



Montana DWSAC Briefing



19 April 2018



Weather-Ready Nation
National Oceanic and Atmospheric Administration



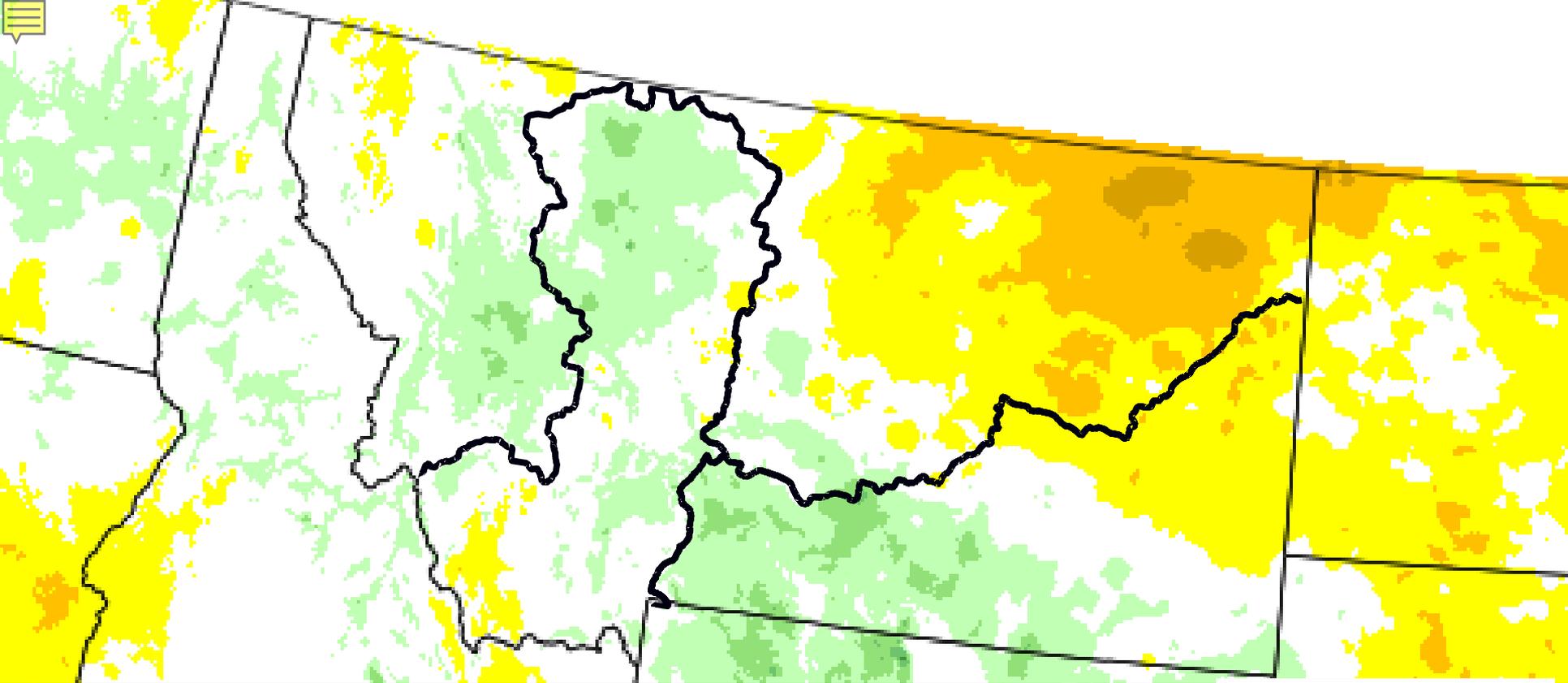
Montana: Apr 2017 – Mar 2018

38th Warmest on Record

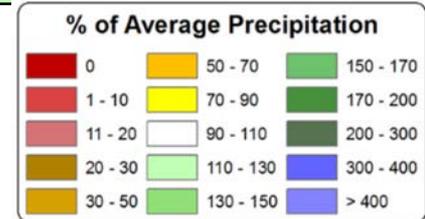
Avg Temp	20 th Century Average	Departure
42.0°F	41.2°F	0.8°F

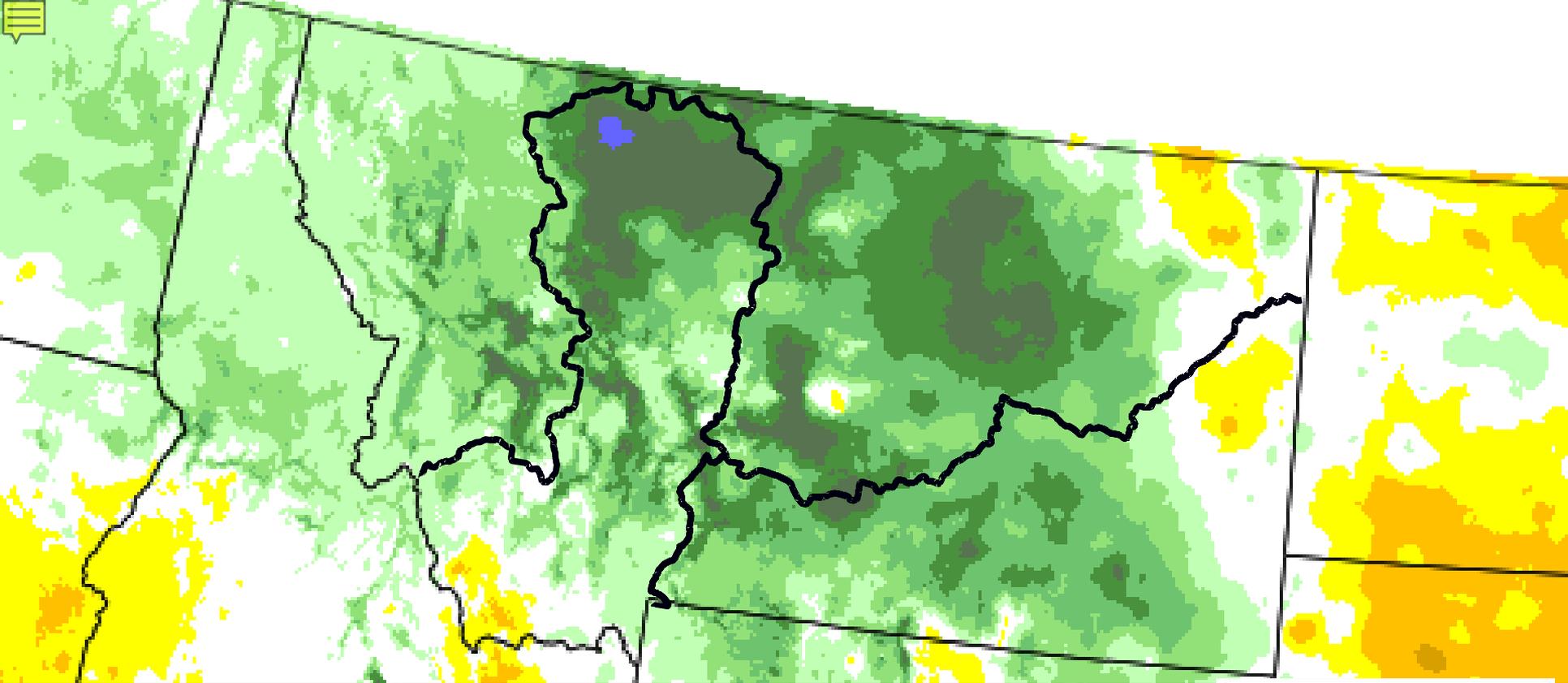
43rd Driest on Record

Precip	20 th Century Average	Departure
17.52"	18.67"	-1.15"

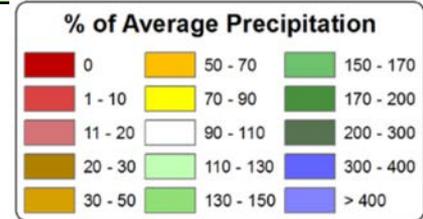


Apr 17 – Mar 18 Precip Anomaly



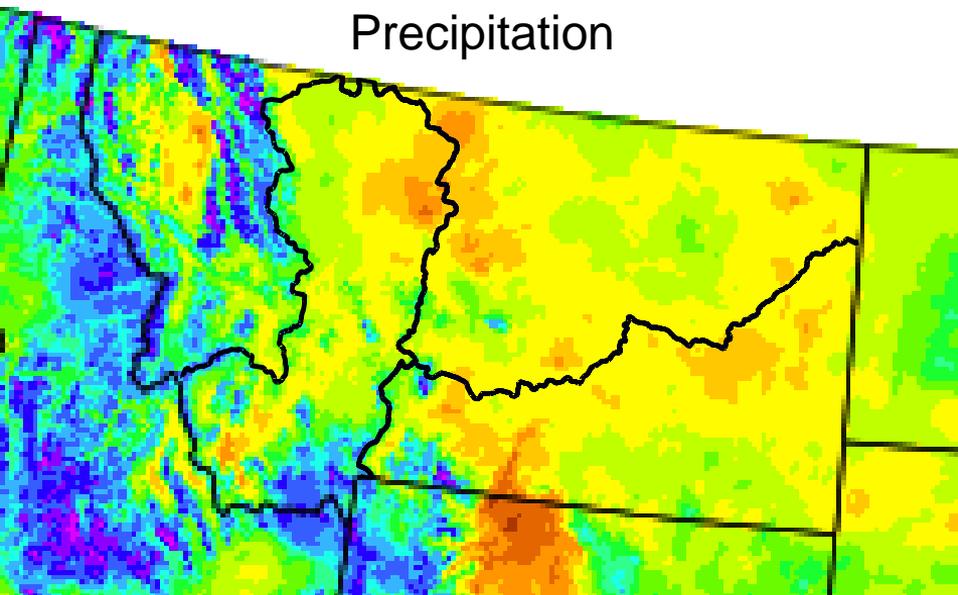


2018 Water Year Precip Anomaly

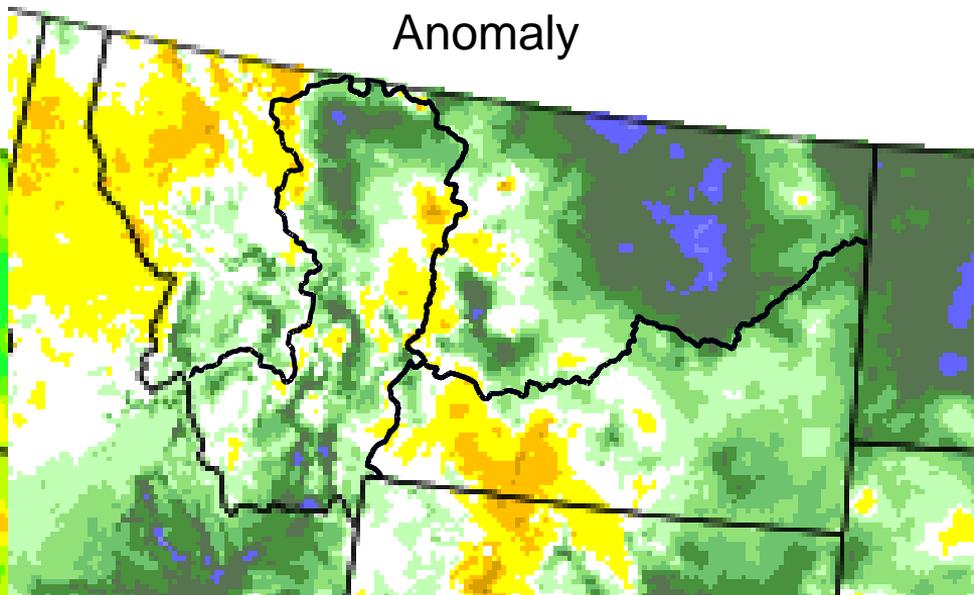


March 2018 Precip vs Anomaly

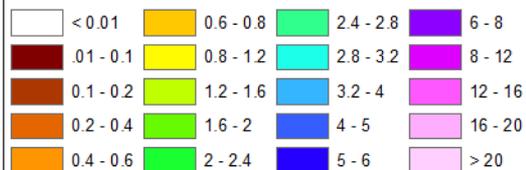
Precipitation



Anomaly



Monthly Precipitation (in.)

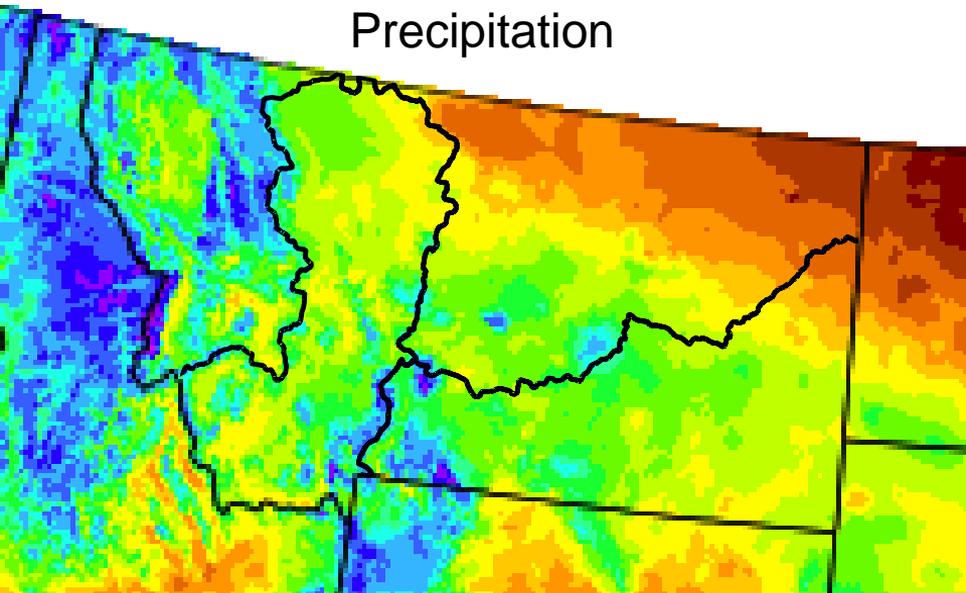


% of Average Precipitation

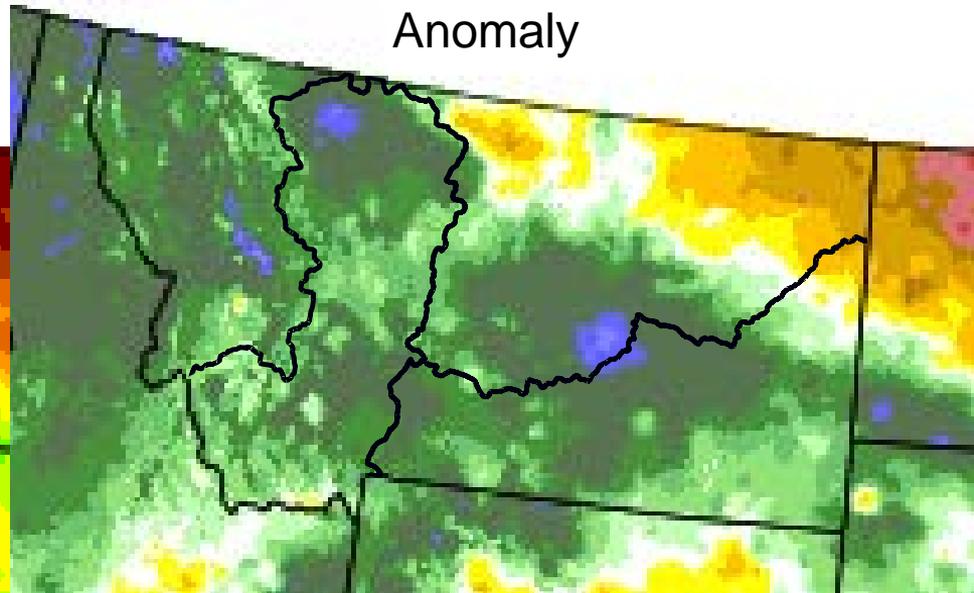


April 2018 Precip vs Anomaly

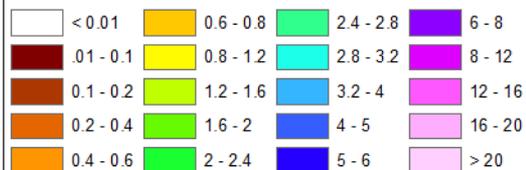
Precipitation



Anomaly



Monthly Precipitation (in.)



% of Average Precipitation



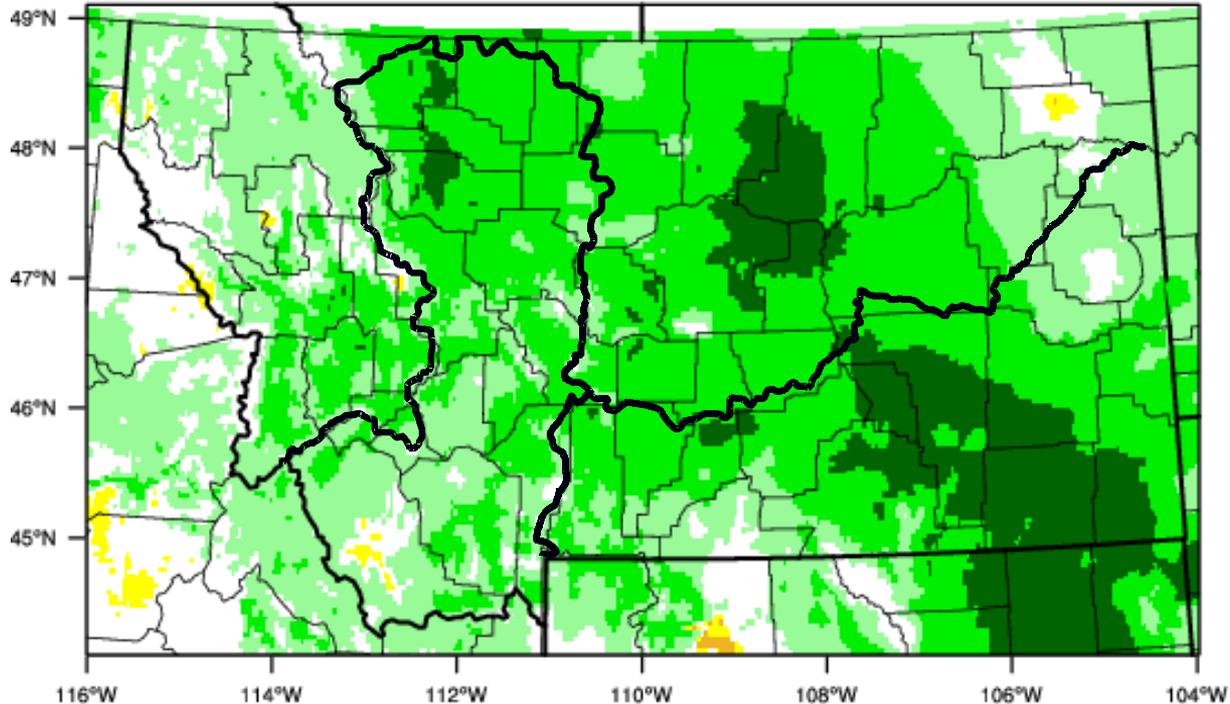


Precipitation Ranking Calendar Year 2018



Montana - Precipitation

January-March 2018 Percentile



Rankings (1895-2010)

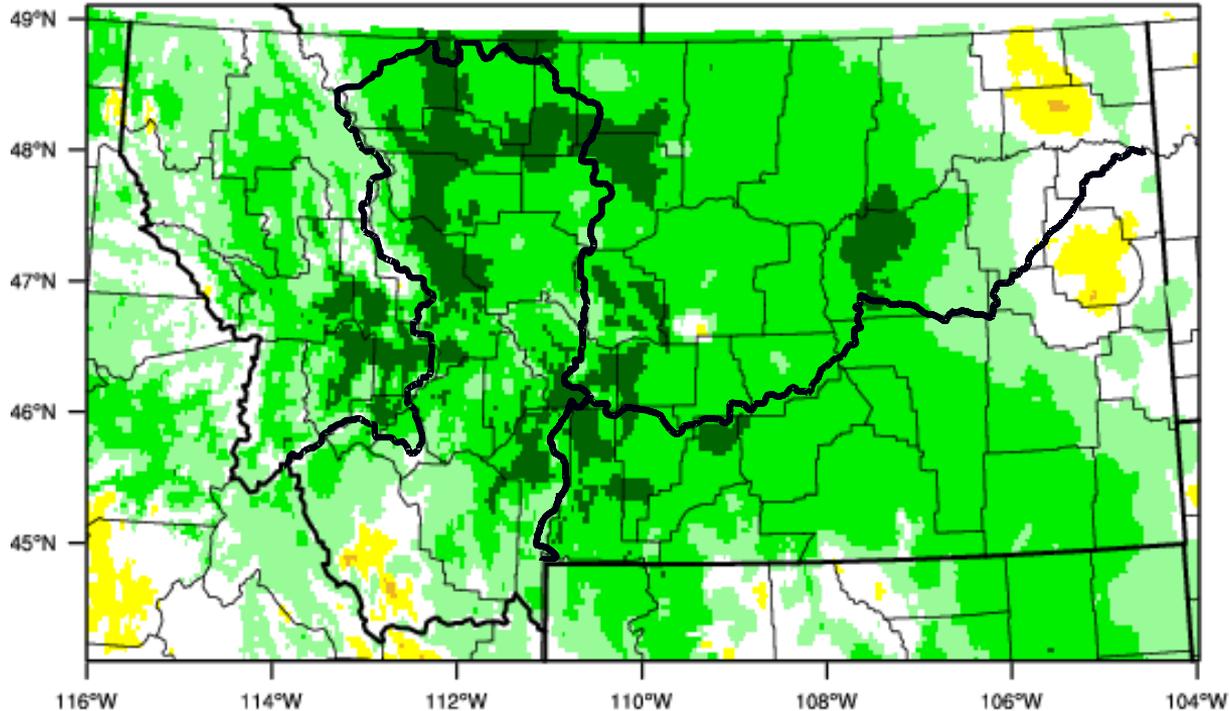


Precipitation Ranking Water Year 2018



Montana - Precipitation

October-March 2018 Percentile



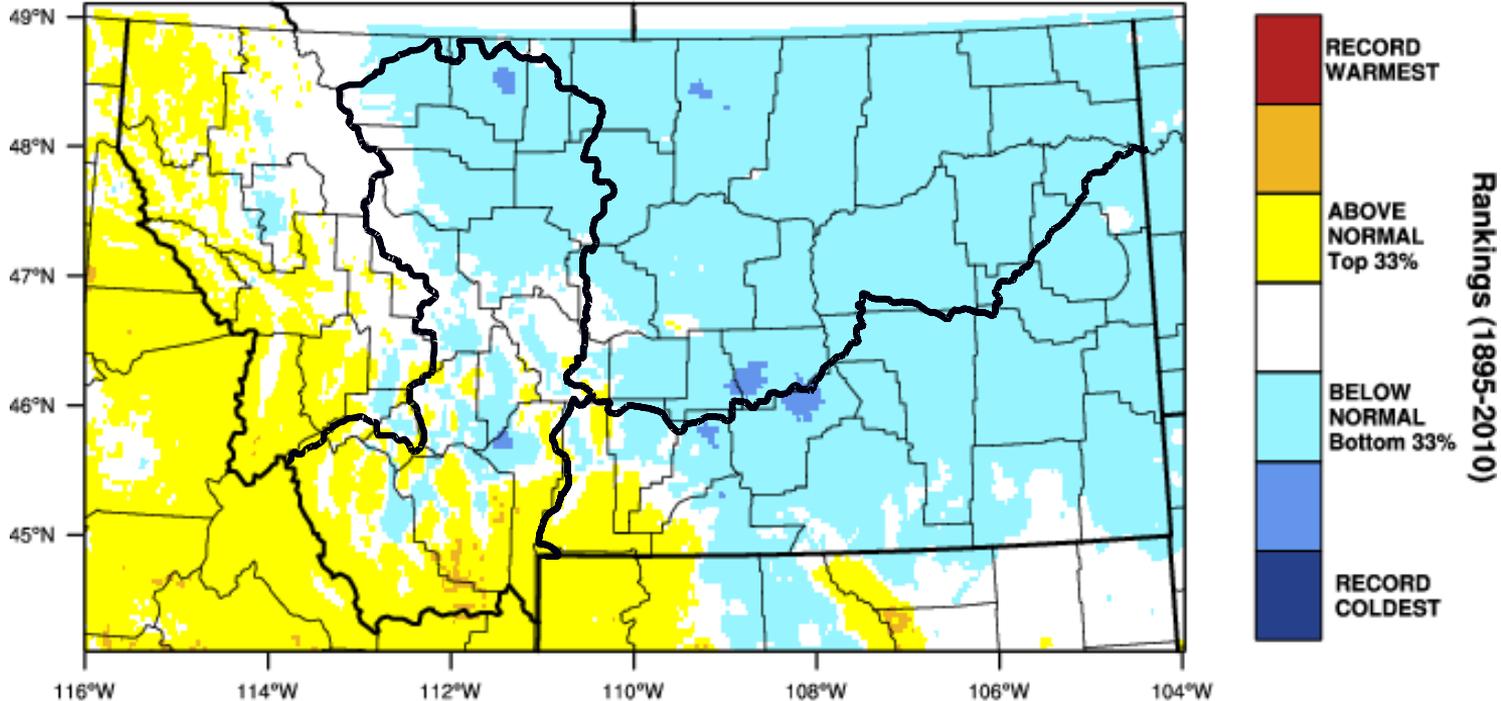
Rankings (1895-2010)



Mean Temperature Ranking Water Year 2018



Montana - Mean Temperature October-March 2018 Percentile



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 16 APR 2018



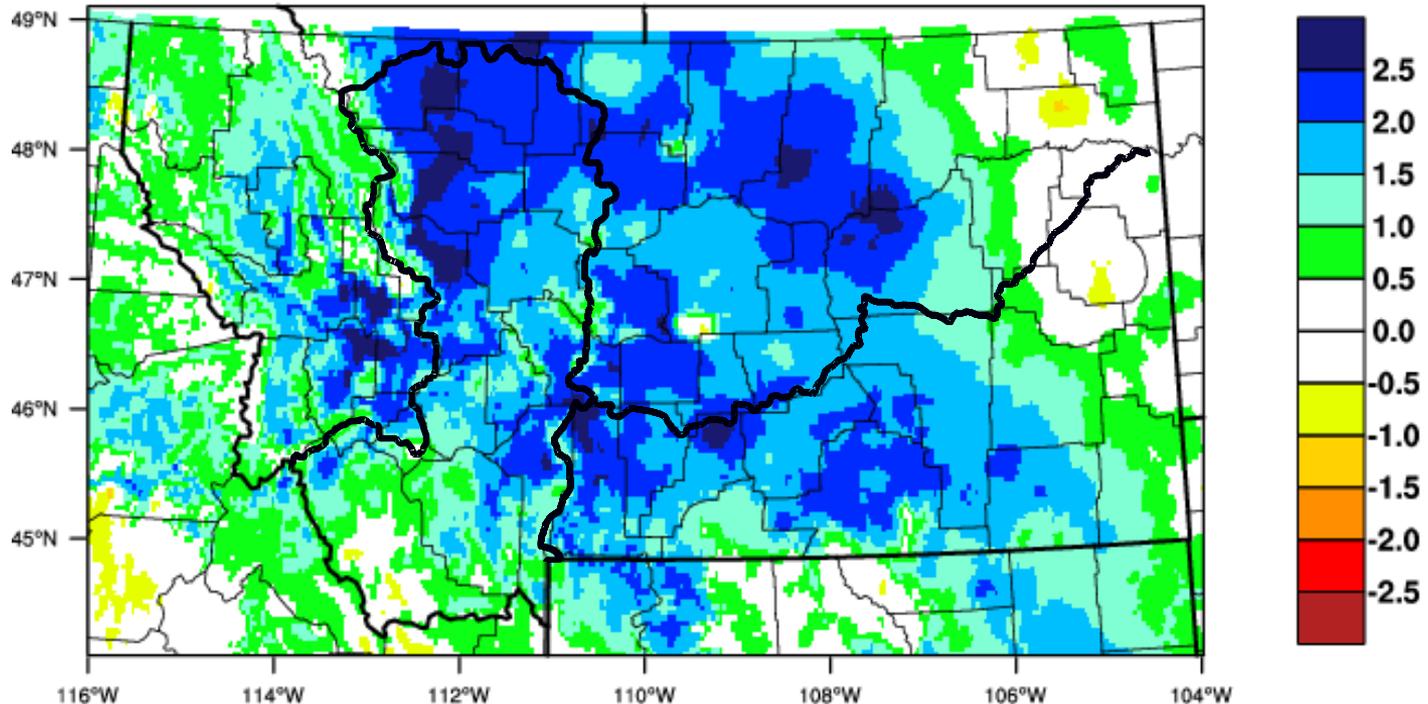
PRISM SPEI

Water Year 2018



Montana - 6 month SPEI

March 2018



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 16 APR 2018



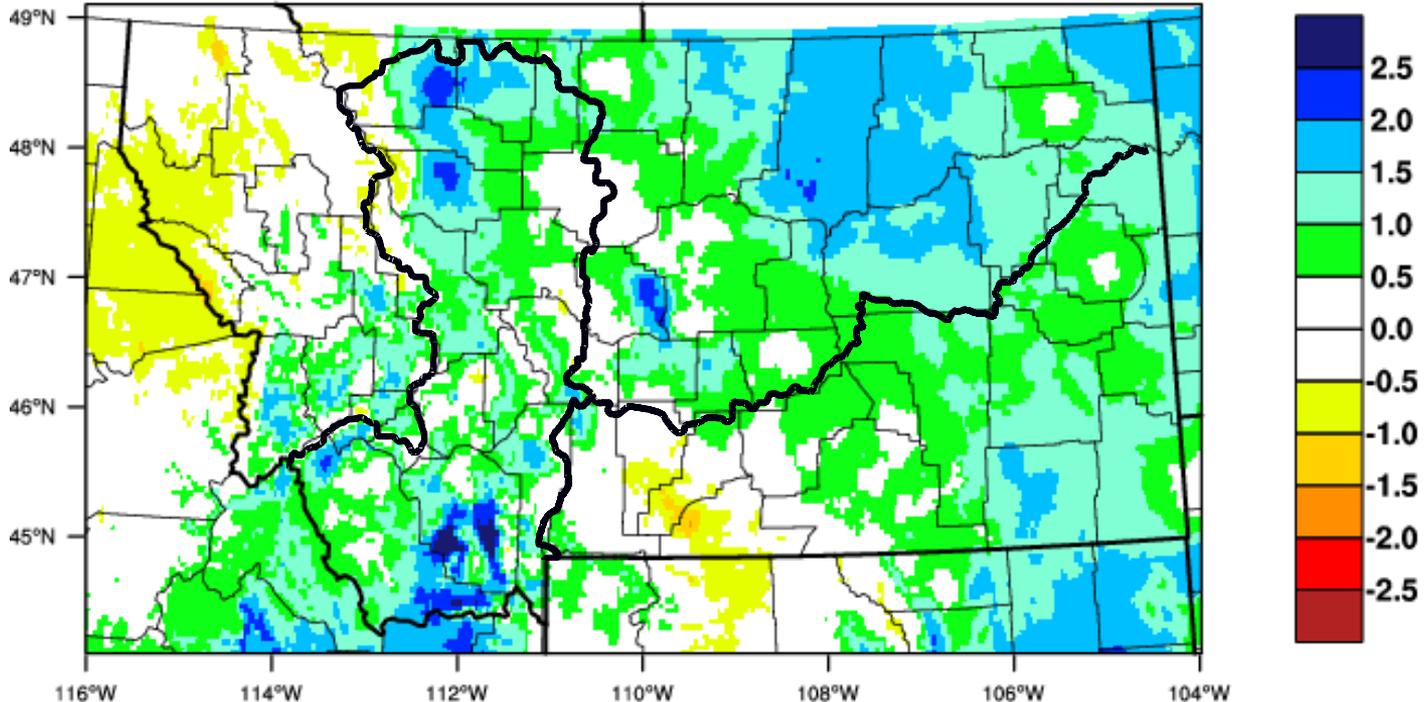
PRISM SPEI

March 2018



Montana - 1 month SPEI

March 2018

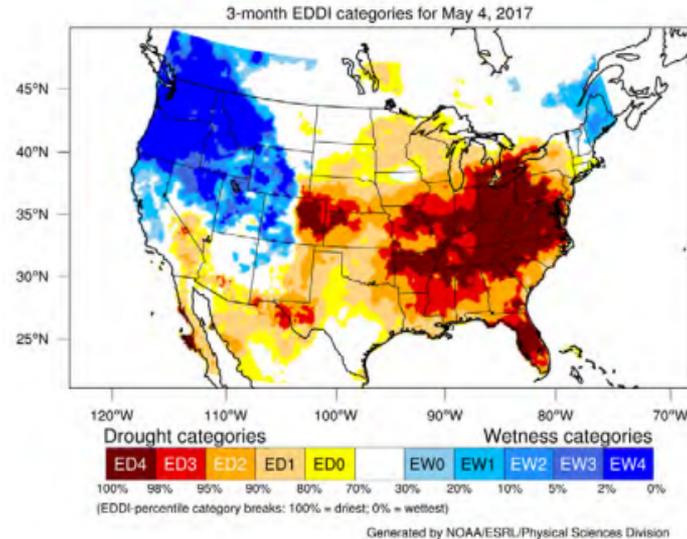


WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 16 APR 2018

EDDI

EDDI in a nutshell

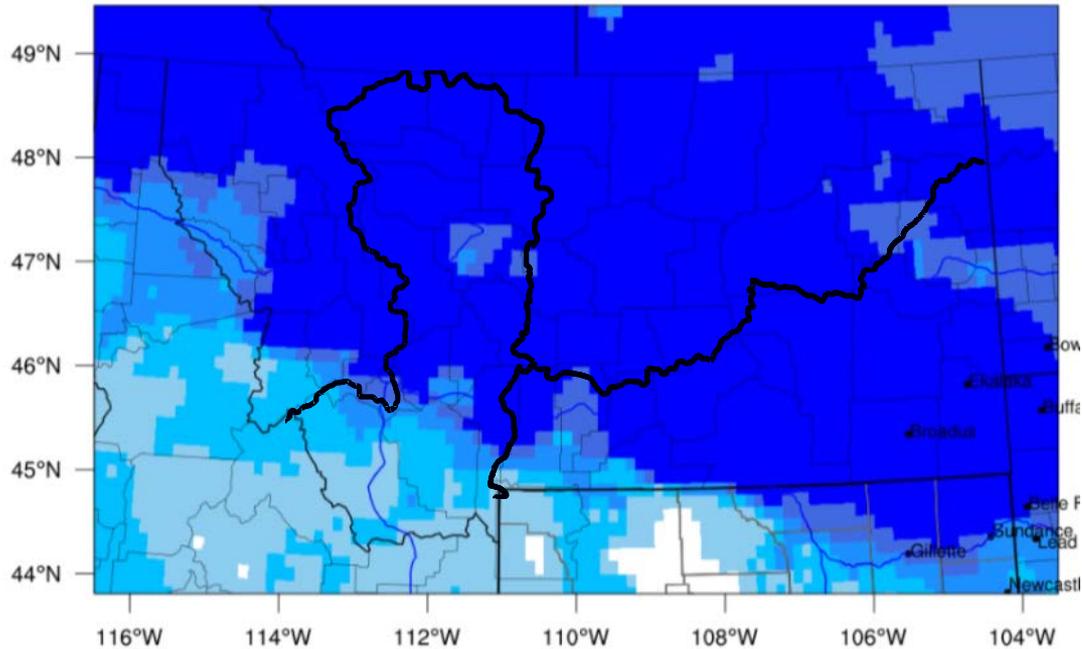
- EDDI is a drought index based on the “thirst” of the atmosphere—which leads to the drying of soils and vegetation, and also reflects that drying
- More technically: EDDI shows the anomaly* in daily **evaporative demand** aggregated over a specified time window, at a given location
- EDDI is calculated from observations of the atmosphere near the land surface: temperature, humidity, windspeed, and solar radiation
- EDDI can provide added value to other drought indicators, especially for early warning and flash drought detection





EDDI

1-Month 13 April 2018



Drought categories



100%

98%

95%

90%

80%

70%

30%

20%

10%

5%

2%

0%

Wetness categories

EW0

EW1

EW2

EW3

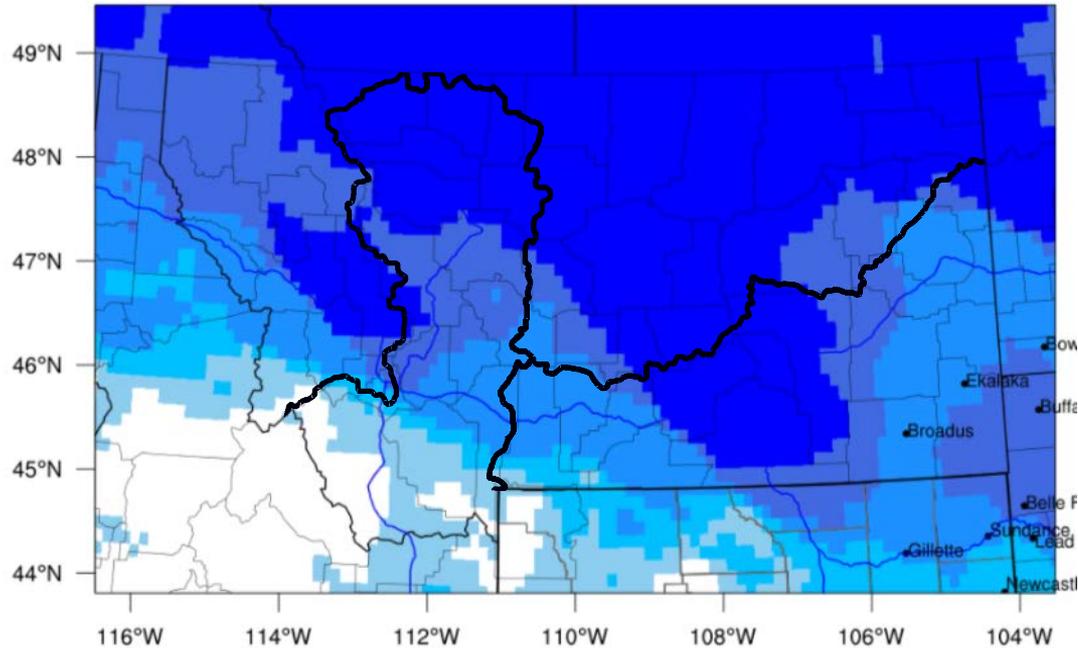
EW4

(EDDI-percentile category breaks: 100% = driest; 0% = wettest)



EDDI

2-Week 13 April 2018



Drought categories

Wetness categories



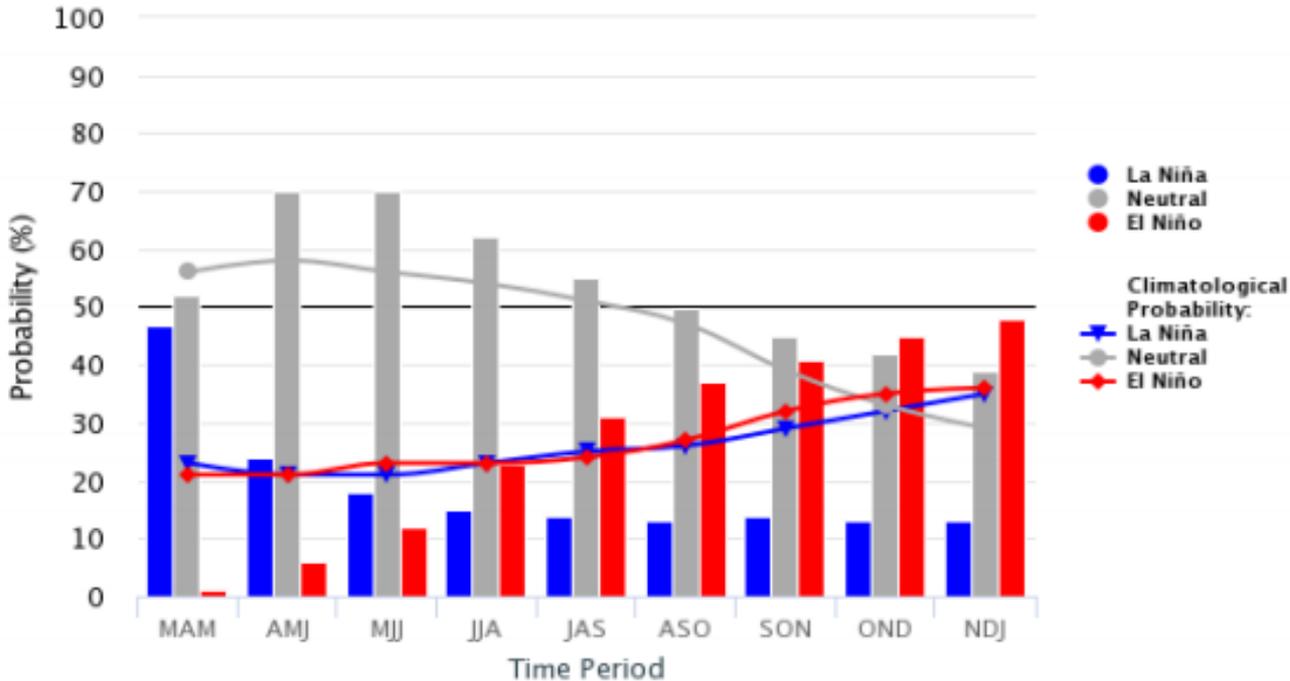


ENSO

La Nina Declining – Neutral Returns

Early-Apr CPC/IRI Official Probabilistic ENSO Forecasts

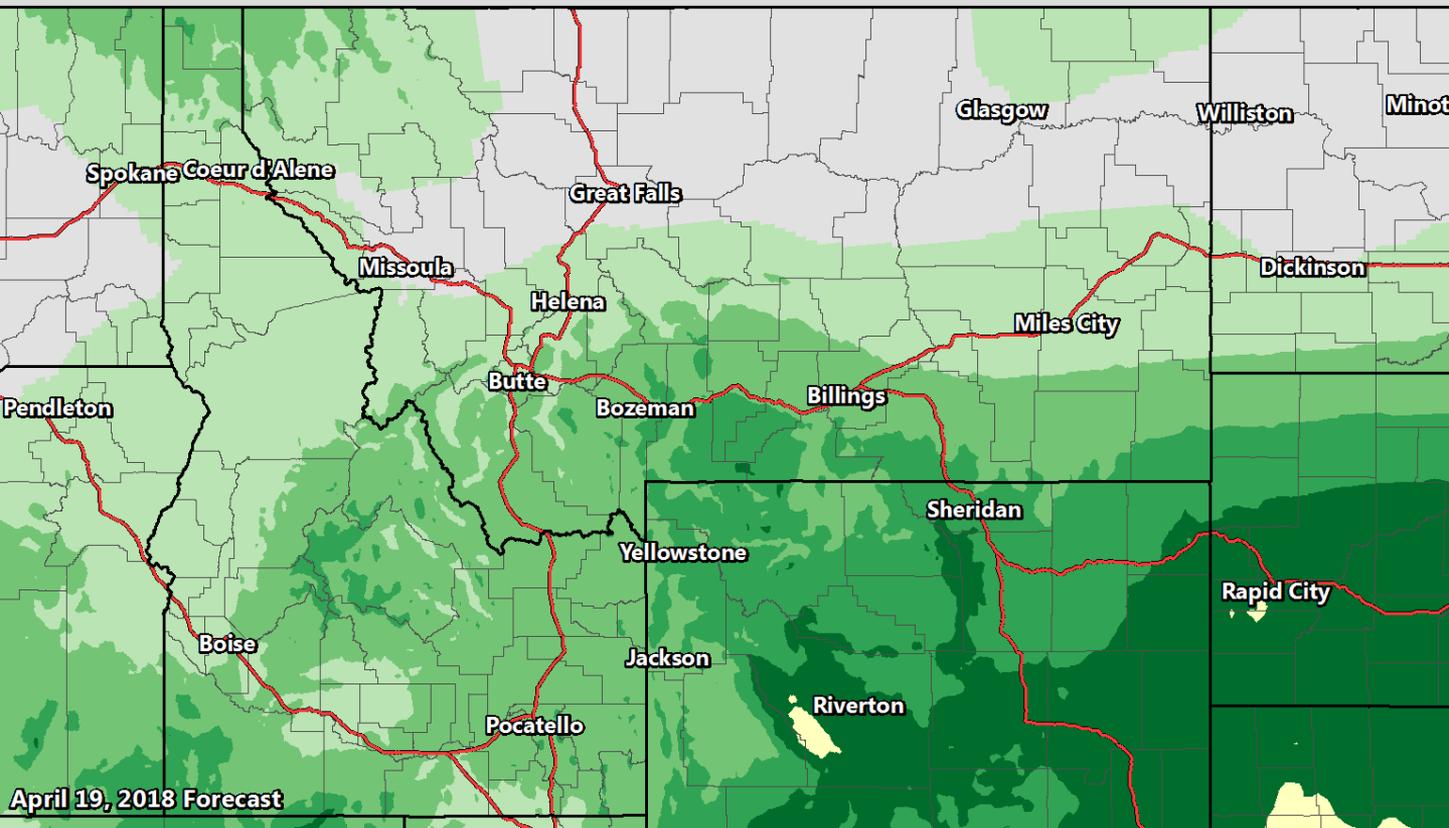
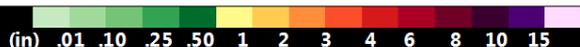
ENSO state based on NINO3.4 SST Anomaly
Neutral ENSO: -0.5 °C to 0.5 °C





7-Day Precipitation Forecast

Through 6PM 04/25/2018



April 19, 2018 Forecast



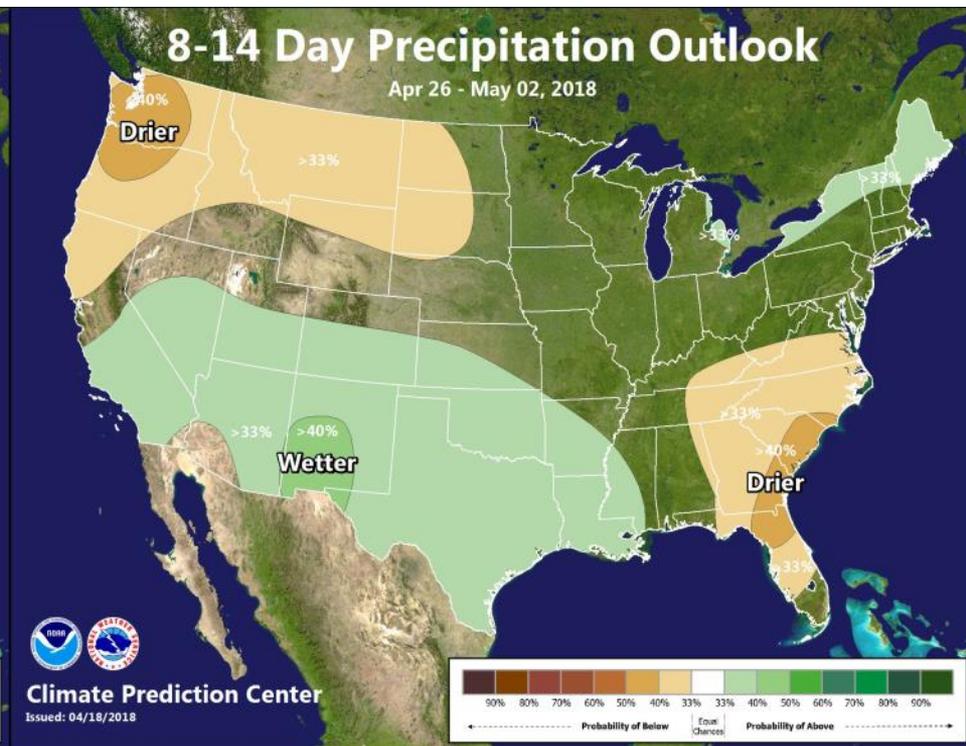
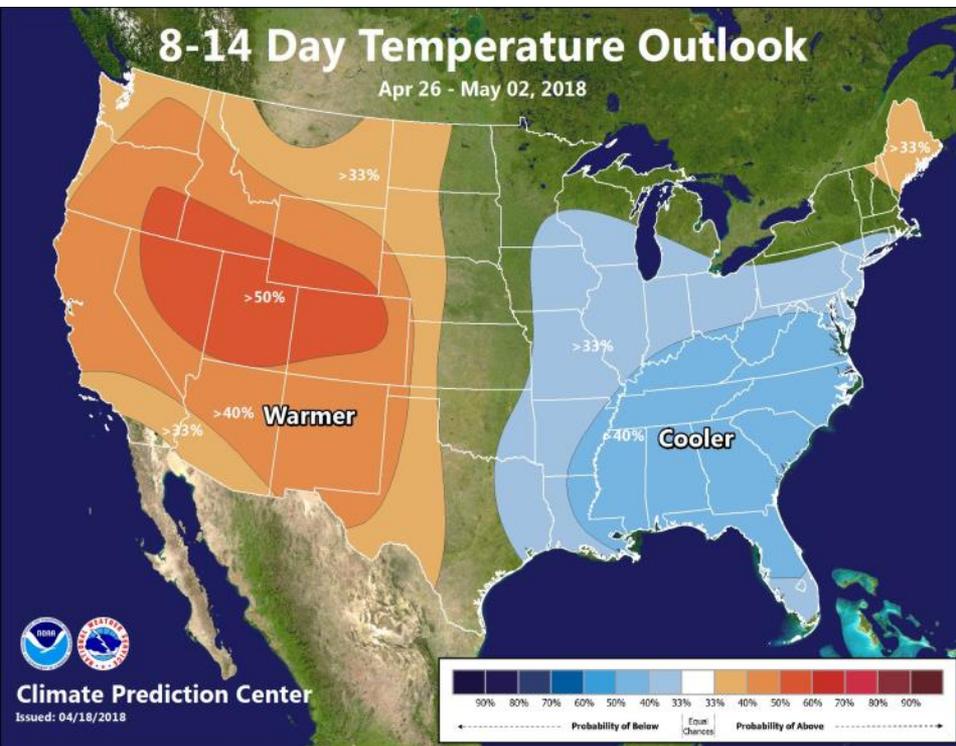
7 Day Precipitation Forecast

Created
April 18



8-14 Day Outlook

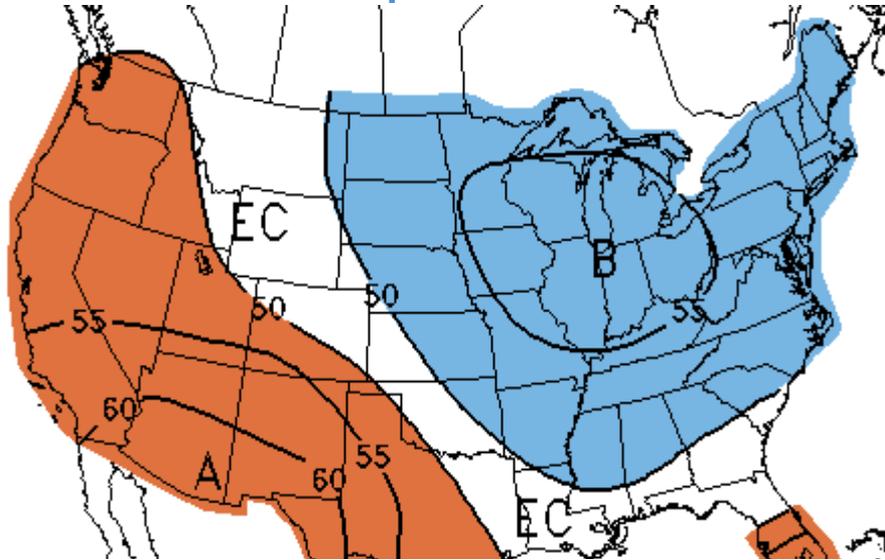
Created 18 April 2018



Experimental Week 3-4 Outlook

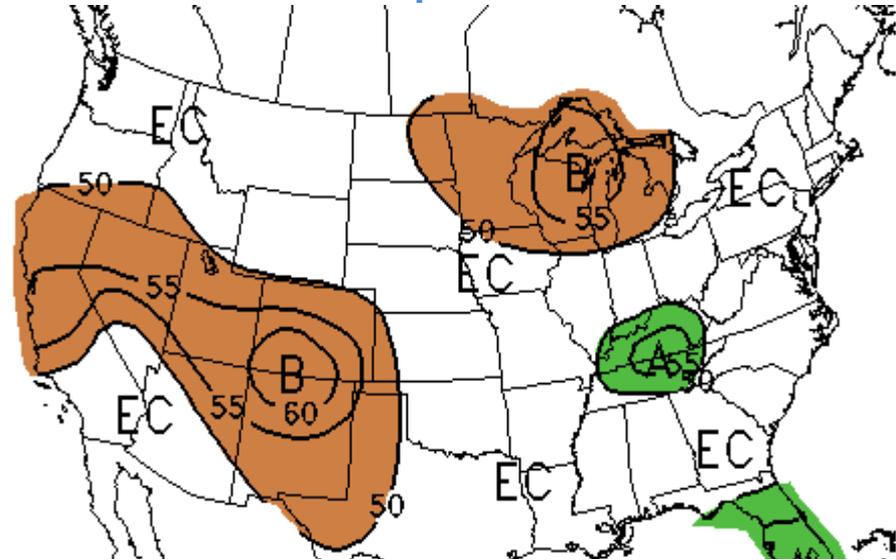
Created April 13

Temperature



Equal chances for above, below or near normal precipitation

Precipitation



Equal chances for above, below or near normal precipitation

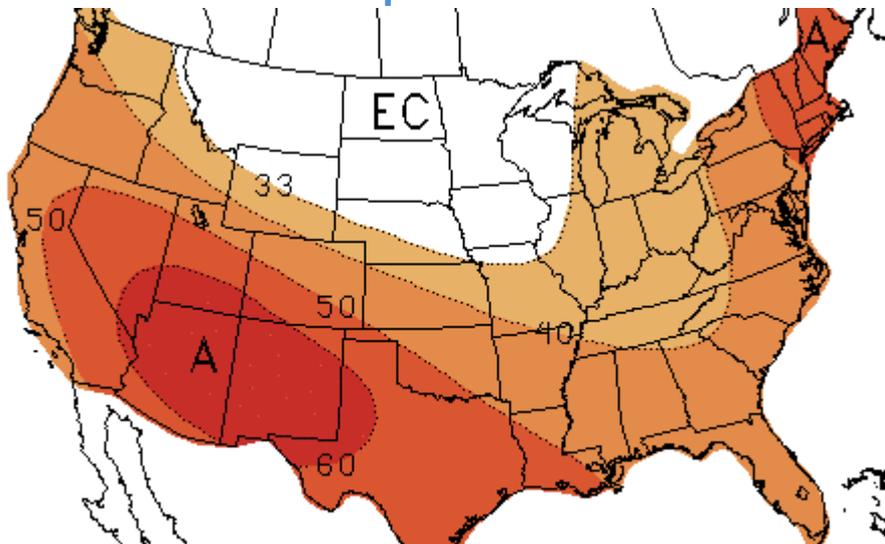


May-Jul Outlook

Created April 19

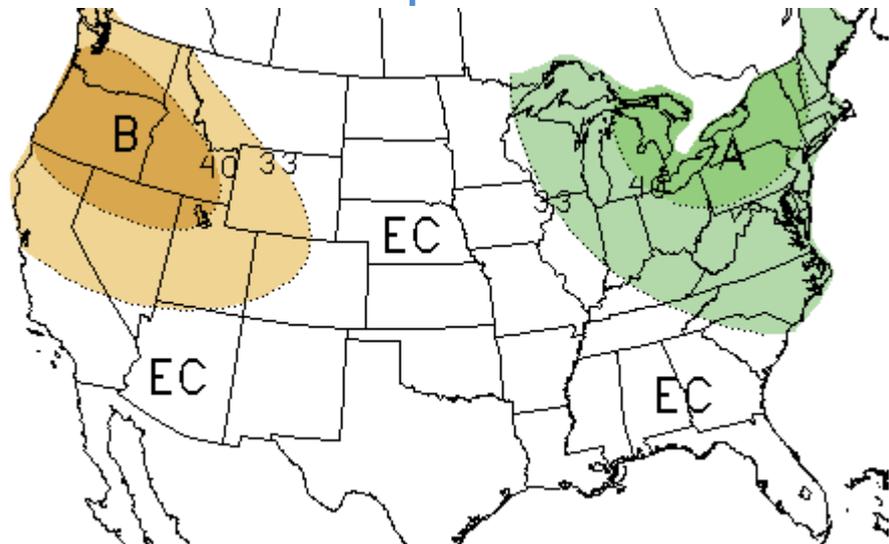


Temperature



Equal chances for above, below or normal temperatures statewide

Precipitation



Greater than 33% chance of below normal precipitation western and southwest Montana

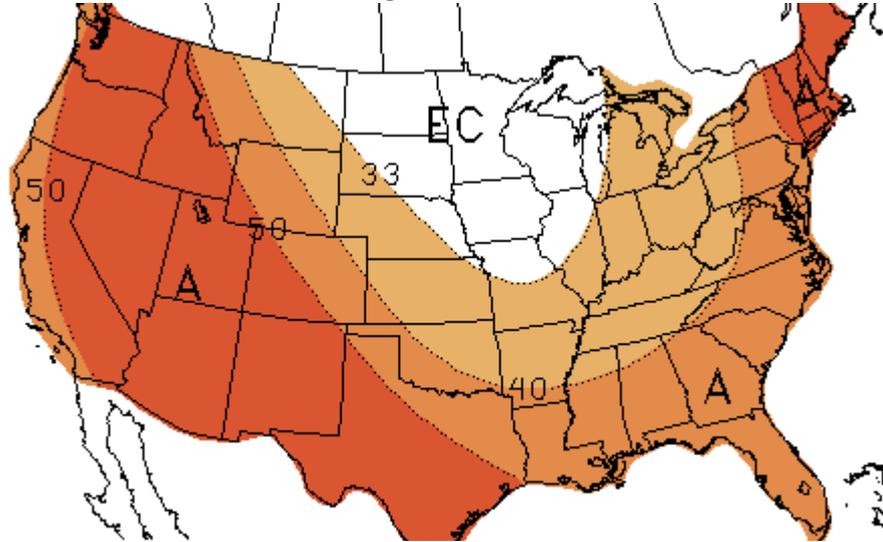


Jun-Aug Outlook

Created April 19

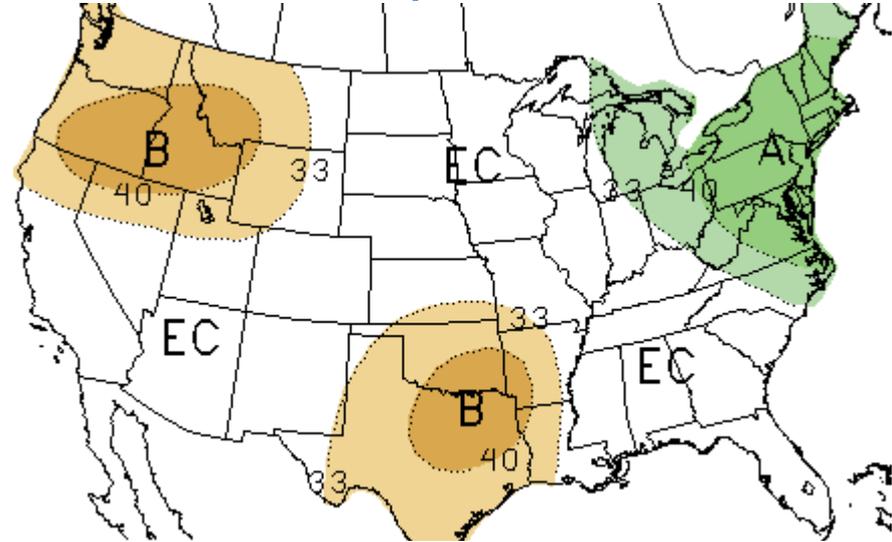


Temperature



33% to 50% chance of above normal temperatures over most of Montana, equal chances over northeast Montana

Precipitation

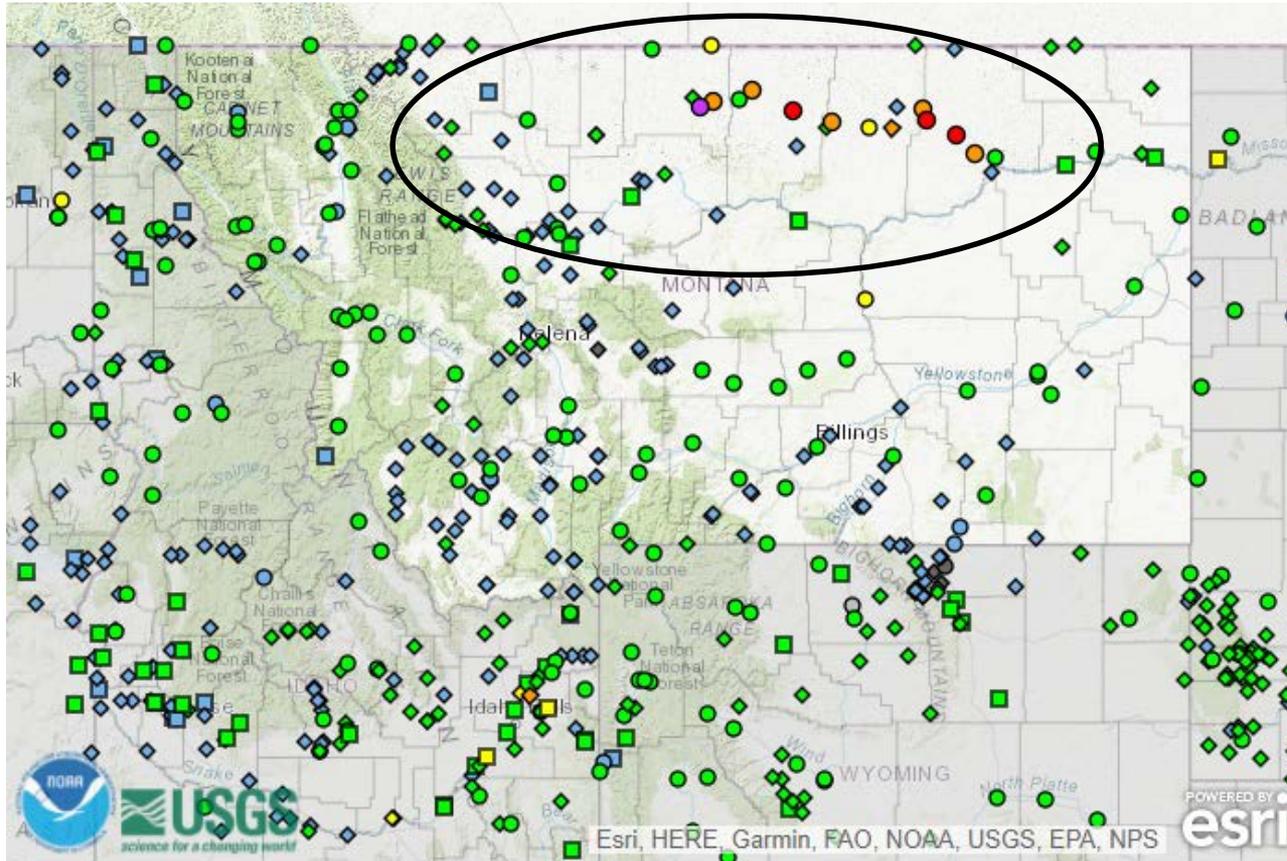


33% to 40% chance of below normal precipitation over most of Montana, equal chances eastern Montana



Current Flooding Locations

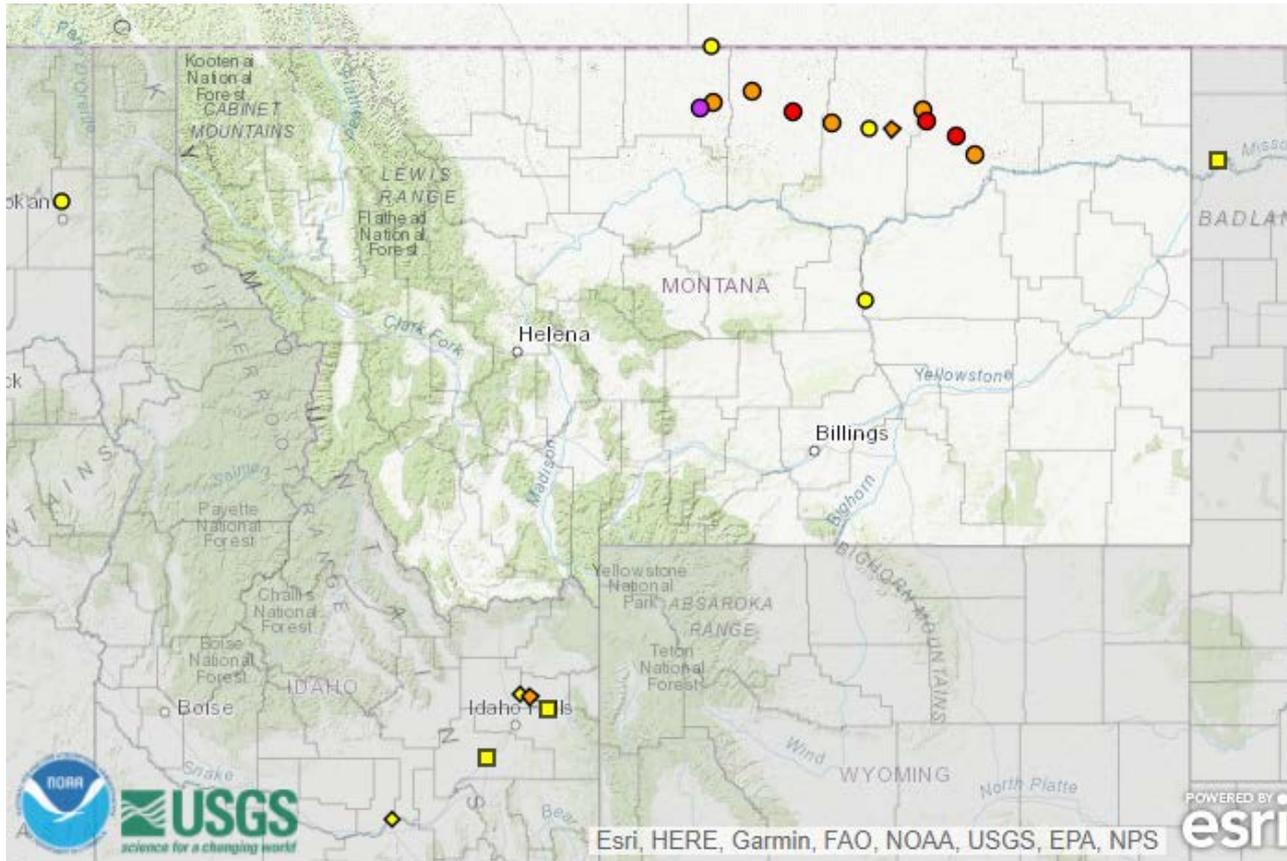
Created April 18





Current Flooding Locations

Created April 18





weather.gov

weather.gov/billings

weather.gov/glasgow

weather.gov/missoula

weather.gov/greatfalls



Weather-Ready Nation

National Oceanic and Atmospheric Administration