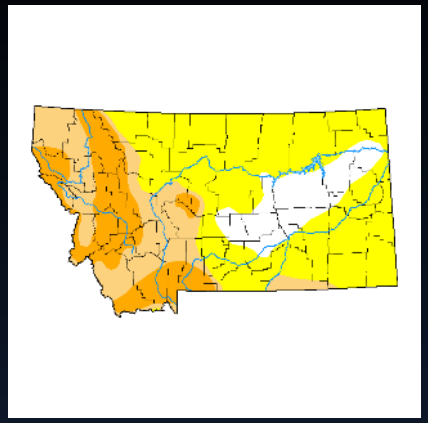
Picture submitted to the Montana Drought Impact Reporter, Oct. 10, 2023
Dawson County, south of Glendive

MT Drought Status: Current Conditions

Troy Blandford Oct. 17, 2024

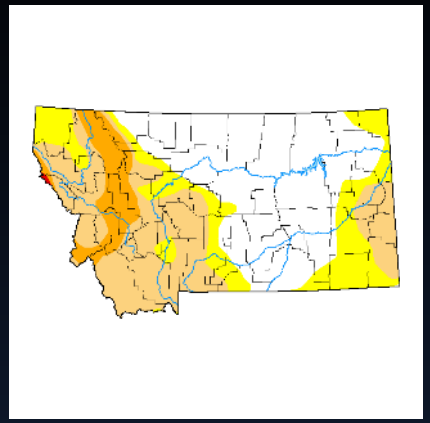
Prepared for the Drought and Water Supply Advisory Committee

Winter



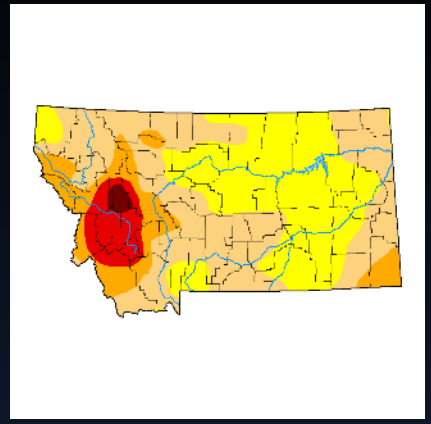
- Fall 2023 – wetter than average
- Slow start to snow season. Nov – Dec. warmer and drier than usual statewide.
- Record low snowpack at many SNOTEL in January
- Widespread snow drought by April 1

Spring



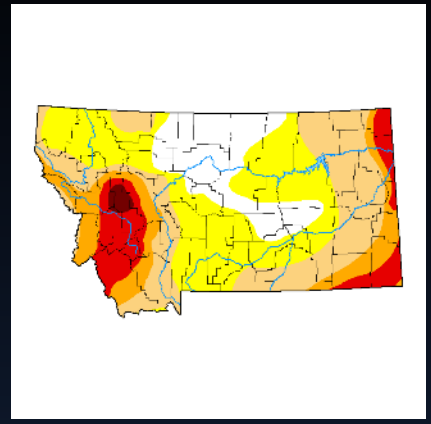
- Higher severity drought traced the mountain ranges due to reduced snowpack (especially the northwest and Blackfoot)
- Spring storms in May built late-season snowpack. Timely precipitation and normal temperatures saved many areas.

Summer



- Much concern about streamflow across west
- Above normal August and early September precipitation looked promising.
- North-central to central have faired quite well

Now



- Much below normal precipitation nw, sw, e, se for the last 45 days.
- 30-day temperature percentiles exceptional (98^{th}+)
- The drought map is currently tracking 90-day metrics well. 90-days and longer will continue to be the key timesteps used through the rest of fall and winter.

U.S. Drought Monitor

Montana

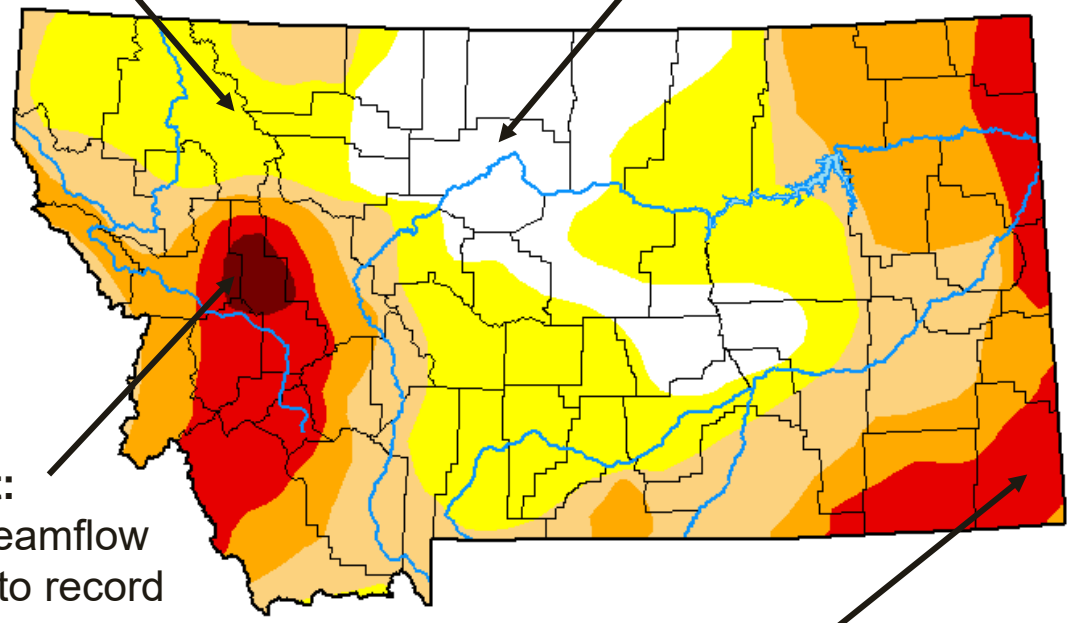
October 15, 2024

(Released Thursday, Oct. 17, 2024)

Valid 8 a.m. EDT

Northwest:
Late spring and summer precipitation thwarted poor outlook in early spring.

Central/northcentral:
Summer precipitation, especially Aug to early Sept. positive.



West/southwest:
Main driver is streamflow (<10th percentile to record low)

East/southeast:
Little precipitation since early June. Dryness at all timesteps from 30-days to 1-year. Drought expanding westward and north along border.

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

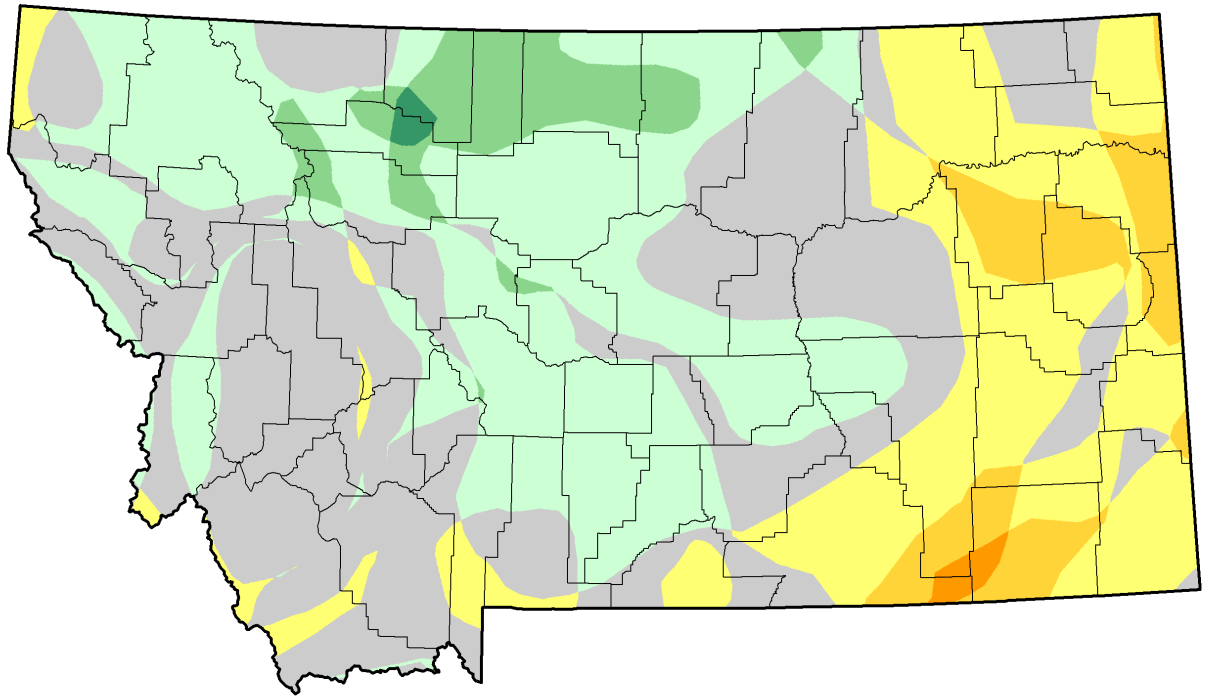
Author:

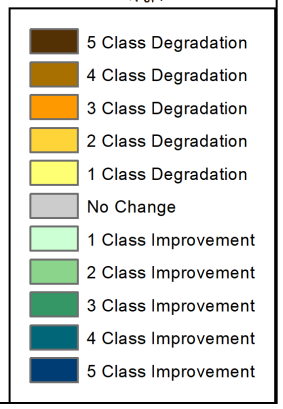
Brian Fuchs
National Drought Mitigation Center

droughtmonitor.unl.edu

U.S. Drought Monitor Class Change - Montana

8 Week



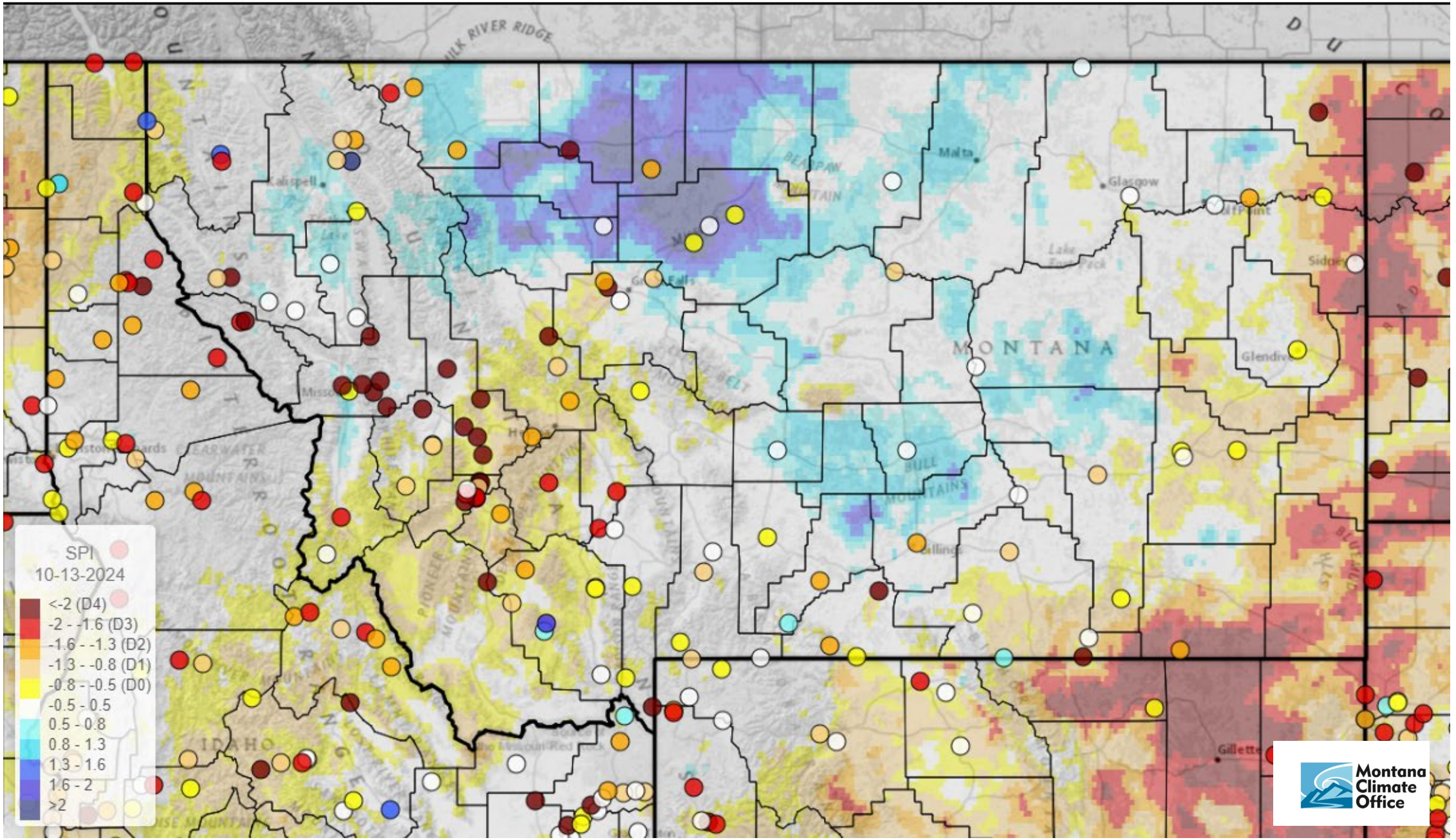


October 15, 2024
compared to
August 20, 2024

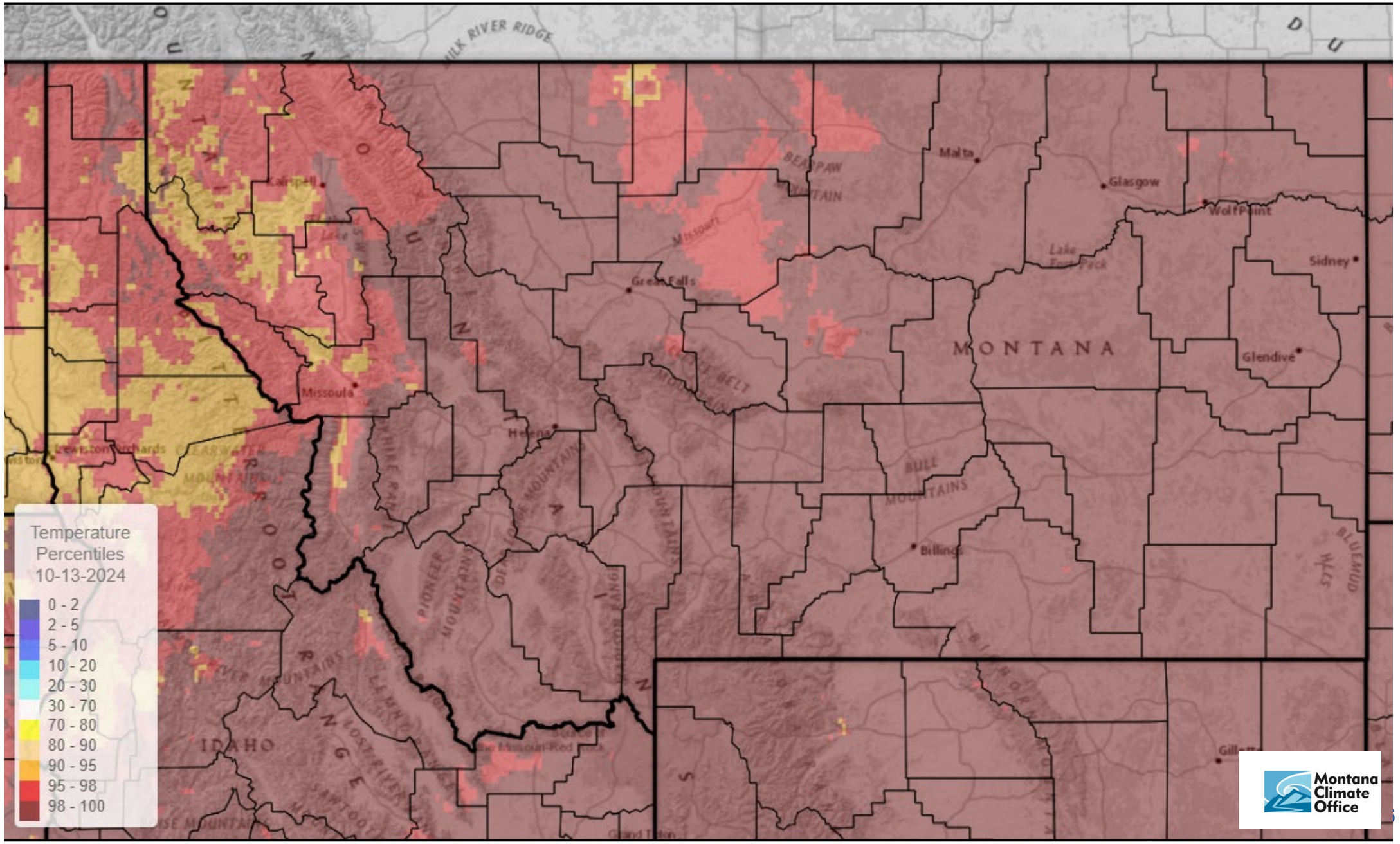
droughtmonitor.unl.edu

MONTANA STATE LIBRARY

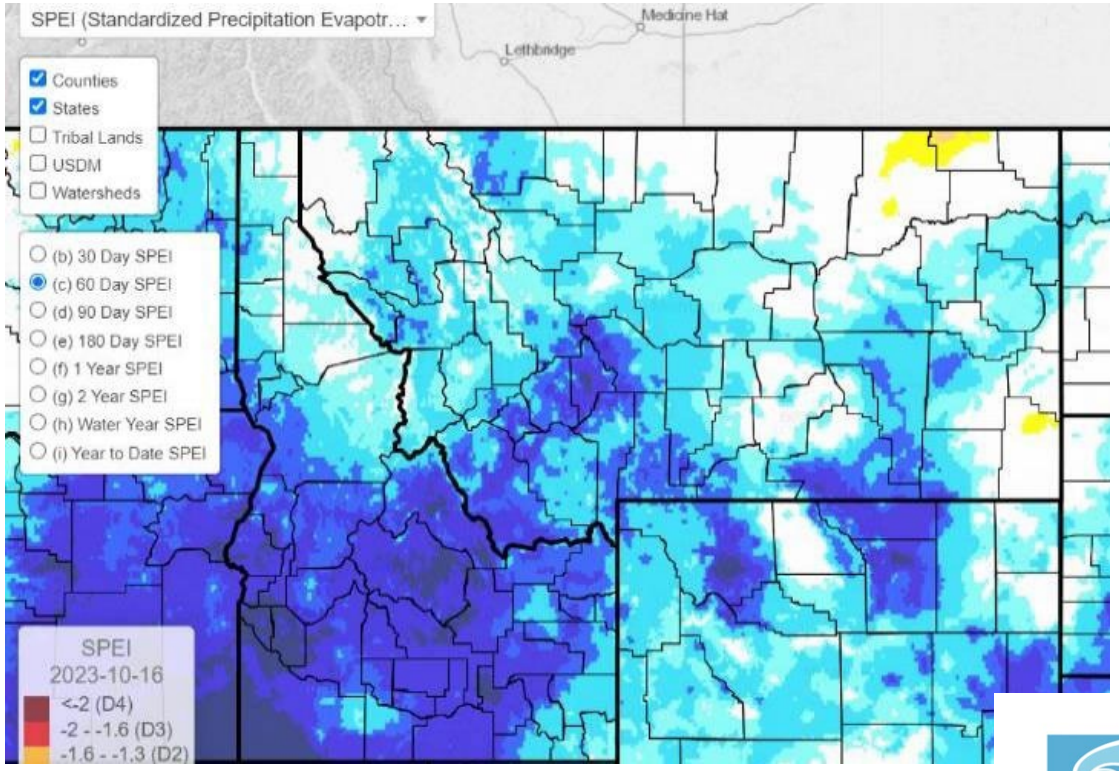
90 Day SPI for 10-13-2024



30 Day Percentile for 10-13-2024

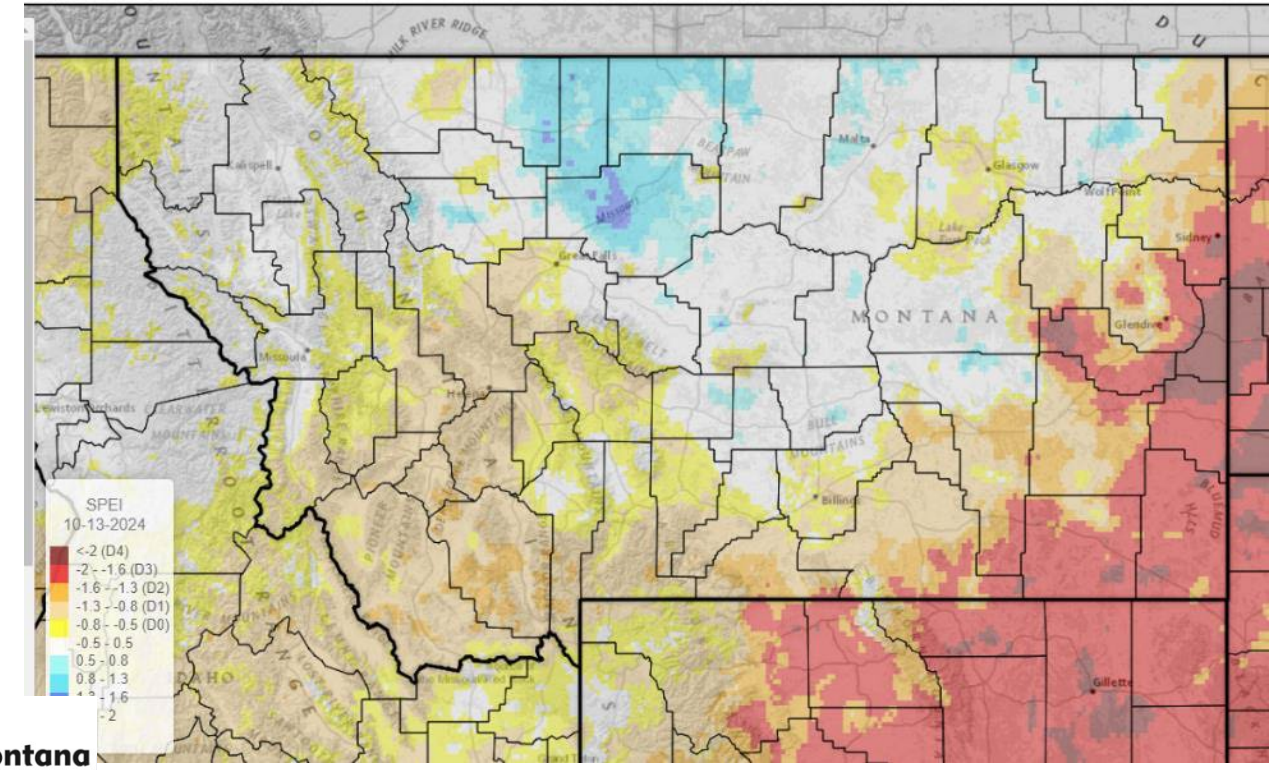


Last year, 10-16-2023



Fall green up

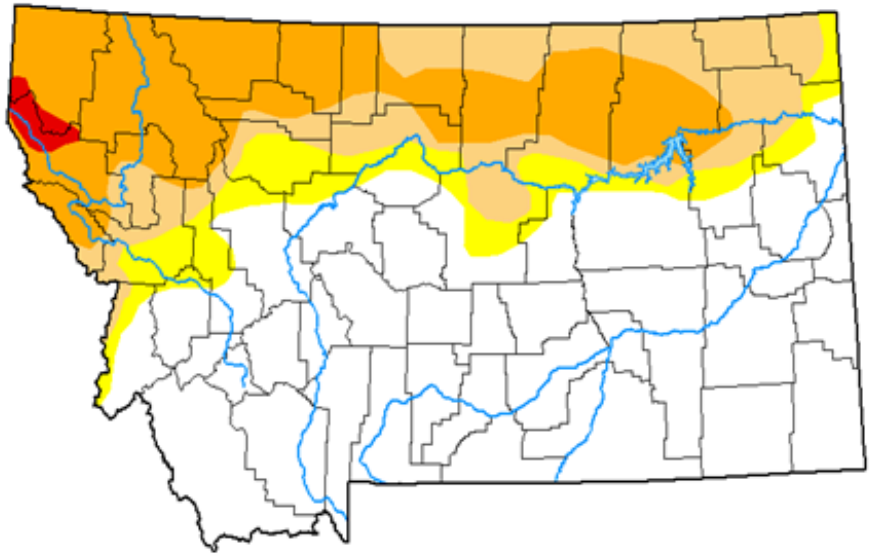
This year, 10-14-2024

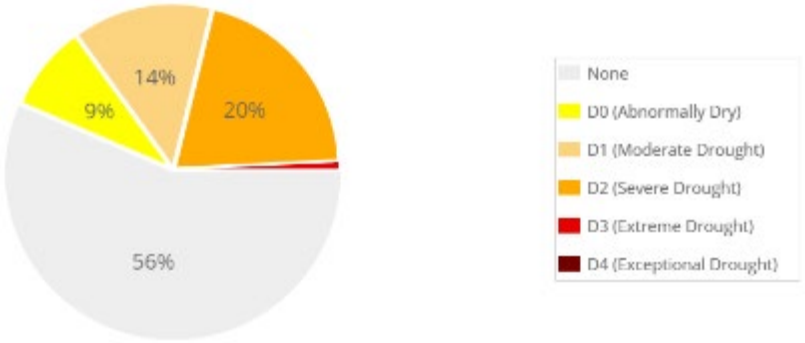


Montana Climate Office

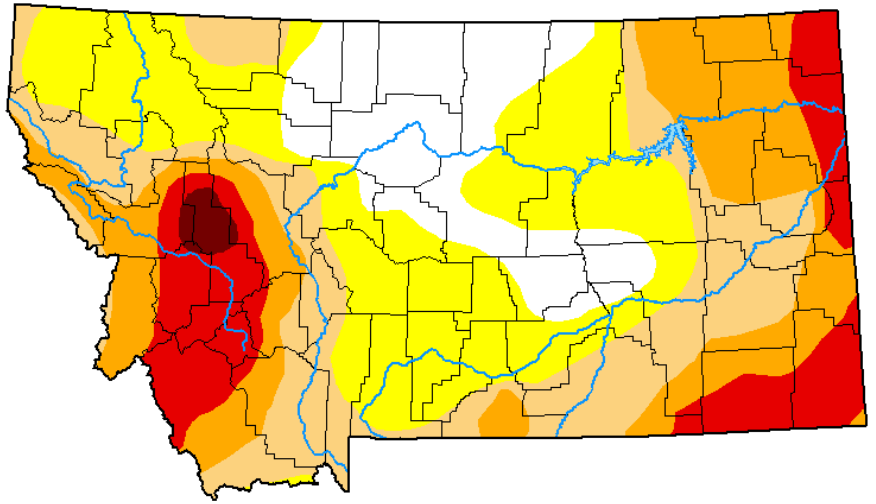
Little to no fall green up (yet?)

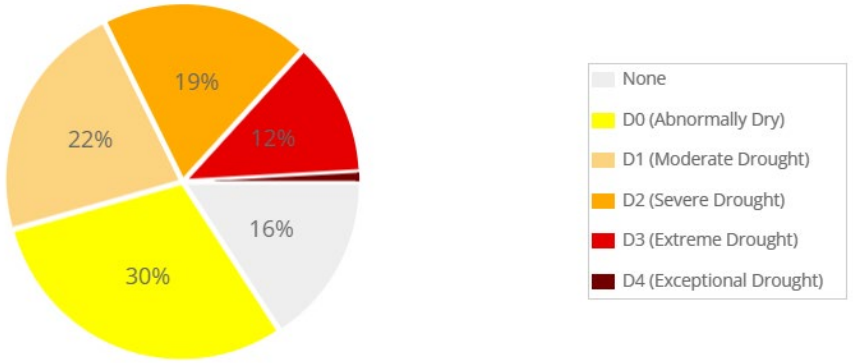
Oct 2023





Oct 2024





Montana Drought Impact Reporter

Reports since October 1, 2023

10/16/2024: Prairie County
They are widespread
Photo: 0

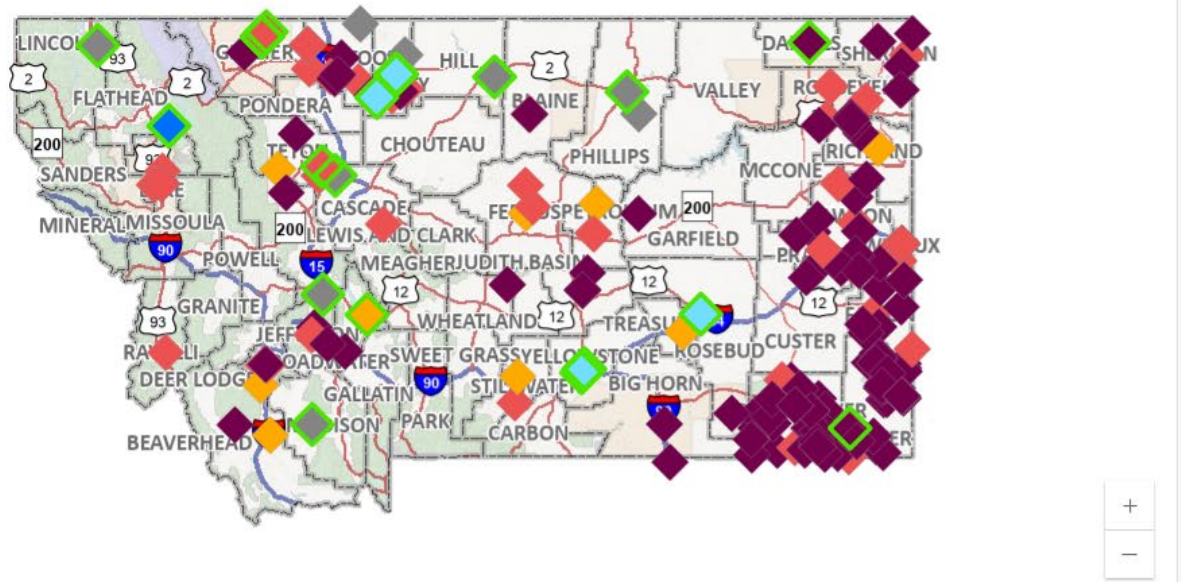
10/15/2024: Prairie County
Cattleman are feeding cattle and there will not be normal winter grazing. Water quality of streams and reservoirs is bad.
Eastern and south eastern Montana counties
Photo: 1

10/15/2024: Prairie County
4 tenths since first week of June
Abnormal hot temperature
100000 acres
Photo: 0

10/12/2024: County

Photo: 0

10/11/2024: Prairie County
Prairie County producers have been requesting drought relief programs. The normal fall green up in pastures is not present. Above average temperature and wind with decreased precipitation continue. Ranchers are feeding supplemental feed including protein tubs, creep, and hay. In effort to keep mother cows in better body condition, calves are being weaned earlier than normal with decreased weights. Farmers have not been able to seed fall seeded crops due to lack of moisture. Germination is poor. County wide drought is severe.
Photo: 0



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

Powered by Esri

Overview Map | Photo Map | Impact Type Map

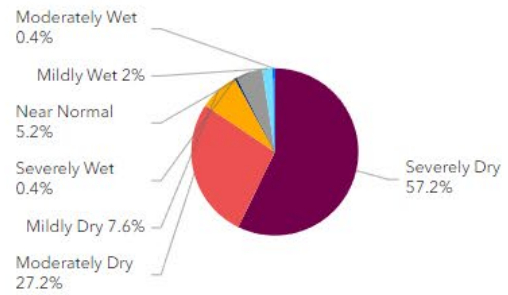
Number of Reports
Since 10/1/2023

250

Number of Reports by Date

Last 10 Days | Total | Reports by Date | Reports By County | Photos by Date

How Wet or Dry is it?



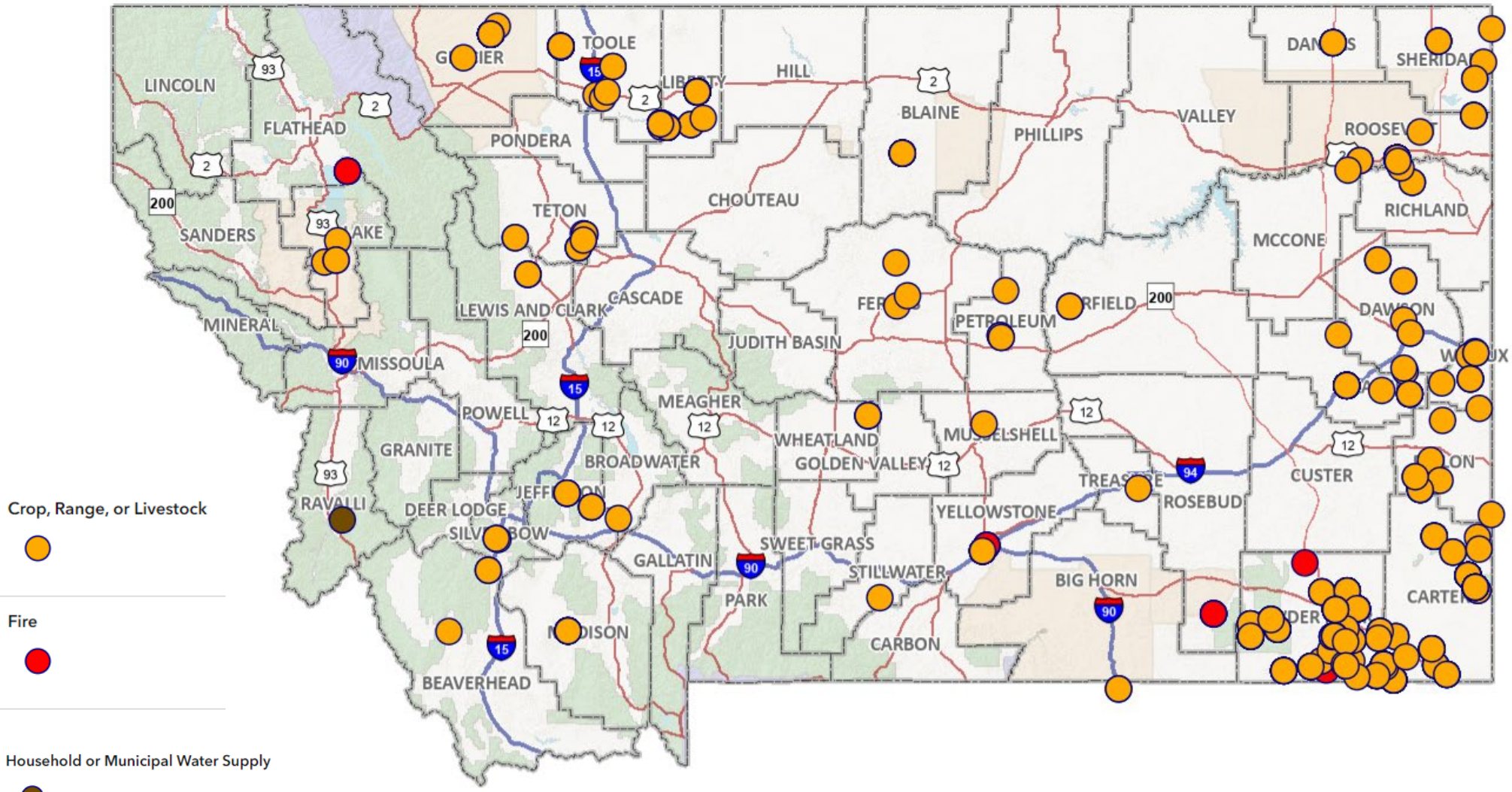
How Wet or Dry is it?

1 of 50

10/15/2024 - Prairie County

Description: Cattleman are feeding cattle and there will not be normal winter grazing. Water quality of streams and reservoirs is bad.

Photos | Photo Viewer



Crop, Range, or Livestock

Fire

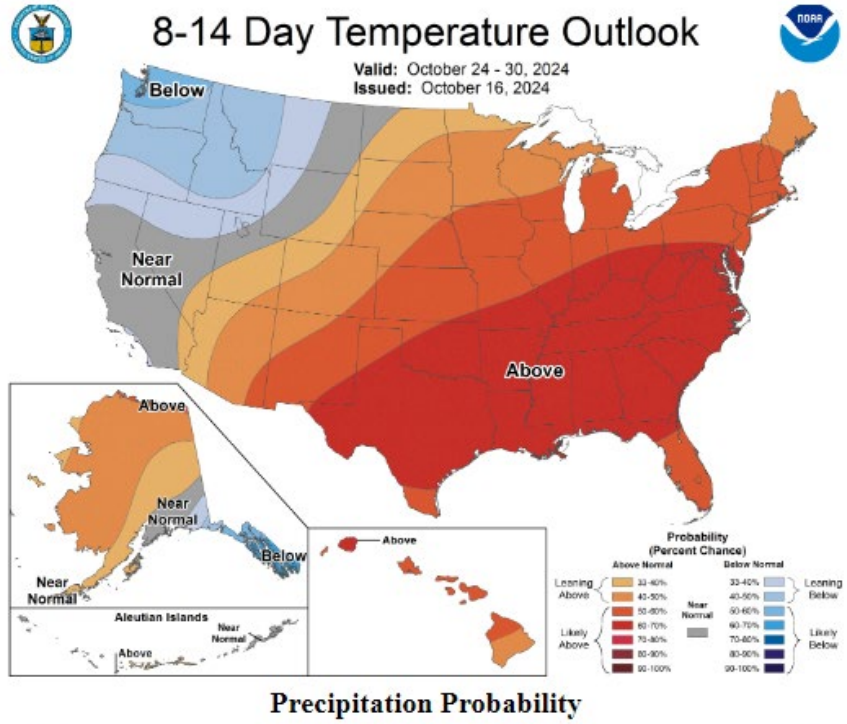
Household or Municipal Water Supply

Liberty County, 9/24/24 – “Fall green up that we haven’t seen in years.”

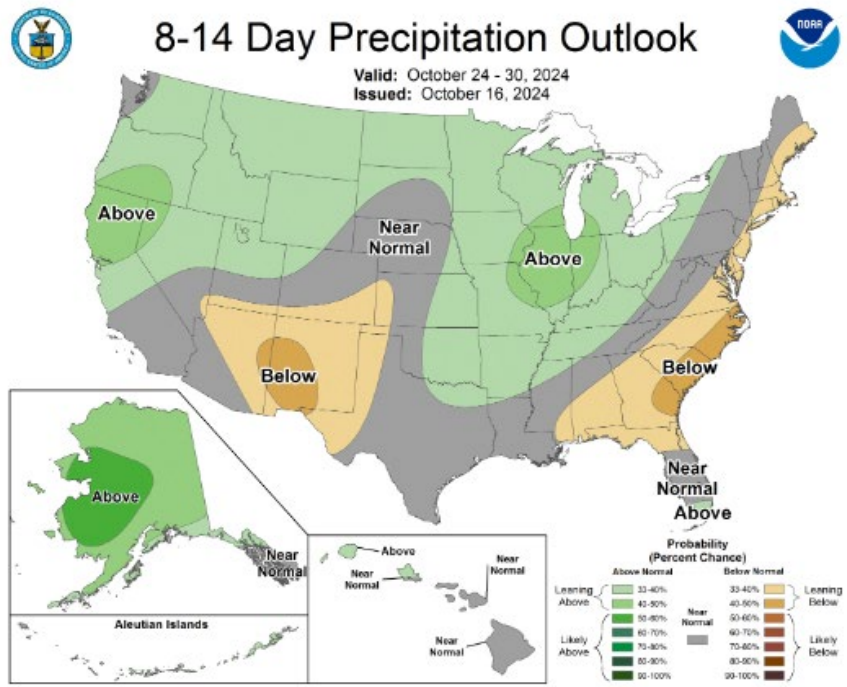
Prairie County, 10/15/2024 – “Cattleman are feeding cattle and there will not be normal winter grazing. Water quality of streams and reservoirs is bad.”

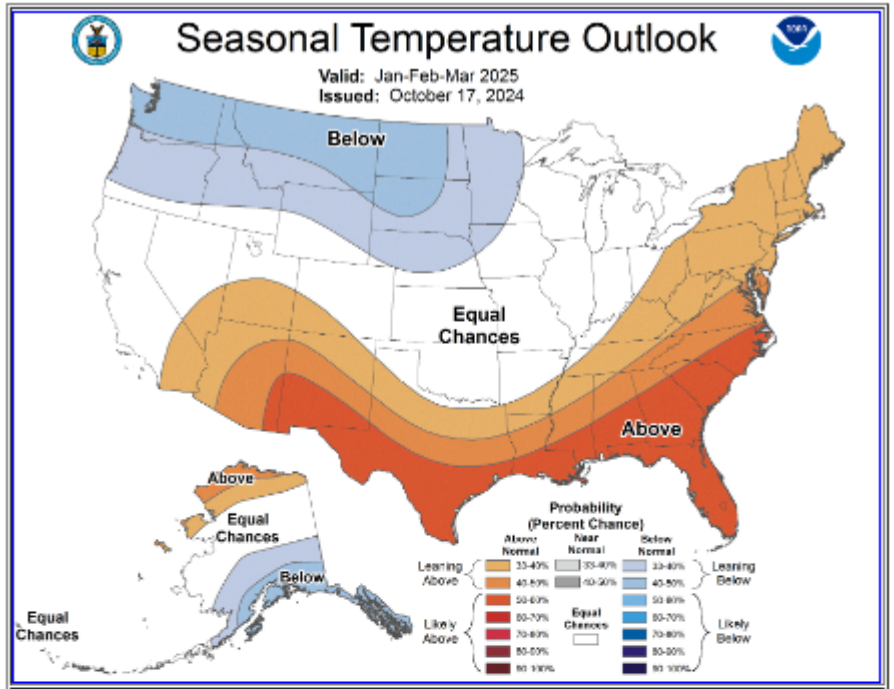
Southeast impacts:

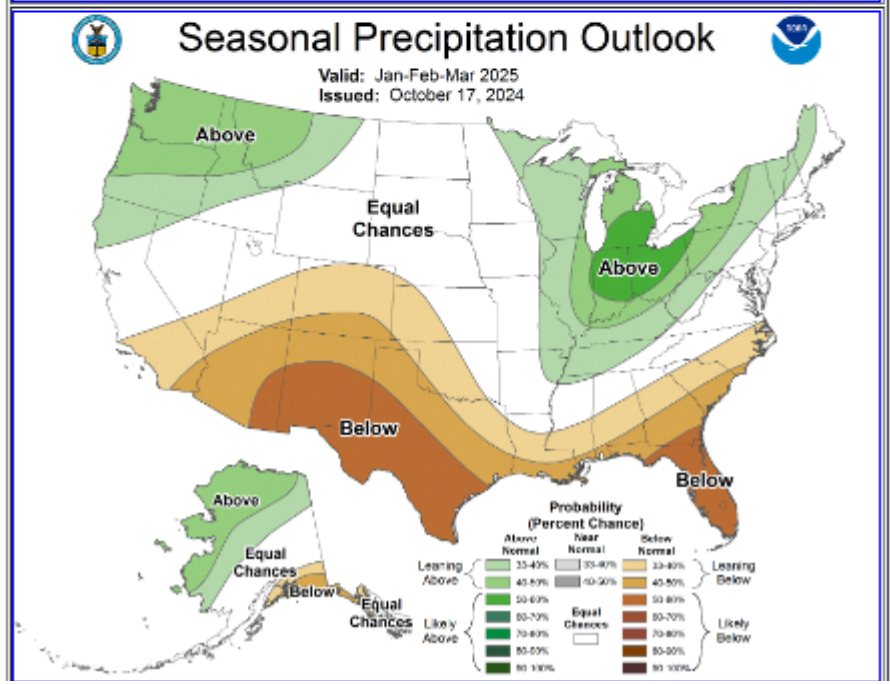
- County(ies)-wide drought is severe. Little to no measurable precipitation since June
- Very little forage; low crop yields
- Dry streams, stock ponds/reservoirs; dry springs
- The normal fall green up in pastures is not present
- Supplemental feeding; started feeding Sept. 1
- Calves are being weaned earlier than normal with decreased weights
- Farmers have not been able to seed fall crops due to lack of moisture. Germination is poor
- Severe fires; never seen the fire risk and number of fires so high in 40+ years
- Worst drought in atleast 5 years, likely longer

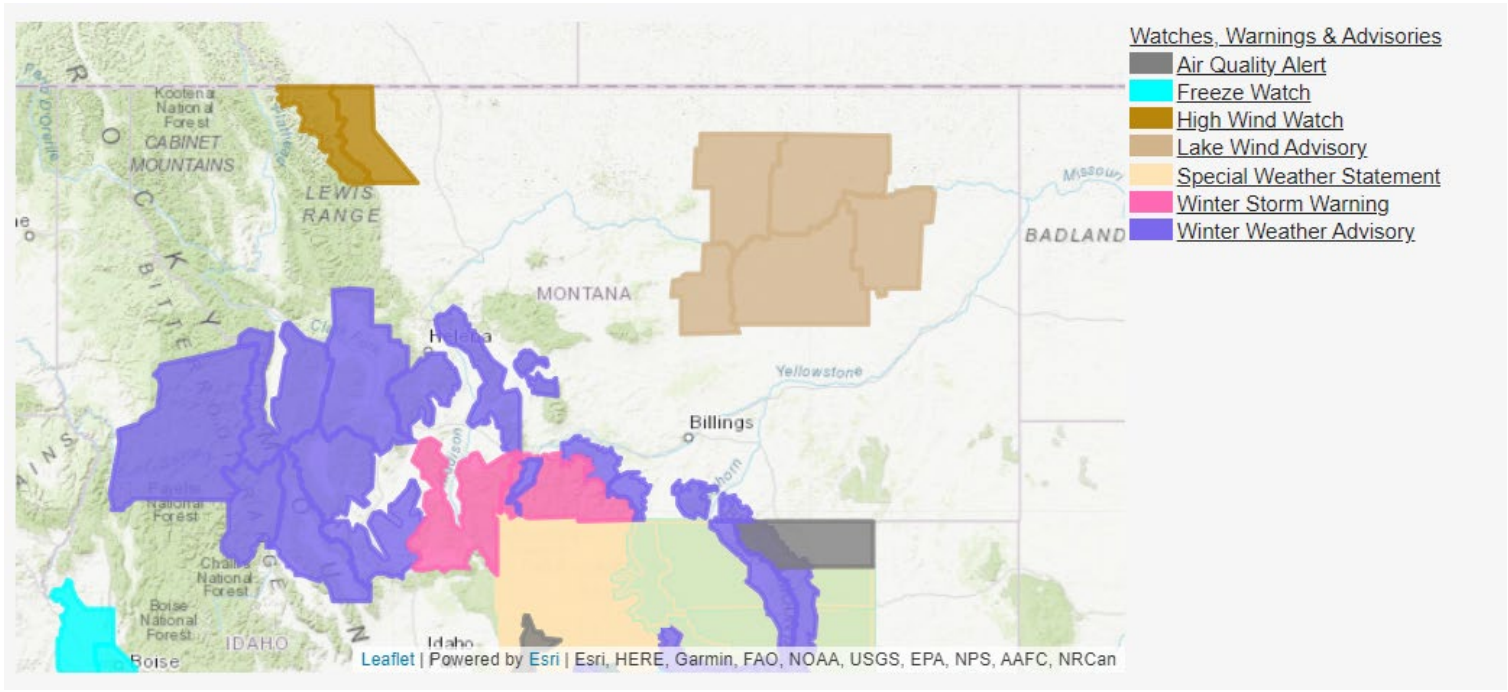


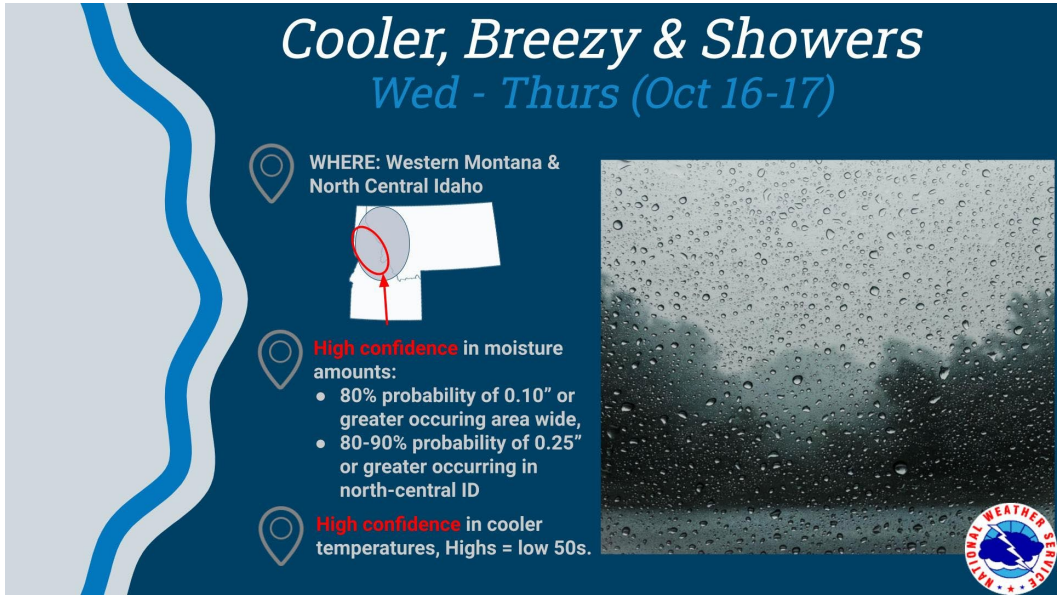
Precipitation Probability

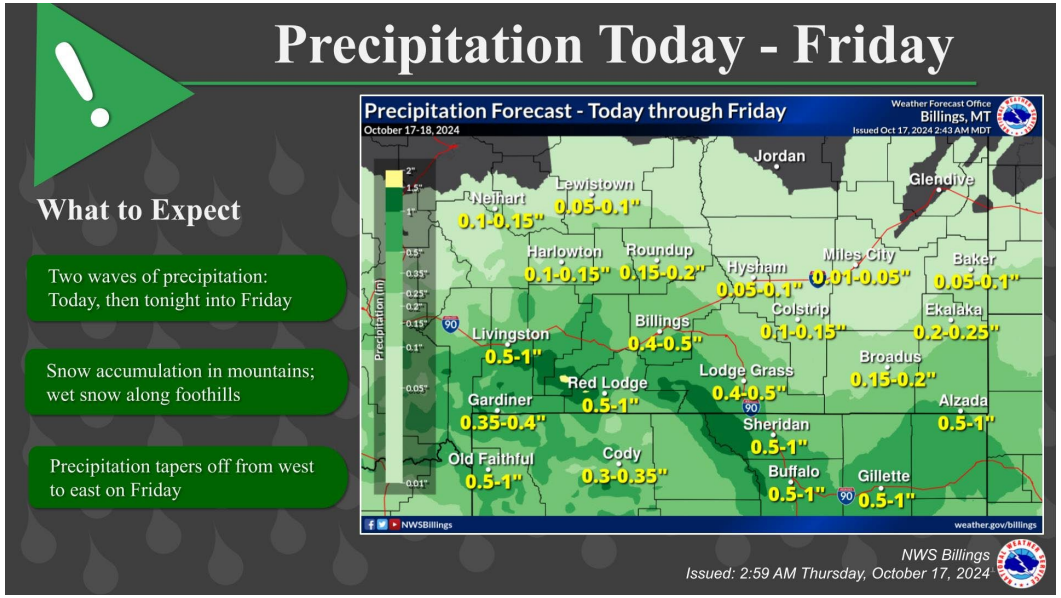



Seasonal Temperature Outlook
Valid: Jan-Feb-Mar 2025
Issued: October 17, 2024
Below
Equal Chances
Above
Above
Equal Chances
Below
Equal Chances
Probability (Percent Chance)
Above Normal
Near Normal
Below Normal
Leaning Above
Leaning Below
Likely Above
Likely Below
Equal Chances


Seasonal Precipitation Outlook
Valid: Jan-Feb-Mar 2025
Issued: October 17, 2024
Above
Equal Chances
Above
Below
Below
Above
Equal Chances
Below
Equal Chances
Probability (Percent Chance)
Above Normal
Near Normal
Below Normal
Leaning Above
Leaning Below
Likely Above
Likely Below
Equal Chances


Watches, Warnings & Advisories
Air Quality Alert
Freeze Watch
High Wind Watch
Lake Wind Advisory
Special Weather Statement
Winter Storm Warning
Winter Weather Advisory
Kootenai National Forest
CABINET MOUNTAINS
LEWIS RANGE
MONTANA
Helena
Billings
Yellowstone
BADLAND
Missouri
Boise National Forest
IDAHO
Boise
Leaflet | Powered by Esri | Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS, AAFC, NRCan


Cooler, Breezy & Showers
Wed - Thurs (Oct 16-17)
WHERE: Western Montana & North Central Idaho
High confidence in moisture amounts:
80% probability of 0.10" or greater occuring area wide,
80-90% probability of 0.25" or greater occurring in north-central ID
High confidence in cooler temperatures, Highs = low 50s.


Precipitation Today - Friday
What to Expect
Two waves of precipitation: Today, then tonight into Friday
Snow accumulation in mountains; wet snow along foothills
Precipitation tapers off from west to east on Friday
Precipitation Forecast - Today through Friday
October 17-18, 2024
Weather Forecast Office Billings, MT
Issued Oct 17, 2024 2:43 AM MDT
Jordan
Glendive
Lewistown 0.05-0.1"
Neihart 0.1-0.15"
Harlowton 0.1-0.15"
Roundup 0.15-0.2"
Hysham 0.05-0.1"
Miles City 0.01-0.05"
Baker 0.05-0.1"
Colstrip 0.1-0.15"
Ekalaka 0.2-0.25"
Billings 0.4-0.5"
Livingston 0.5-1"
Broadus 0.15-0.2"
Lodge Grass 0.4-0.5"
Red Lodge 0.5-1"
Gardiner 0.35-0.4"
Alzada 0.5-1"
Sheridan 0.5-1"
Old Faithful 0.5-1"
Cody 0.3-0.35"
Buffalo 0.5-1"
Gillette 0.5-1"
Precipitation (in)
NWSBillings
weather.gov/billings
NWS Billings
Issued: 2:59 AM Thursday, October 17, 2024

Thank you.
Questions?

Troy Blandford
tblandford@mt.gov

MONTANA STATE LIBRARY
A GREATER STATE OF KNOWLEDGE