual precipitation for most counties

- Q1 (Oct, Nov, Dec) accounts for 32% of the annual precipitation in Lincoln, Sanders, and Mineral



May

All but three counties receive the largest portion of annual precipitation in either May or June

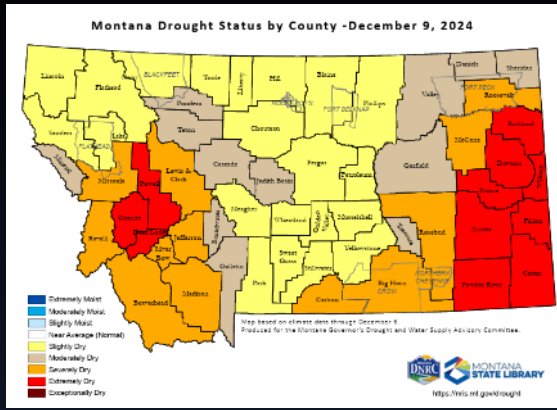
- November and December are the largest precipitation months for Lincoln, Sanders, and Mineral



June

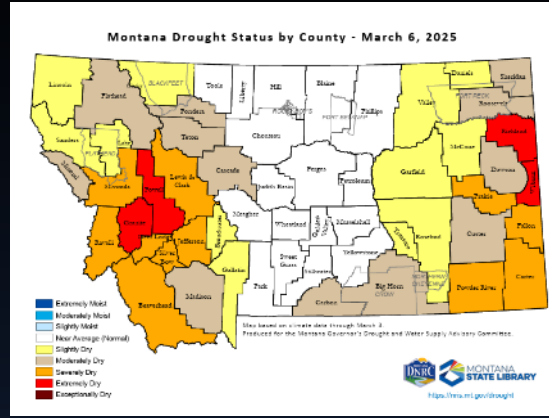
is the wettest month of the year for most counties.

Fall



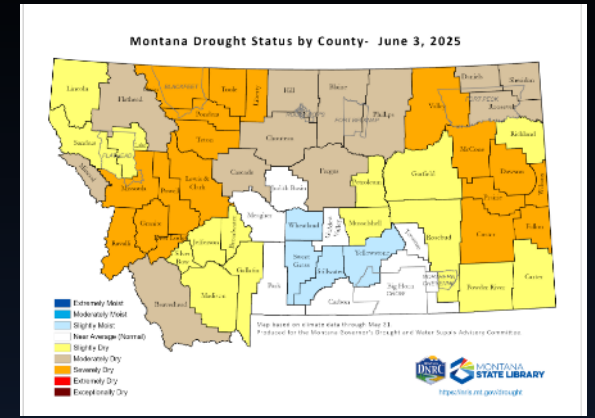
- Fall 2024 – below average precip. about 0.5” anomaly (statewide average) from Sep. through Nov.
- Much above normal temperatures from Sep through Nov. (ranked 129 out of 130).
- Oct. 18 first widespread snow of the season. Second widespread event Nov 22. NW above average precipitation Oct - Nov.
- Milk (high-elevations) 170% of normal precipitation in November

Winter



- Central had big January, 150-180% of normal;
- Early February storms opened a wide block of Dnada and improved DI to D0. Northwest MT slipped after Nov., however, and DI remained along the Front Range
- Little Belts and Snowies highlight of the snow season
- Snow was the talk of the town (ecstatic skiers) in February, but followed by a dramatic swing (warm up and wind) in early March

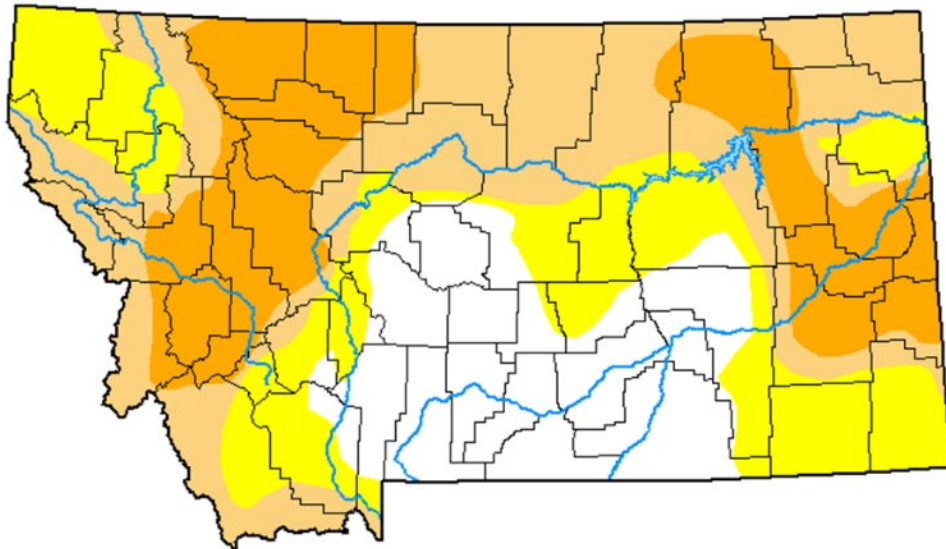
Spring/now



- First of March thaw... Temps in 40s-50s. Nighttime temps in 40s. Mesonet soil moisture indicating recharge.
- April precip. in Helena was 2nd lowest on record (since 1938) . A good start to April quickly went to nothing.
- Average May for much of state. Helena southwest to Dillon above normal. Northwest below.
- Spring temps have generally been above normal. Some cool downs but also some much above normal (85F +)

U.S. Drought Monitor Montana

May 27, 2025
(Released Thursday, May. 29, 2025)
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>

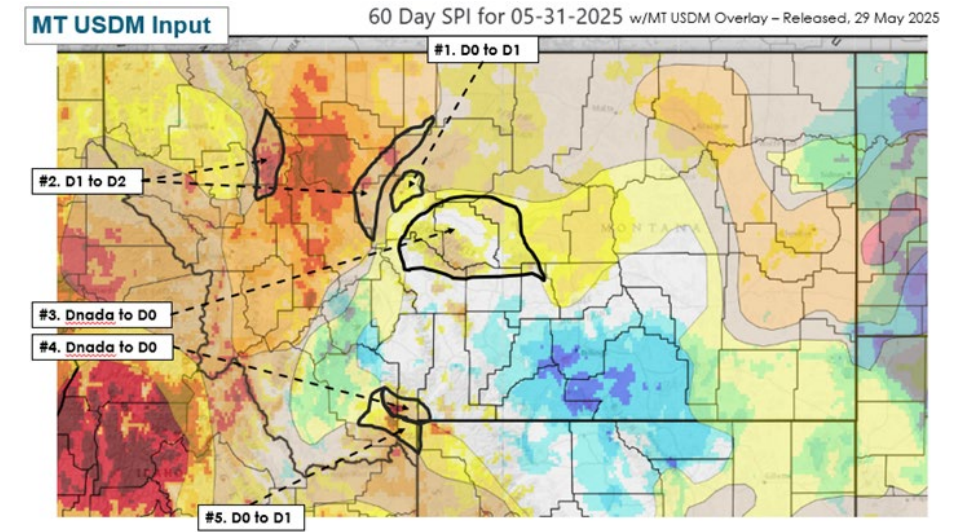
Author:

Brad Pugh
CPC/NOAA



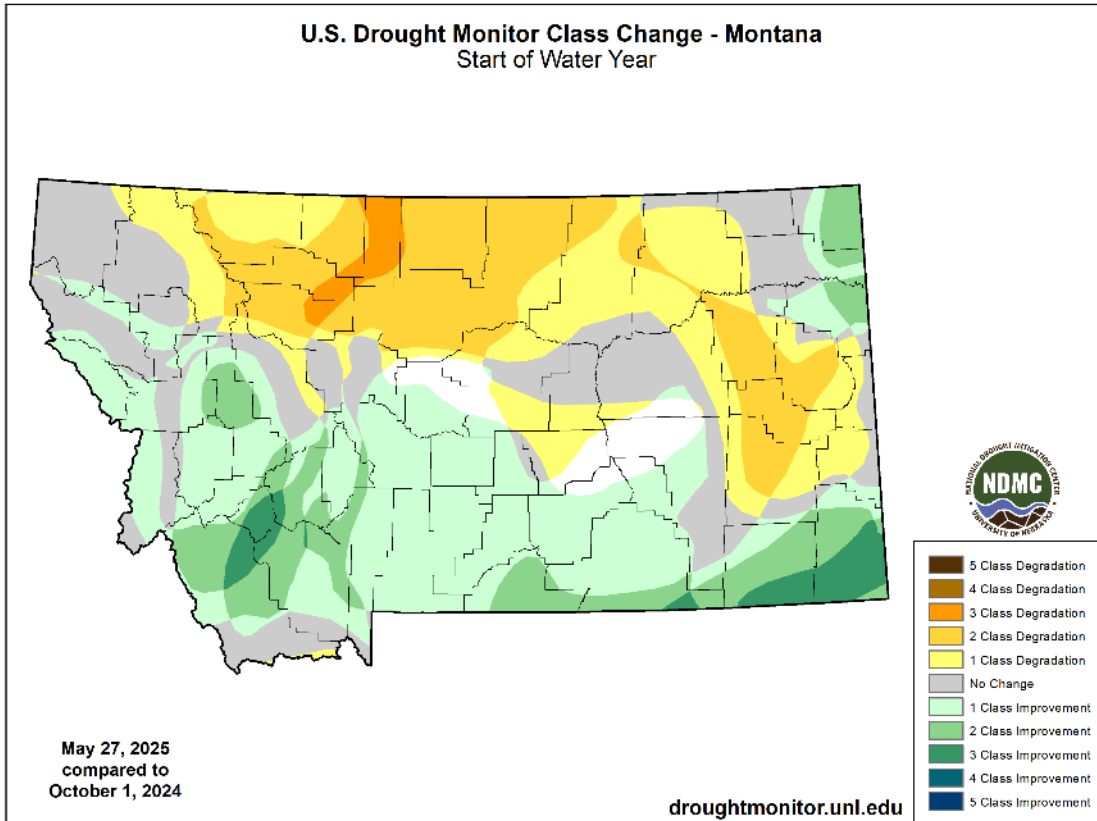
droughtmonitor.unl.edu

Potential changes to the USDM this week

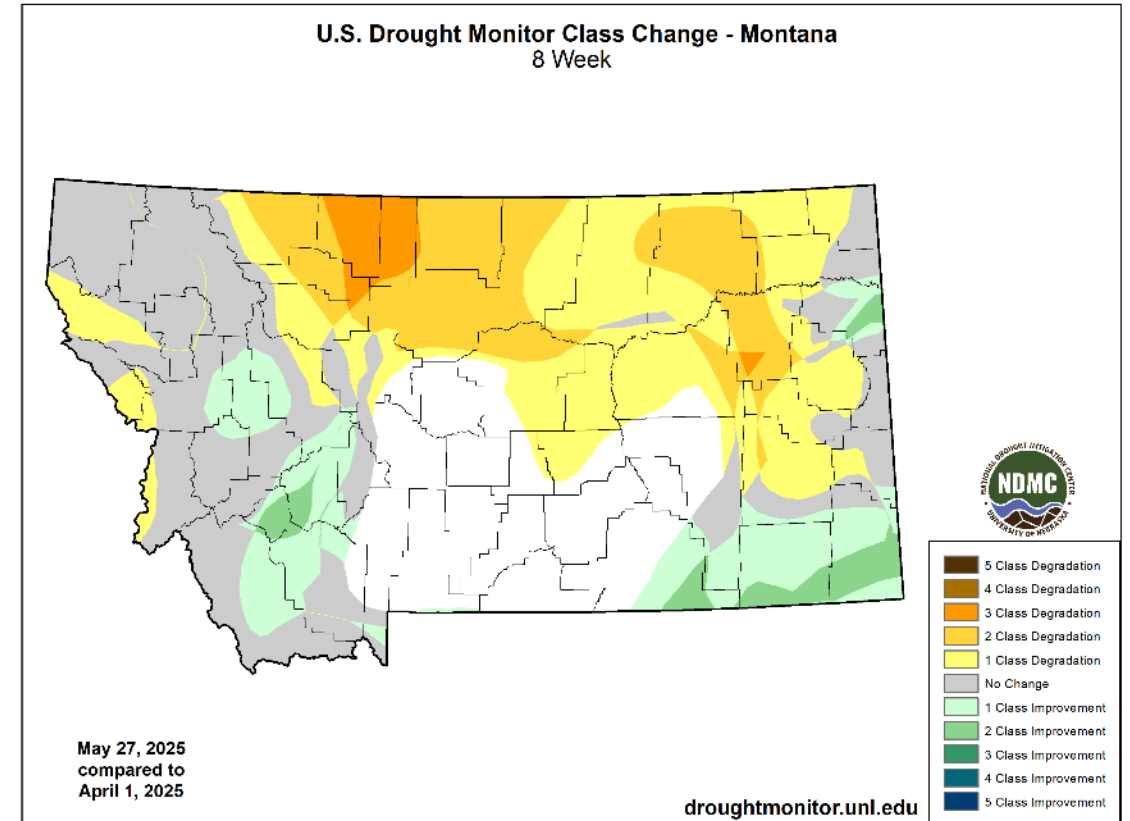


Drought Monitor Change Maps

Now compared to start of Water Year



Now compared to April 1



Northwest:

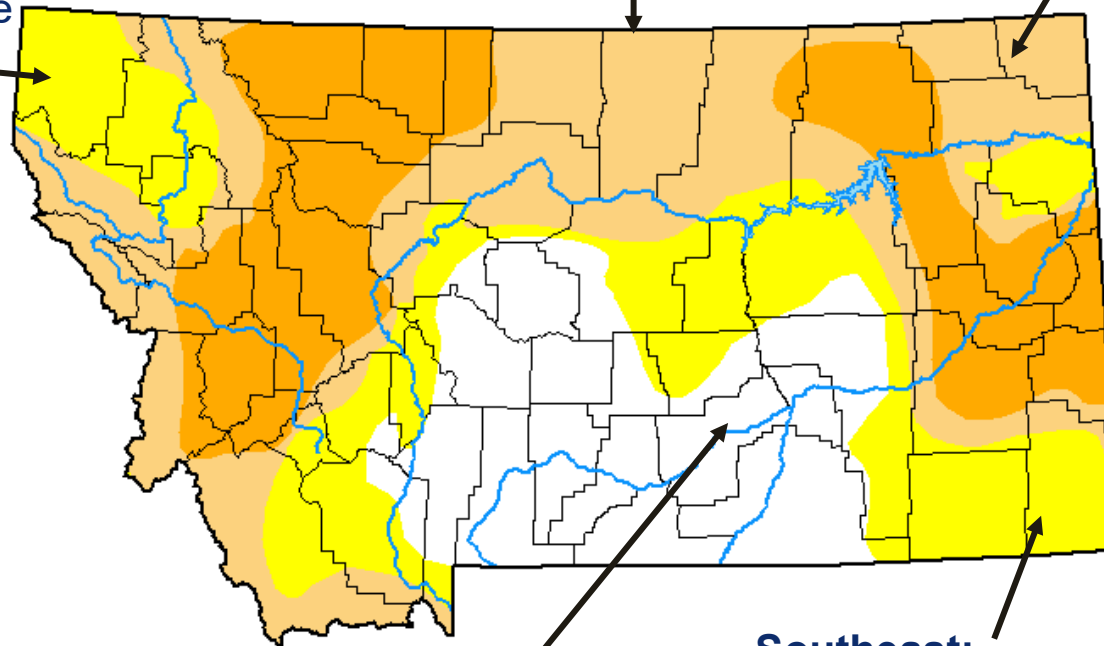
Promising fall tapered off to a so so winter. Status quo for many months now. Last 60-days especially concerning ahead of fire season.

Central/northcentral:

Trending drier. Anticipate expanding D2 Severe.

Northeast:

Has been a difficult read because metrics look okay. The issue is timing and frequency.



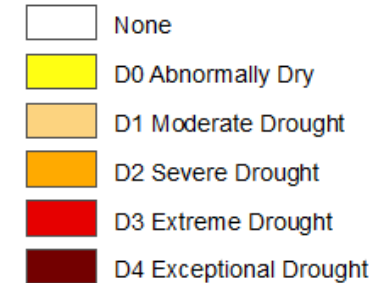
Southcentral:

Metrics have been on the wet side for quite some time. Looking good.

Southeast:

Improving after Extreme conditions in Fall and into new year.

Intensity:



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Author:

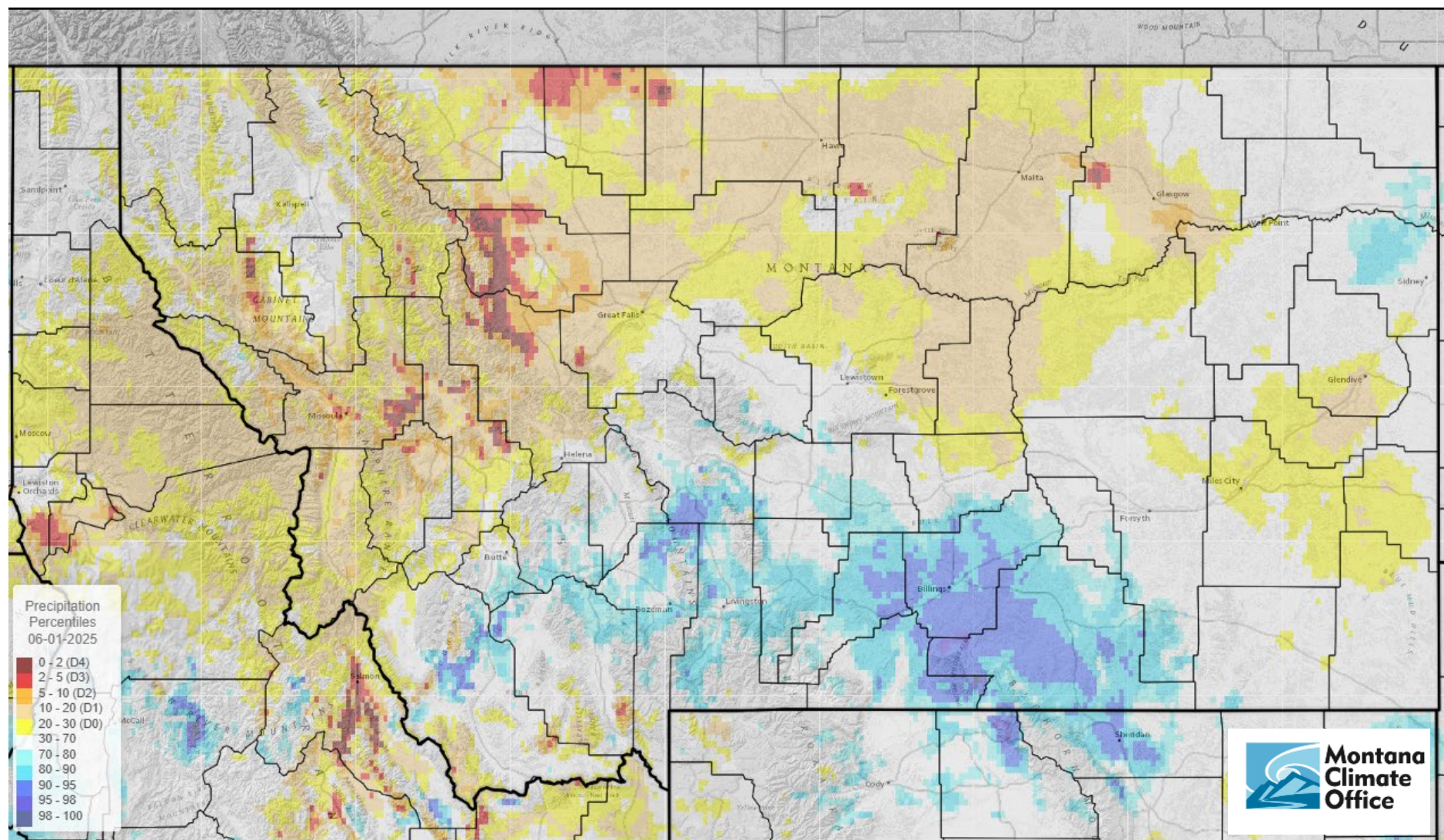
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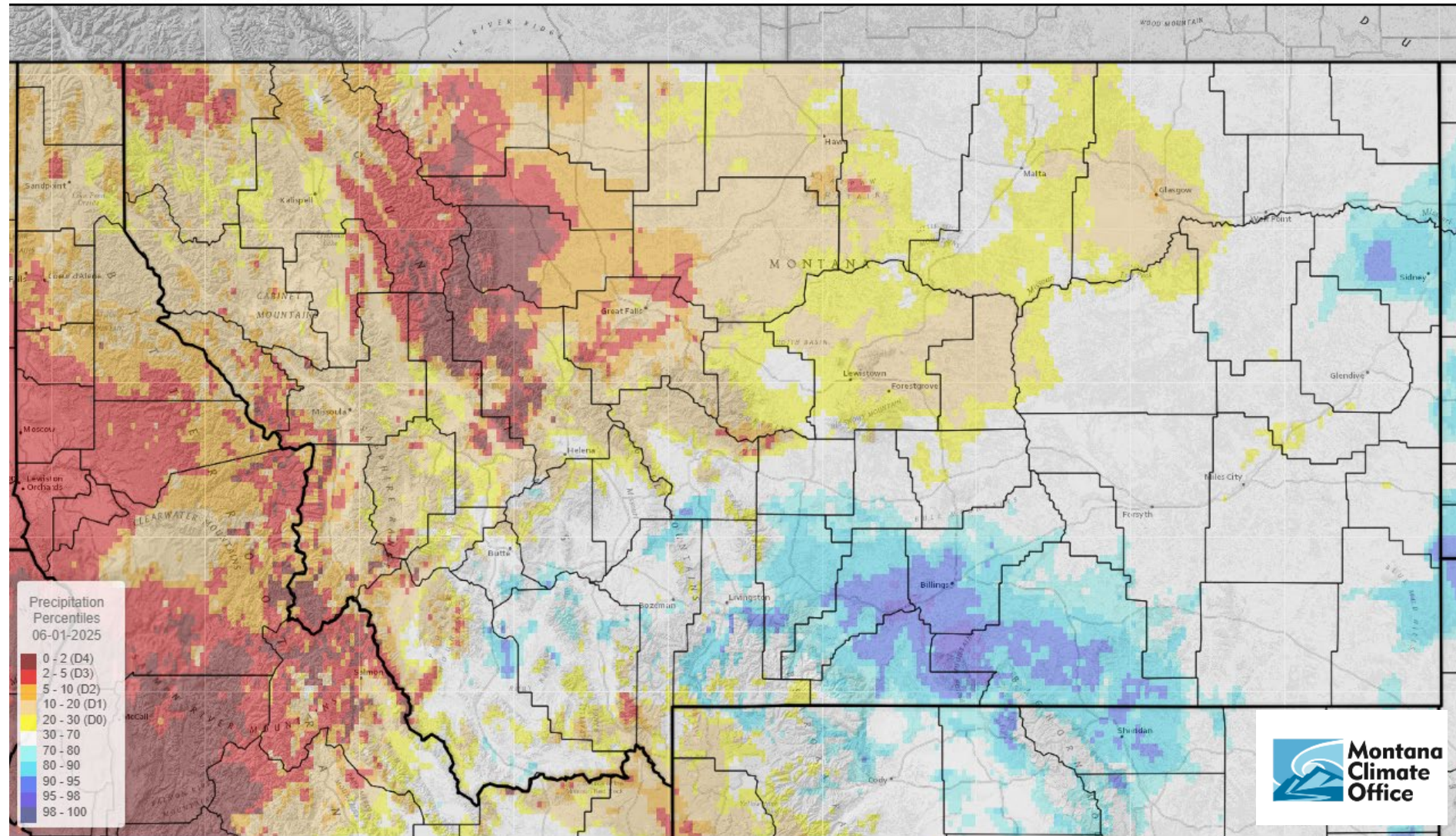
Precipitation

Water Year Percentile for 06-01-2025



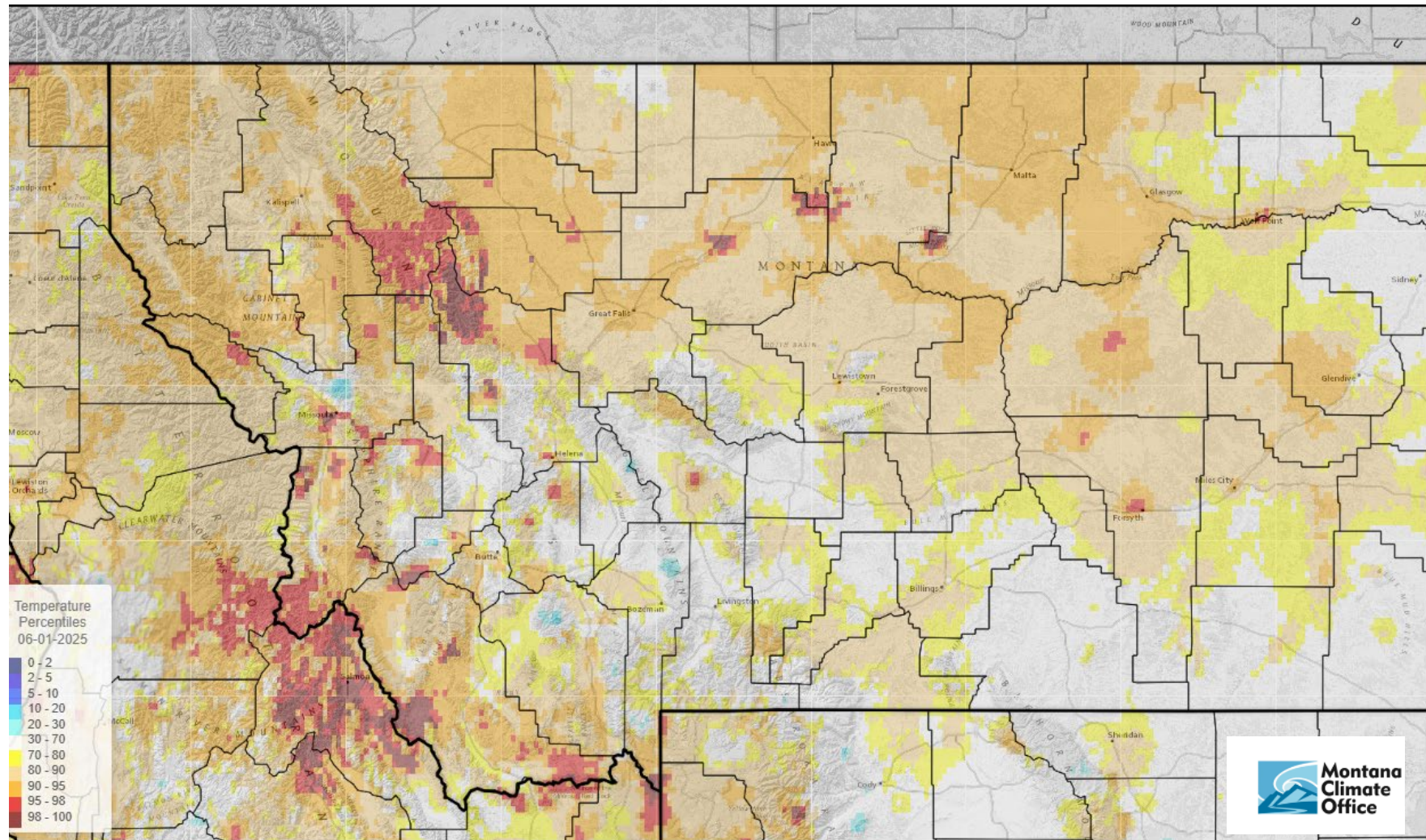
Precipitation

60 Day Percentile for 06-01-2025



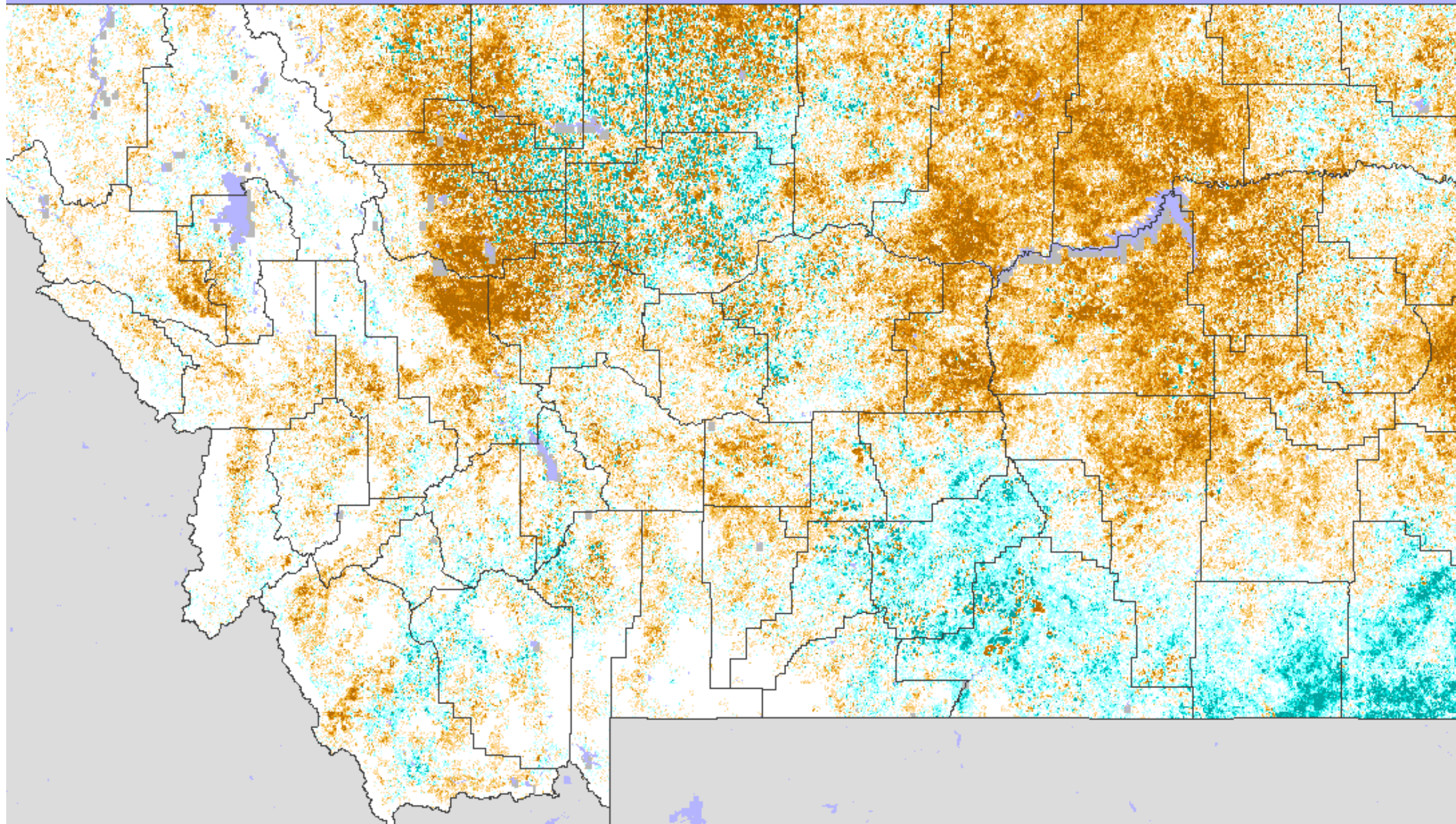
Temperature

60 Day Percentile for 06-01-2025

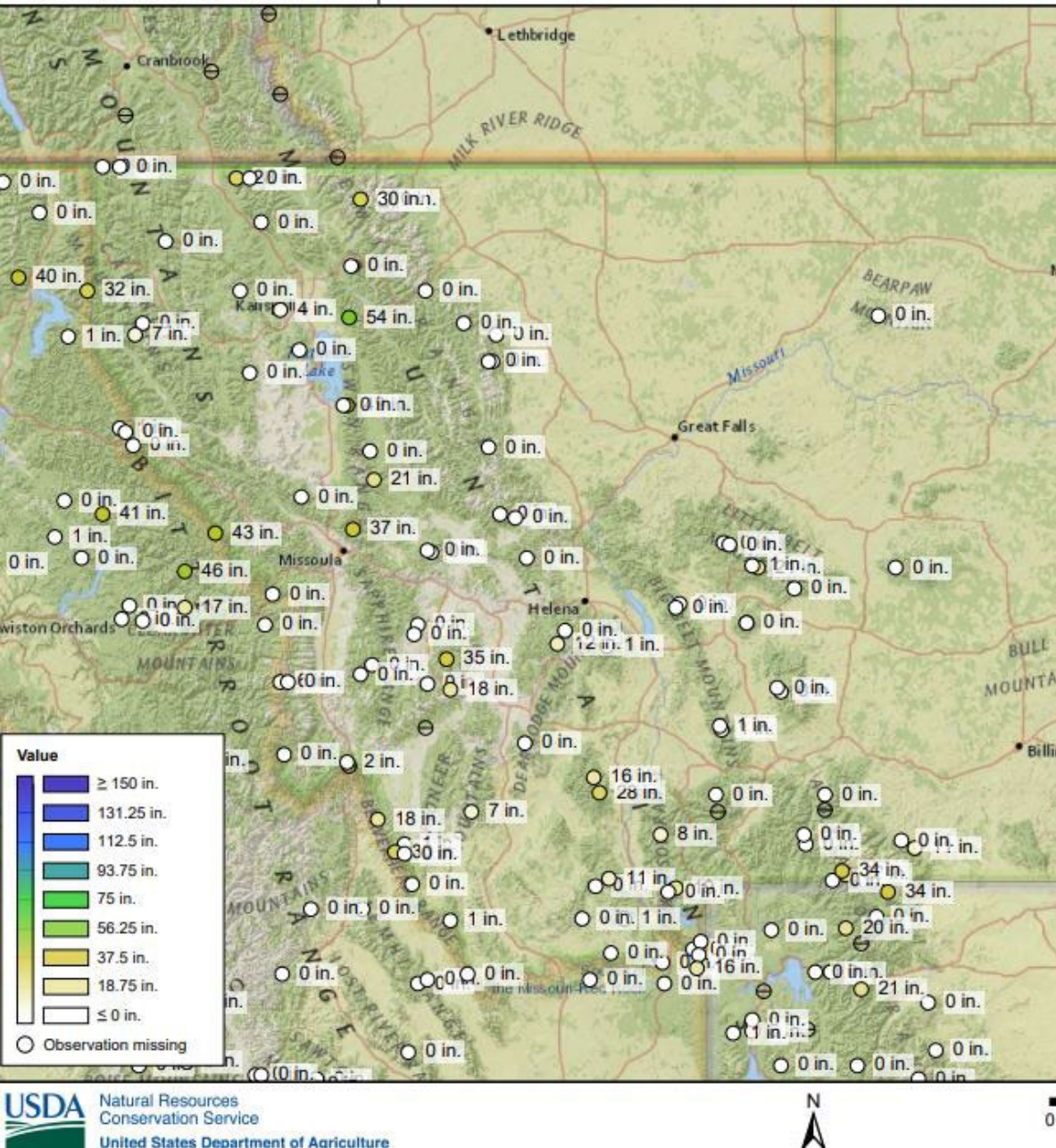


Vegetation Health

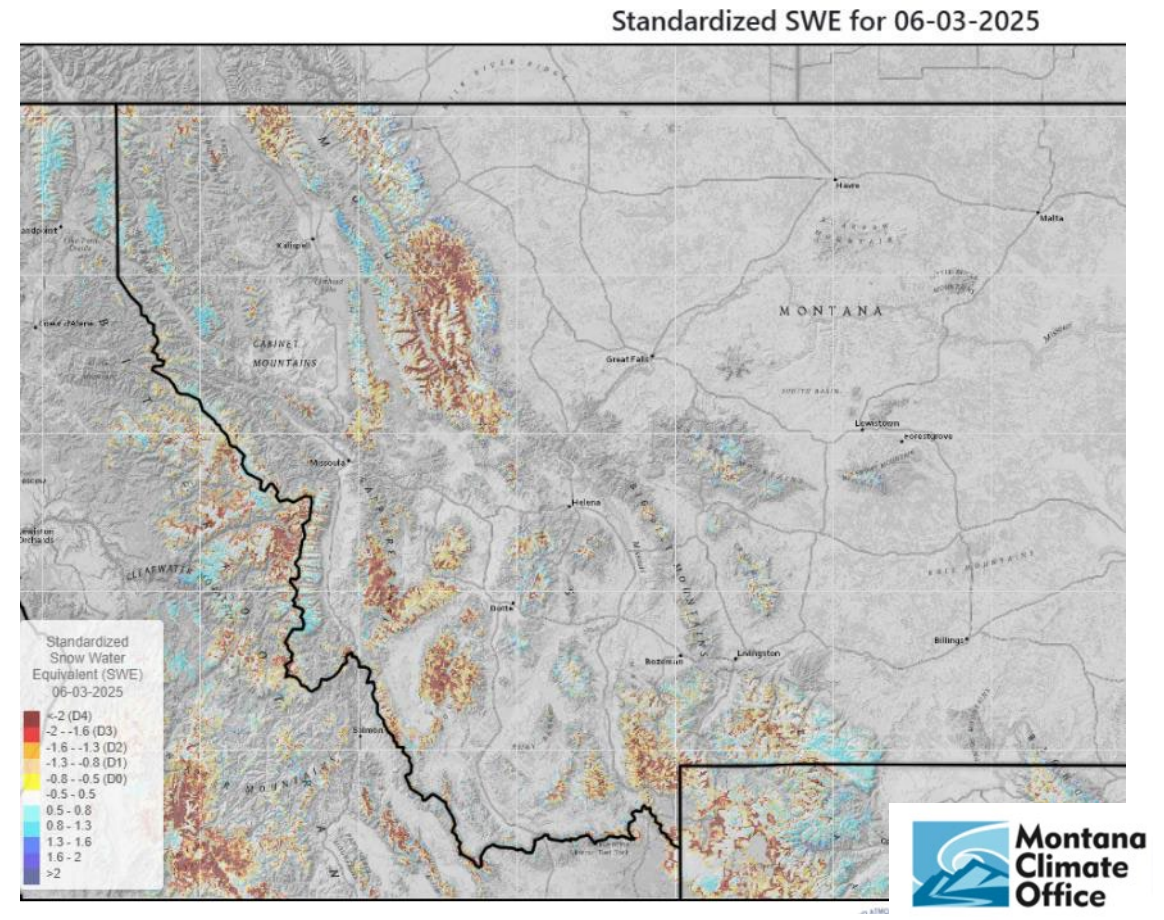
VH yearly change, May 27, 2025 (week 21)



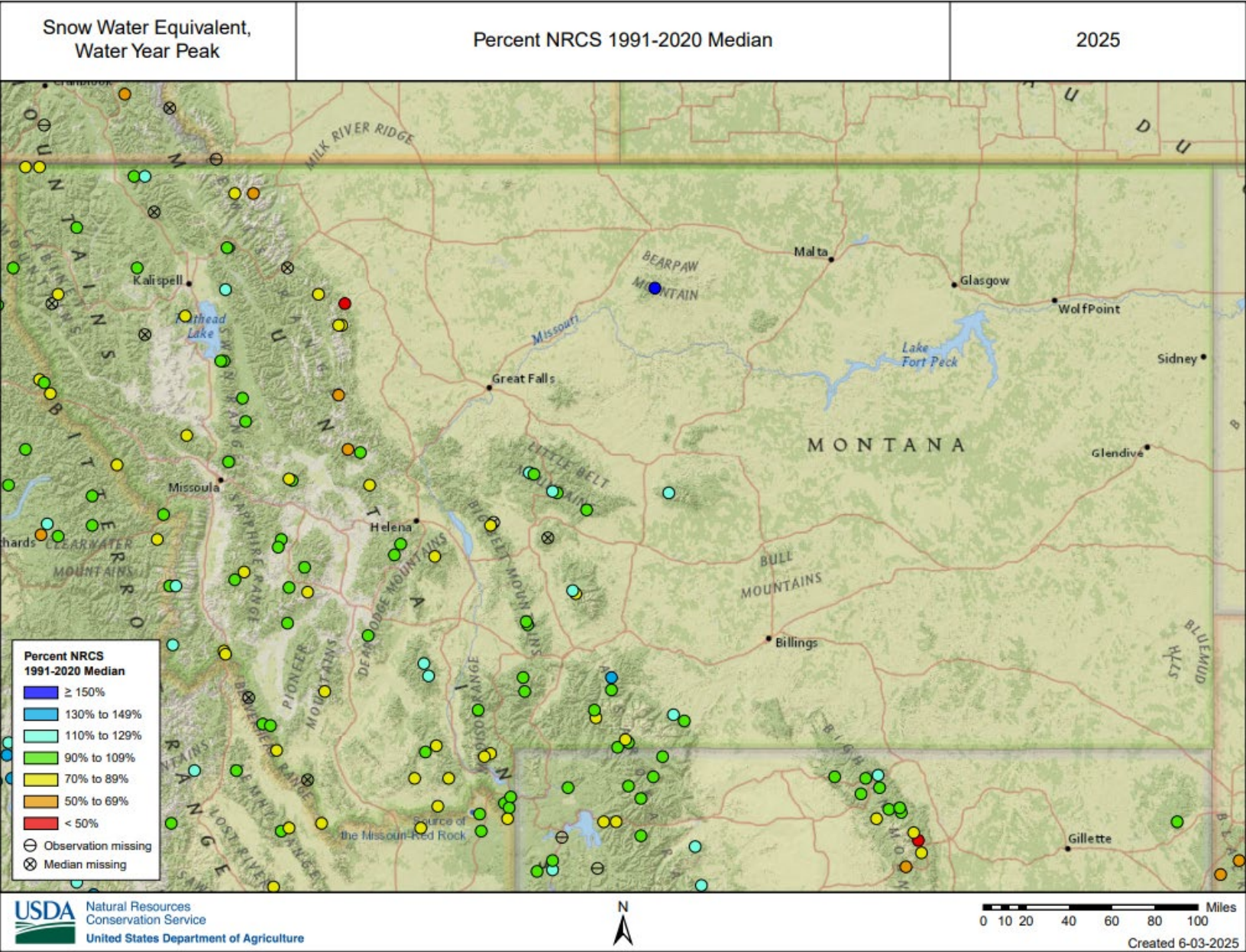
Snow depth at SNOTELs



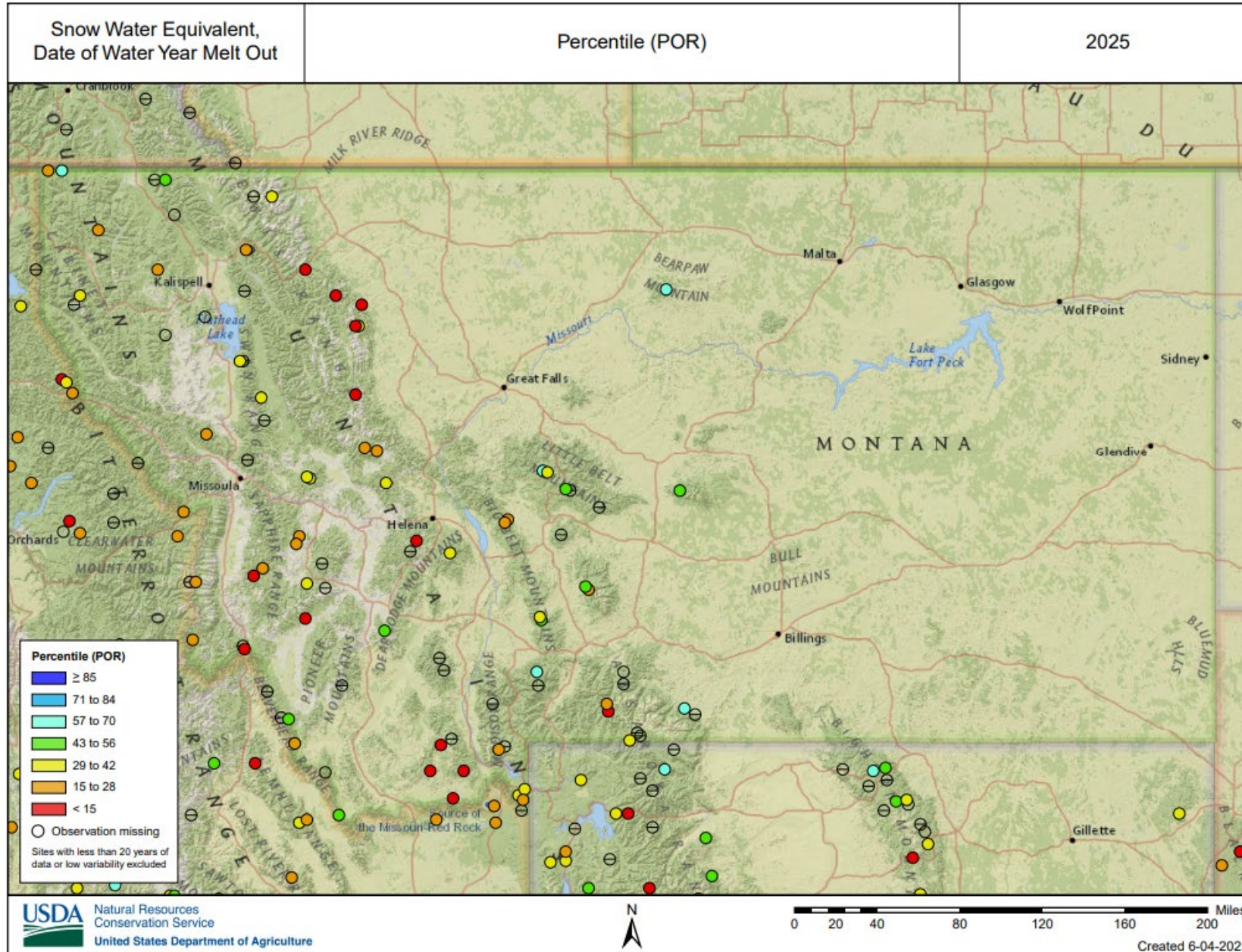
Standardized SWE (remotely sensed)



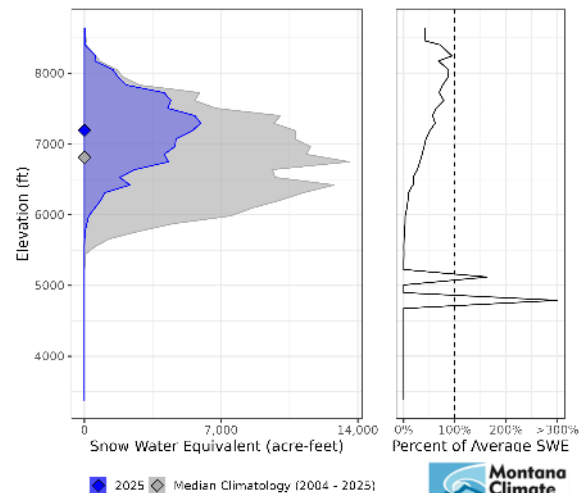
Water Year Peak Snow Water Equivalent



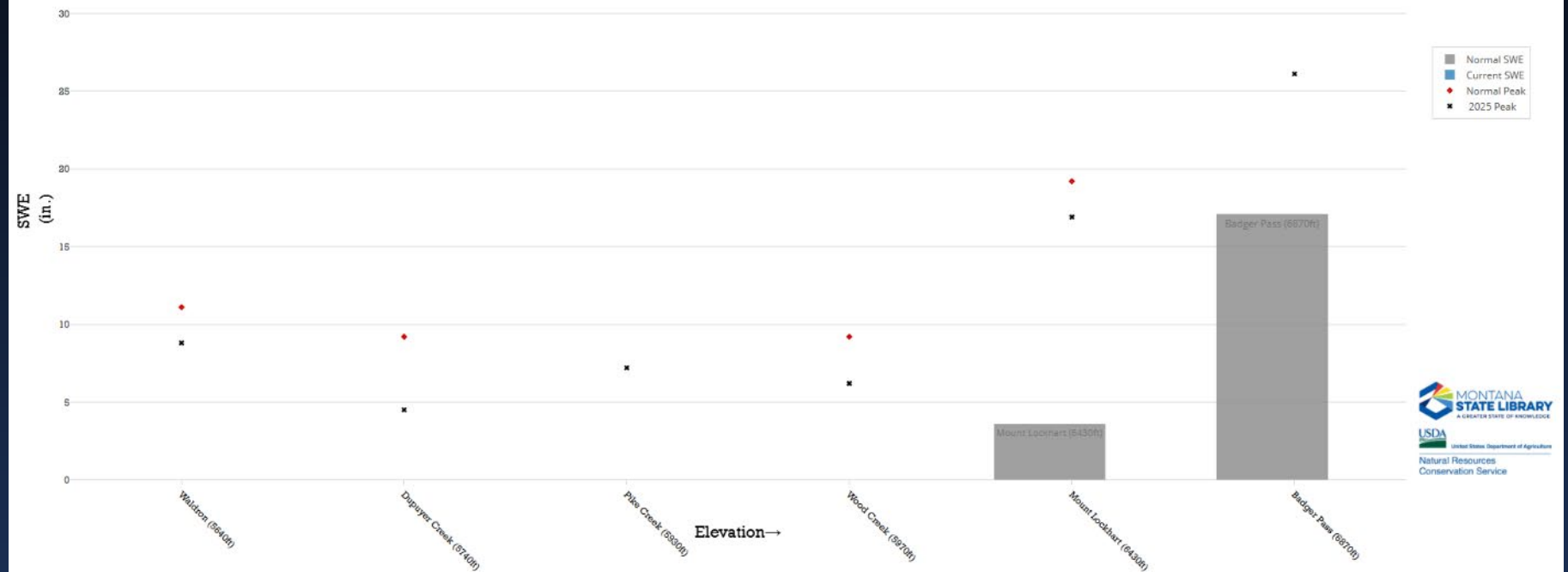
Date of Melt Out



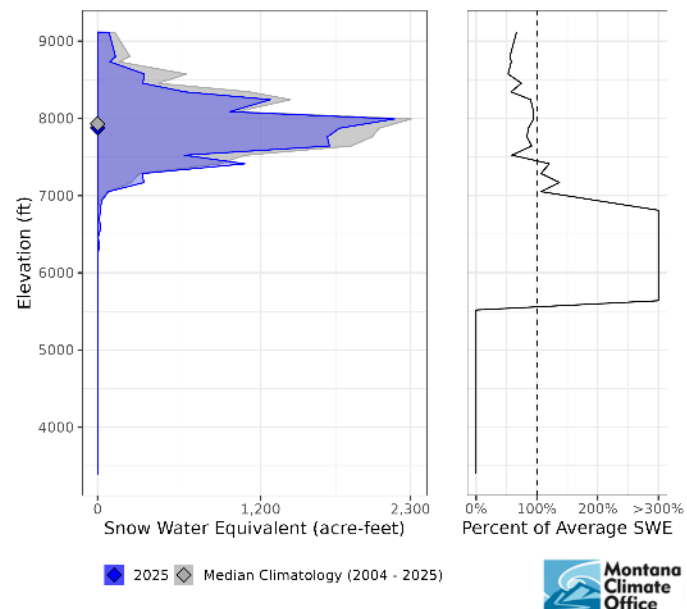
Hypsom-SWE for Sun (HUC8: 10030104)
2025-06-03 (35% of Normal)



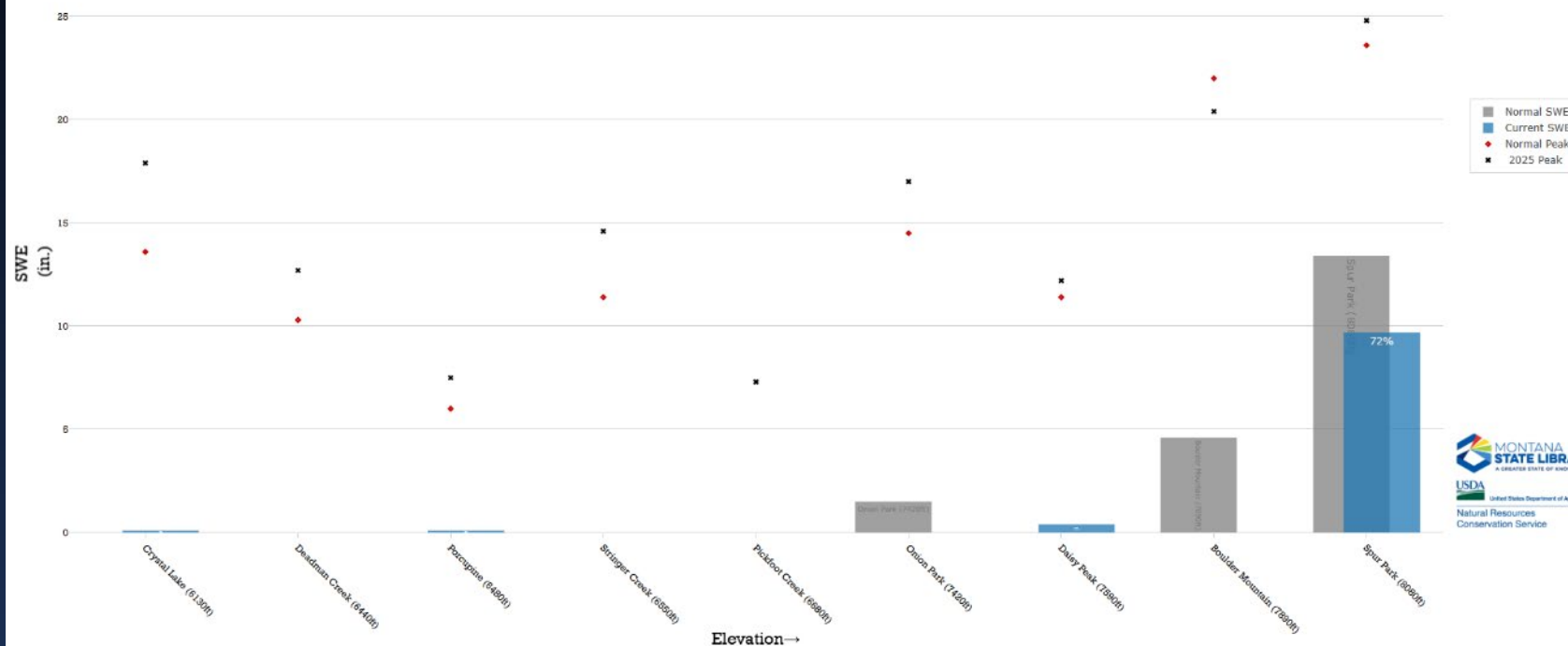
SunTetonMarias
Snow Water Equivalent
2025-06-03



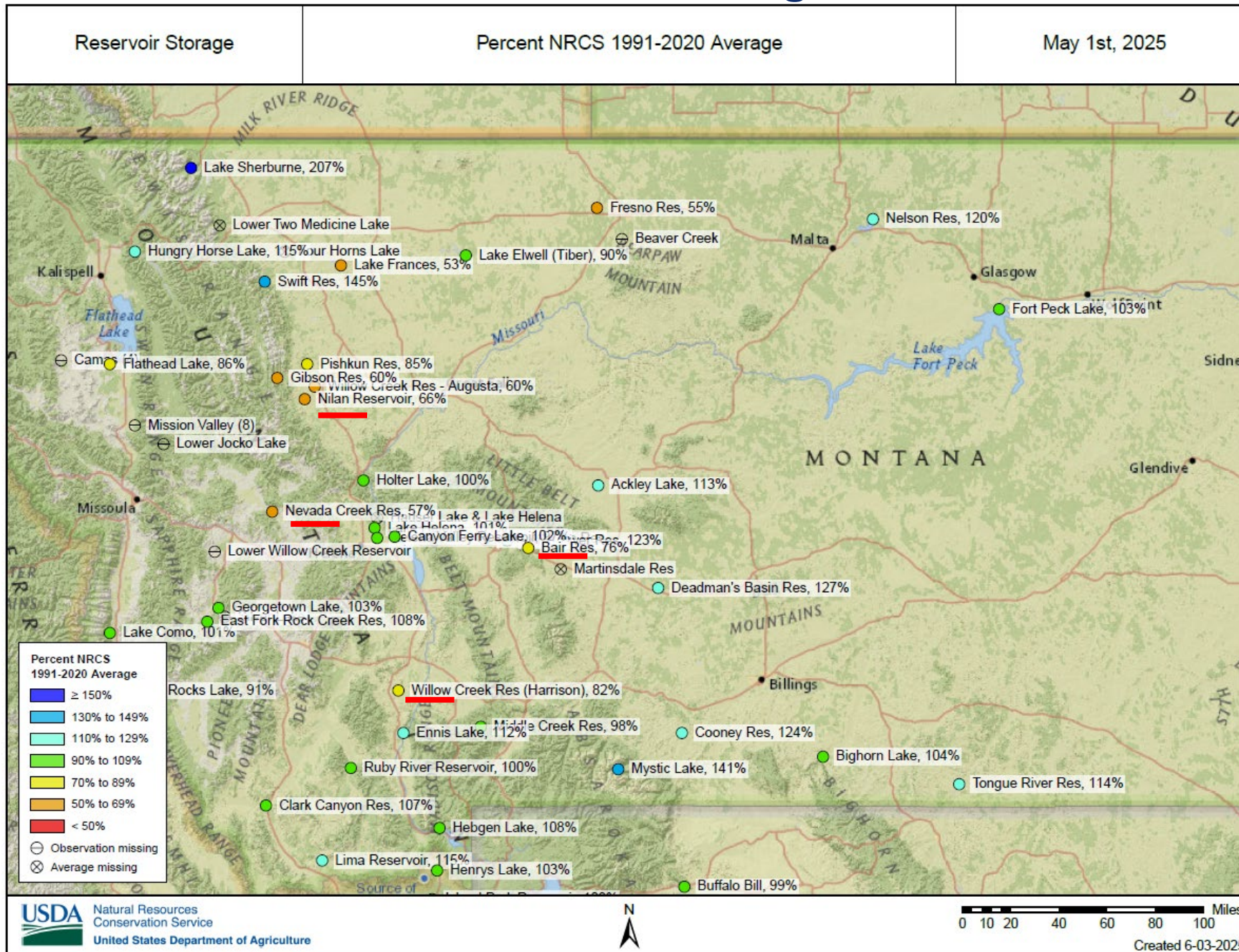
Hypsom-SWE for Smith (HUC8: 10030103)
2025-06-03 (86% of Normal)



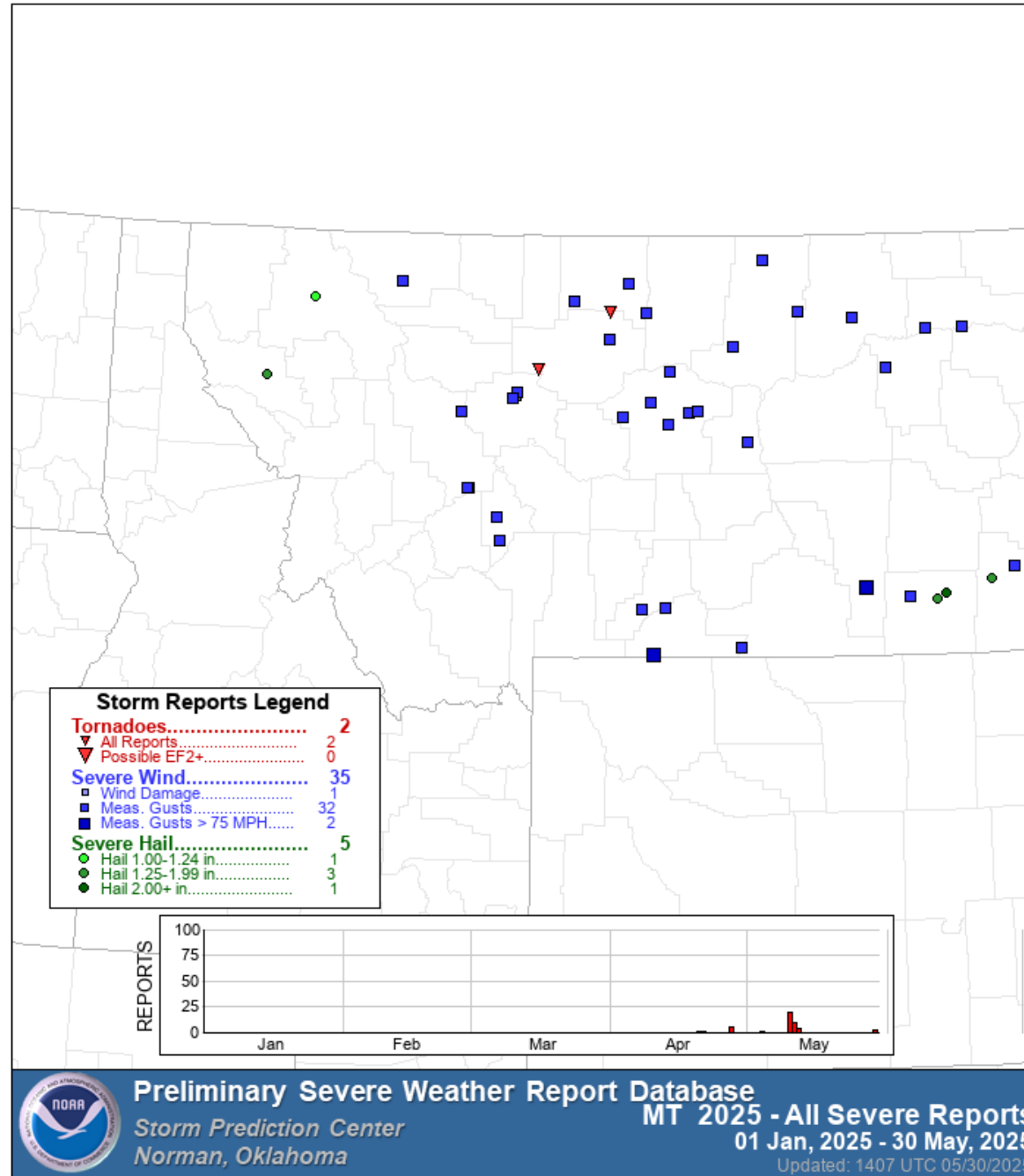
SmithJudithMusselshell
Snow Water Equivalent
2025-06-03



Reservoir Storage



2025 Annual Preliminary Report Summary



Montana Drought Impact Reporter

Reports since October 1, 2024

6/3/2025: Jefferson County

Jefferson County, approx. Boulder, was on the drier side at the start of May but has since improved. Conditions are looking normal to slightly dry. Better than last year and on par with May 2023. Soil moisture is adequate at the moment, though a drying trend the last week or two. I have not had to water lawn yet and just watered the garden one day when it was 85F. Hoping for normal June rains or better moisture.

Most of Jefferson and south into Silverbow and Madison. Farther south is drier.

Experience: 10-20 years

Photo: No

6/2/2025: Valley County

There is gonna be no dry land hay and any dry land forage that I planted looks to be a complete loss. Grass is short and water ponds are drying up fast. Farm fields are burning up spring wheat doesn't even seem to be growing. Have not seen crops this bad.

most of valley county

Experience: 20 or more years

Photo: No

6/2/2025: Valley County

County wide

Experience: 5-10 years

Photo: No

6/2/2025: Glacier County

all of glacier county

Experience: 20 or more years

Photo: No

6/2/2025: Sanders County

I believe the Flathead Reservation as a whole is at least moderately dry and mostly severely dry. We are in the Camas Prairie Basin on the reservation in Sanders County. We had very little snowpack and only a sprinkle of rain since April. Our hay is too low to the ground to cut and is turning already.

Experience: 20 or more years

Photo: No

6/2/2025: Wibaux County

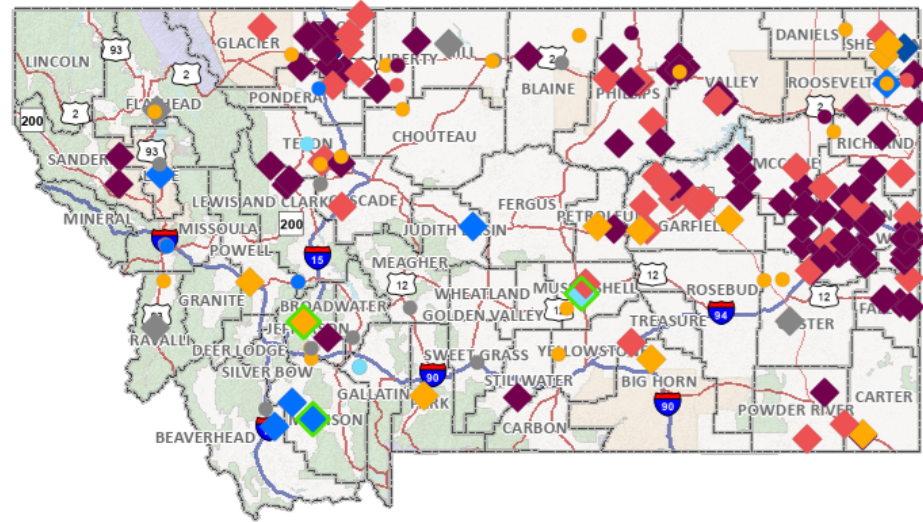
Dry and grasshoppers

Eastern Montana

Experience: 20 or more years

Photo: No

6/2/2025: Hill County



Montana State Library | National Drought Mitigation Center, University of Nebraska

Powered by Esri

Overview Map

Photo Map

Impact Type Map

Crop Condition Map

Range Condition Map

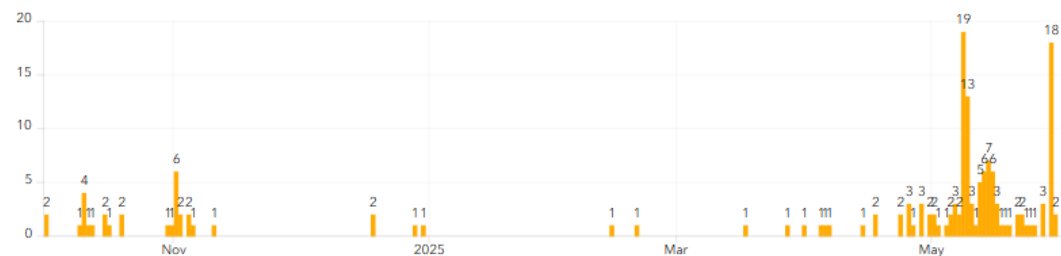
All Years

All Photos

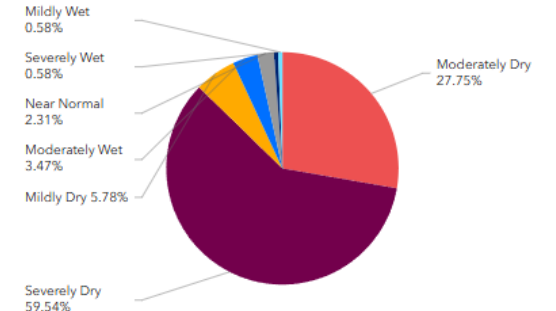
Number of Reports
Since 10/1/2024

171

Number of Reports by Date



How Wet or Dry is it?



How Wet or Dry is it?

2 of 50

6/1/2025 - Dawson County

Description: Grasses are very slow growing. Planted alfalfa the 15th of april and never came up.



5/30/2025 - Phillips County

Description: "The Saco flat is devoid of any green vegetation. Winter wheat near Malta will not be harvested."



6/2/2025: Valley County

"There is gonna be no dry land hay and any dry land forage that I planted looks to be a complete loss. Grass is short and water ponds are drying up fast. Farm fields are burning up spring wheat doesn't even seem to be growing. Have not seen crops this bad."

- Experience: 20 or more years



6/2/2025 - Liberty County

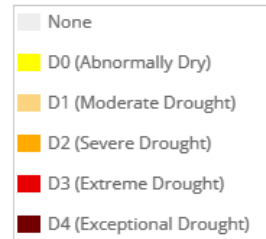
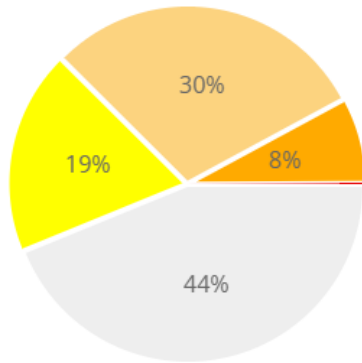
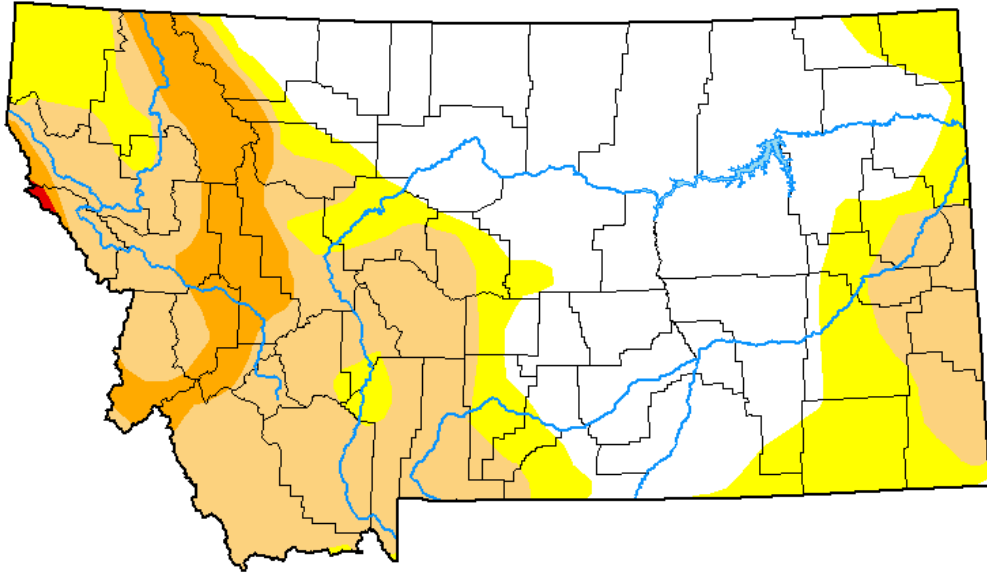
Description: "...Water year precipitation 3.57 inches is only 44 percent of normal. Pastures, dryland hay, and winter wheat stressed from excessive heat and lack of moisture. Potential yields being reduced. Tiber Reservoir is a little over 4 feet lower than normal. Marias River flow averaged around 40 percent of normal for the past week."



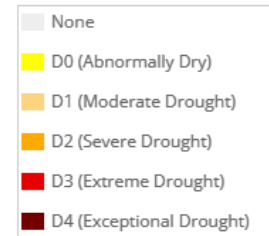
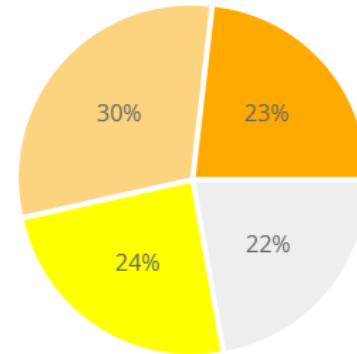
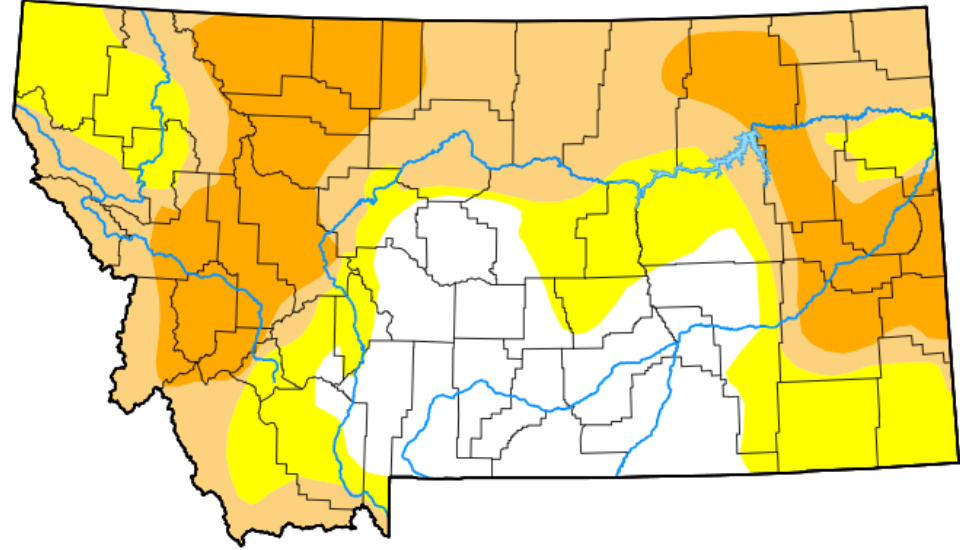
6/1/2025: Dawson County

Description: "Grasses are very slow growing. Planted alfalfa the 15th of april and never came up. I farm from 7 miles south of lambert to 8 miles north of glendive. In the 8 places i farm it is very dry with no ground moisture. Top is powder and the rest is hard. Am seeing 3 hatches of hoppers. Smallest at 1/16" and largest at 1/2". Crested wheat is 4-6" tall and headed out. Grasses have more of a blue color then a green color."

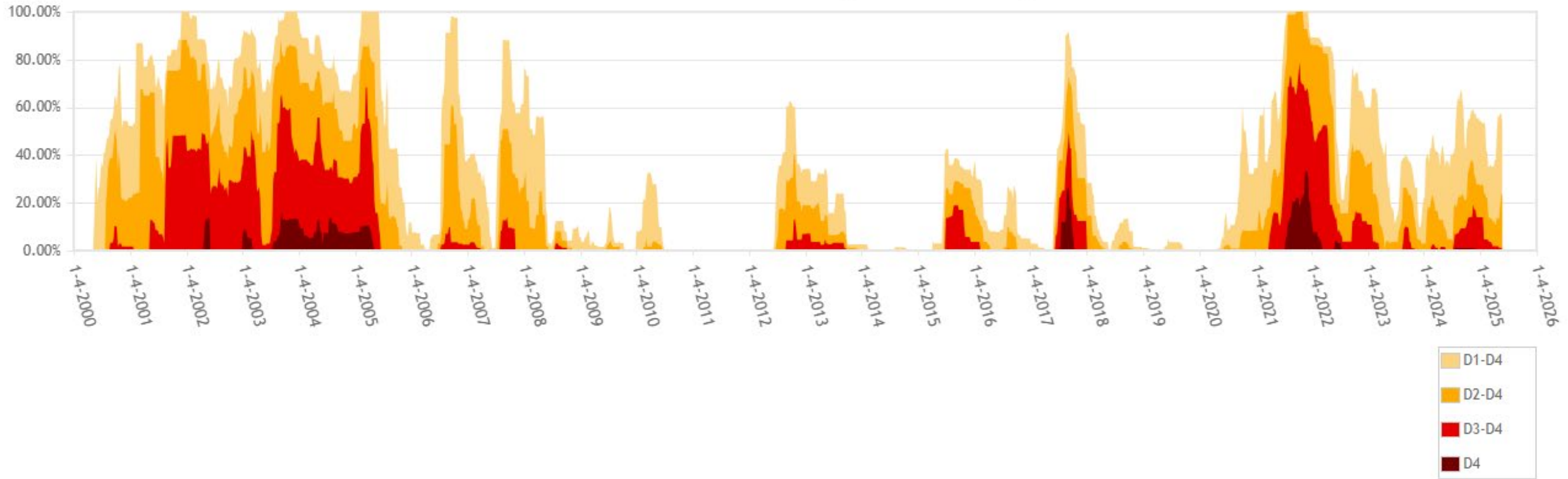
May 28, 2024



May 27, 2025



Montana Percent Area in U.S. Drought Monitor Categories





Valid: June 9 - 13, 2025
Issued: June 3, 2025

The map displays the probability of above-normal and below-normal precipitation across the United States. The main map shows the contiguous United States, with insets for Alaska and Hawaii. The legend at the bottom right provides the color coding for the probability ranges.

Probability (Percent Chance)

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

Leaning Above (Orange to Red)

Likely Above (Dark Red to Maroon)

Near Normal (Gray)

Below Normal (Light Blue to Dark Blue)

Below (Dark Blue)



Valid: June 2025
Issued: May 31, 2025

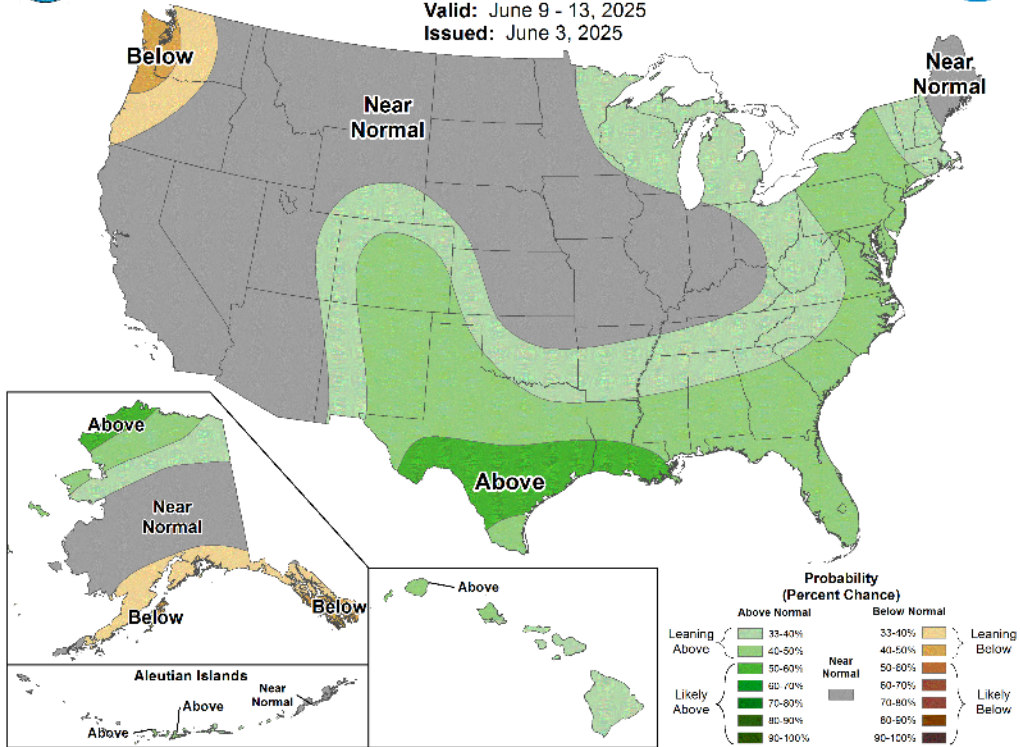
Probability (Percent Chance)

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



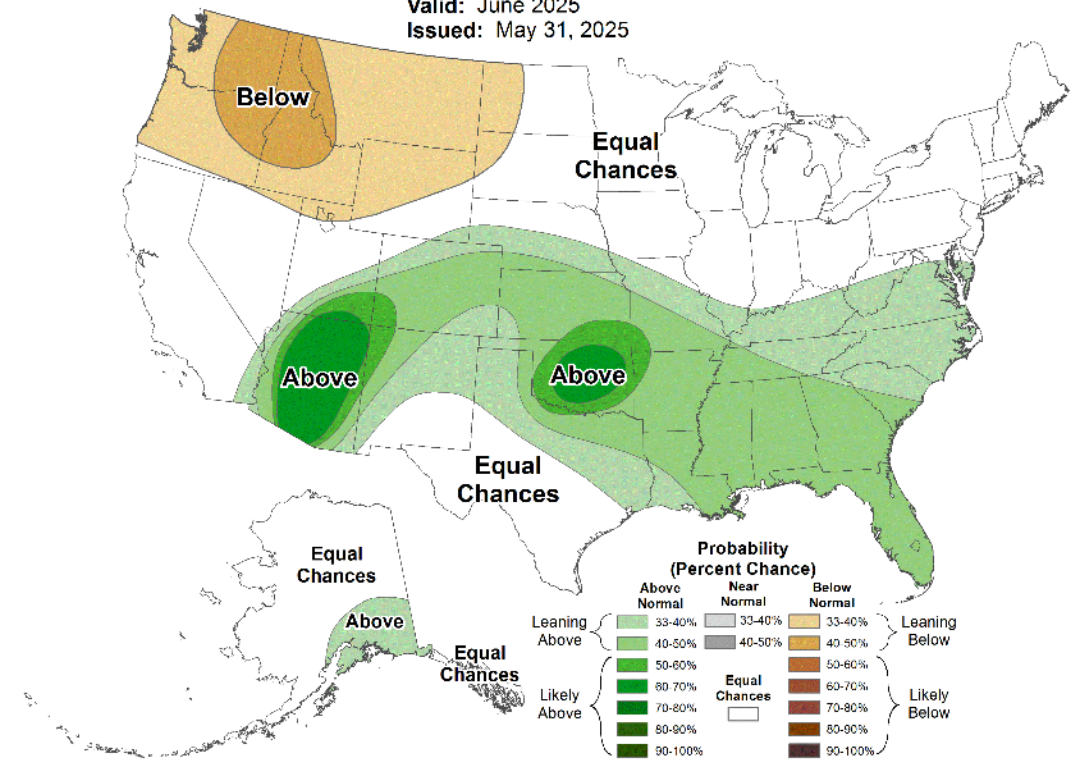
6-10 Day Precipitation Outlook

Valid: June 9 - 13, 2025
Issued: June 3, 2025



Monthly Precipitation Outlook

Valid: June 2025
Issued: May 31, 2025



June is a critical month for Montana precipitation. Will it pan out?

Key Takeaways

In general, more degradations than improvements are being made to the drought map. (Spring is usually a time for improvements)

Bright spot is southcentral (approx. Billings southwest to Red Lodge)

Biggest concerns are Valley County (approx. Glasgow), the Rocky Mountain Front (approx. Choteau), and the Sweet Grass Hills

West has been trending drier the last 60-days, which is concerning ahead of fire season.

Temperature and Precipitation outlooks are unpromising.

Drought impacts are being reported and can be expected to pickup July through September.

Thank you.
Questions? Discussion.

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