WY Conditions & Outlooks:

Precipitation, Temperatures, Drought, Floods, & Everything In-between

July 17, 2025

The University of Wyoming is an equal opportunity/affirmative action institution.

Presentation Outline

- **Current Conditions:** Overview
  - Drought, Temperature, Precipitation, Soil Moisture, and Snow Water Equivalent
  - Streamflows
  - Reservoir Levels
  - Water Calls & Allocations
- **Outlooks:**
  - Temperature & Precipitation
- **Highlight of the Month:**
  - USGS Drought Viewer
- **Questions**

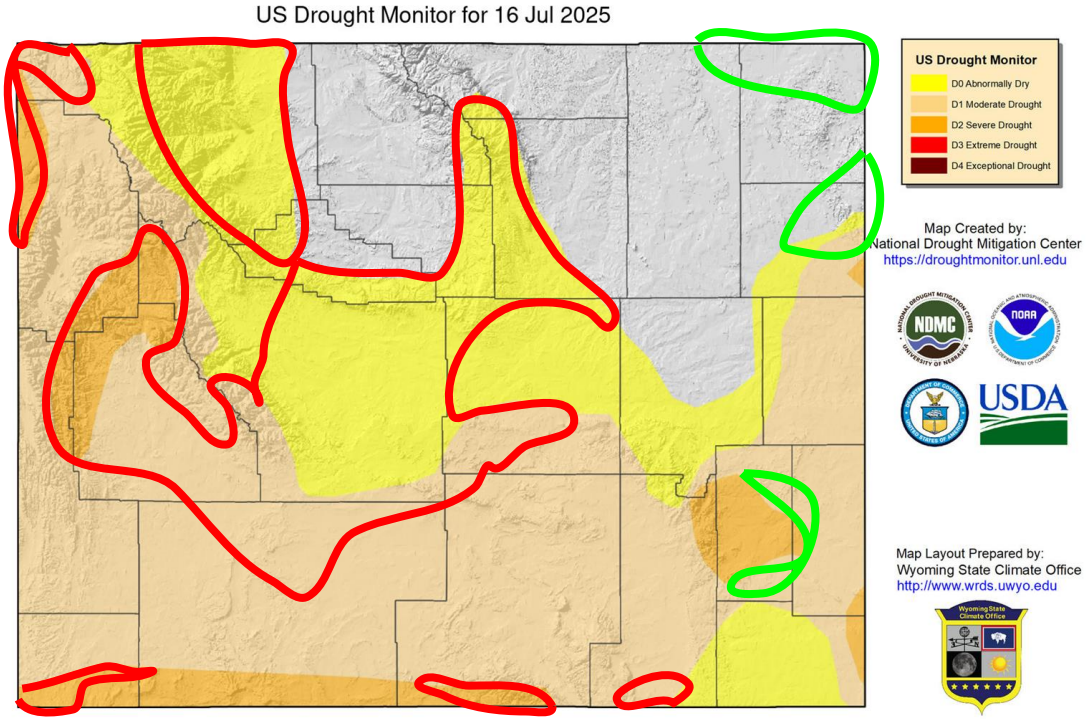
Current Conditions

US Drought Monitor for July 15th, 2025

(Released Thursday, July 17th, 2025)

Valid 8 a.m. EDT

Drought Level	Percentile
None	>30.01
D0 (Abnormally Dry)	20.01 to 30
D1 (Moderate Drought)	10.01 to 20
D2 (Severe Drought)	5.01 to 10
D3 (Extreme Drought)	2.01 to 5
D4 (Exceptional Drought)	0 to 2



The U.S. Drought Monitor, is a weekly map of drought conditions produced jointly by the National Oceanic and Atmospheric Administration, the U.S. Department of Agriculture, and the National Drought Mitigation Center (NDMC) at the University of Nebraska-Lincoln. The U.S. Drought Monitor website is hosted and maintained by the NDMC. http://droughtmonitor.unl.edu

Map Layout Created 17 Jul 2025 07:56 https://www.wrds.uwyo.edu

How are Drought categories assigned?
https://youtu.be/45MQ1GB-uTc

Improvements in far eastern Wyoming. Degradations in the much of the rest of the state.

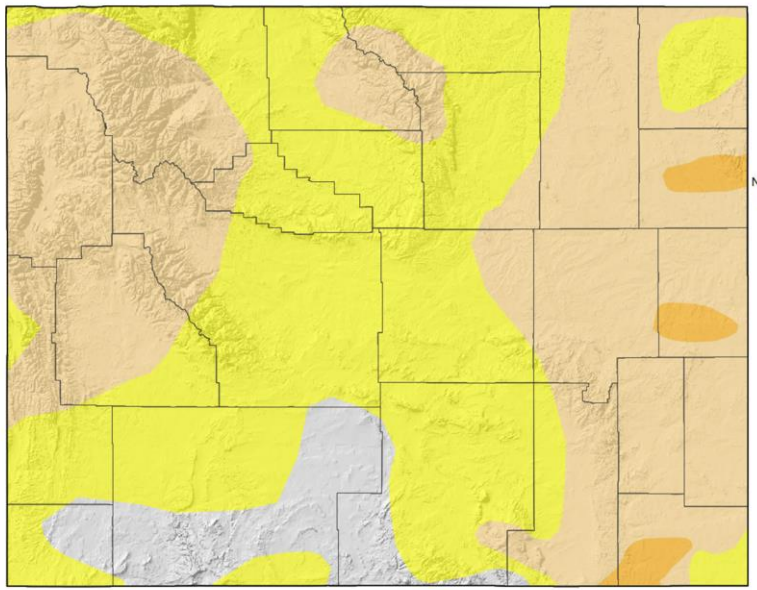
https://droughtmonitor.unl.edu

droughtmonitor.unl.edu

WRDS
Water Resources Data System

One Year Ago

US Drought Monitor for 16 Jul 2024



US Drought Monitor

45.58%	D0 Abnormally Dry
44.22%	D1 Moderate Drought
1.91%	D2 Severe Drought
0.00%	D3 Extreme Drought
0.00%	D4 Exceptional Drought

Map Created by:
National Drought Mitigation Center
https://droughtmonitor.unl.edu

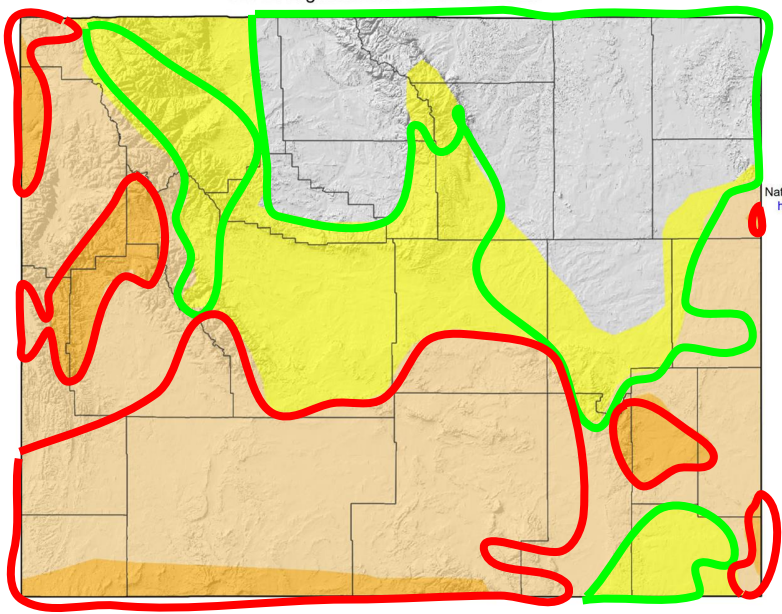
Map Layout Prepared by:
Wyoming State Climate Office
http://www.wrds.uwyo.edu

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Map Layout Created 18 Jul 2024 http:/www.wrds.uwyo.edu

Today

US Drought Monitor for 16 Jul 2025



US Drought Monitor

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

Map Created by:
National Drought Mitigation Center
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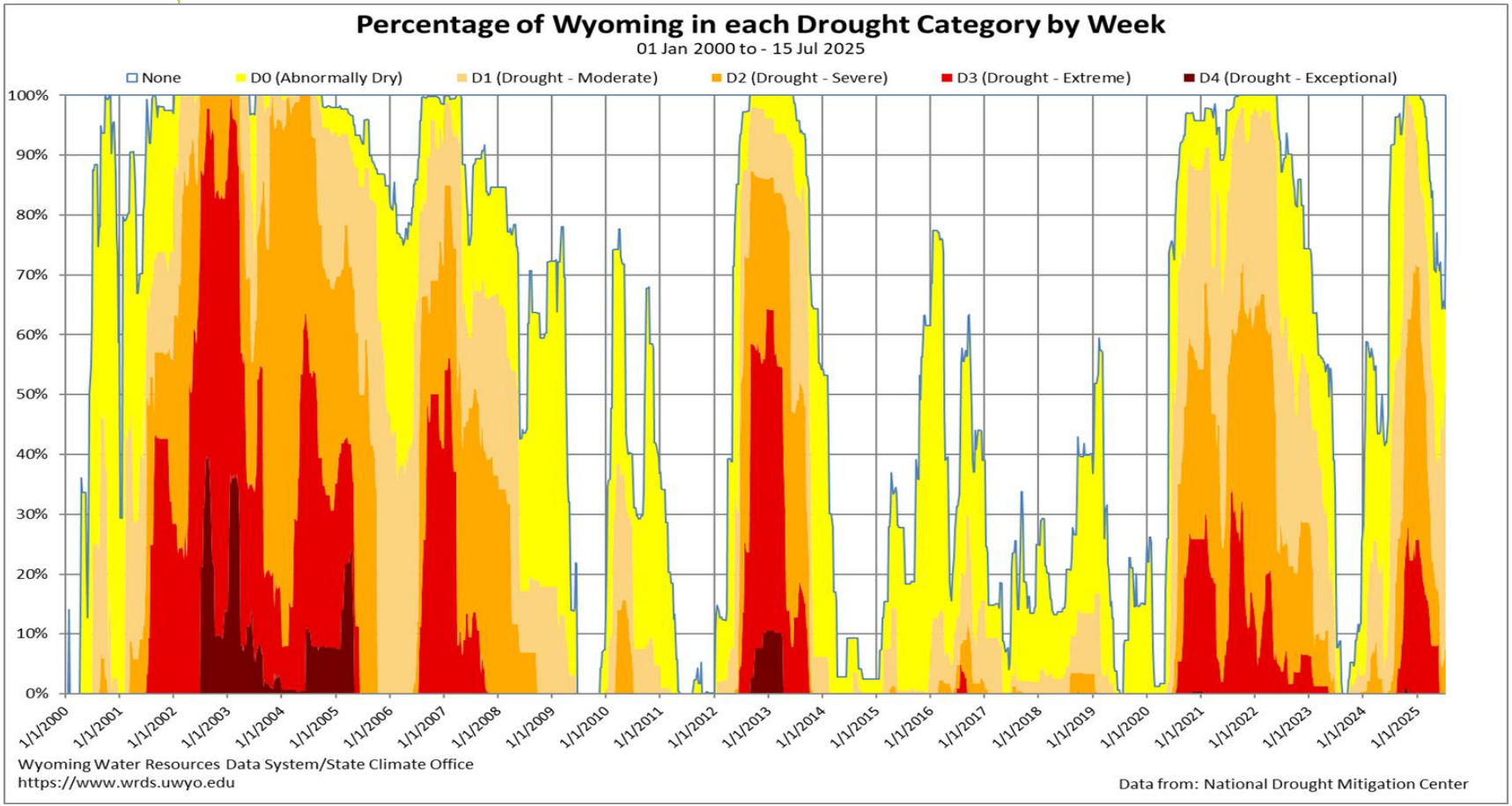
Map Layout Created 17 Jul 2025 07:56 https://www.wrds.uwyo.edu

https://droughtmonitor.unl.edu

droughtmonitor.unl.edu

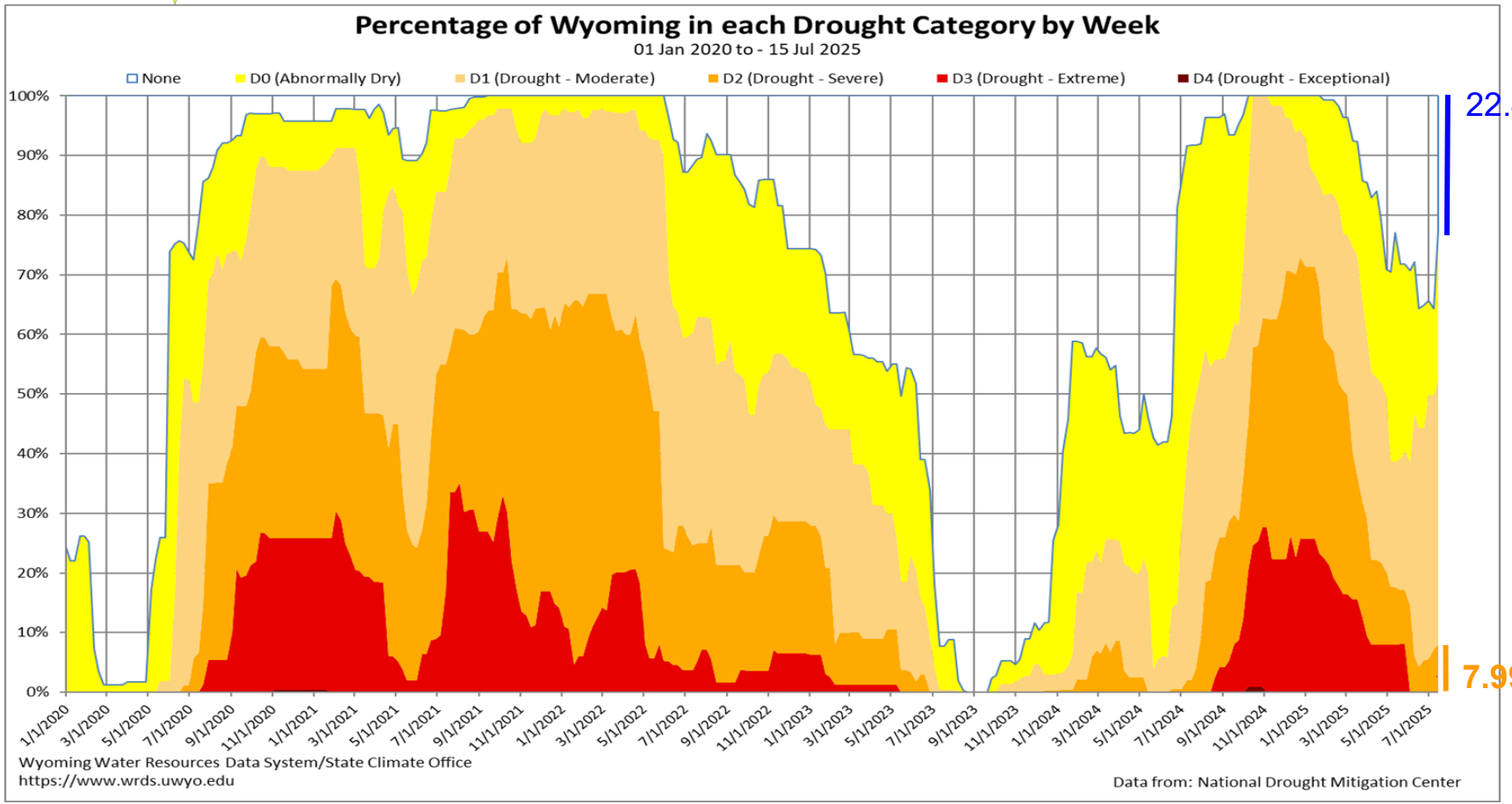
WRDS Water Resources Data System

Wyoming Area Affected: 77.55% D0-D4 ; 52.2% D1-D4



https://www.wrds.uwyo.edu/drought/droughttimeline.html

WRDS
Water Resources Data System



https://www.wrds.uwyo.edu/drought/droughttimeline.html

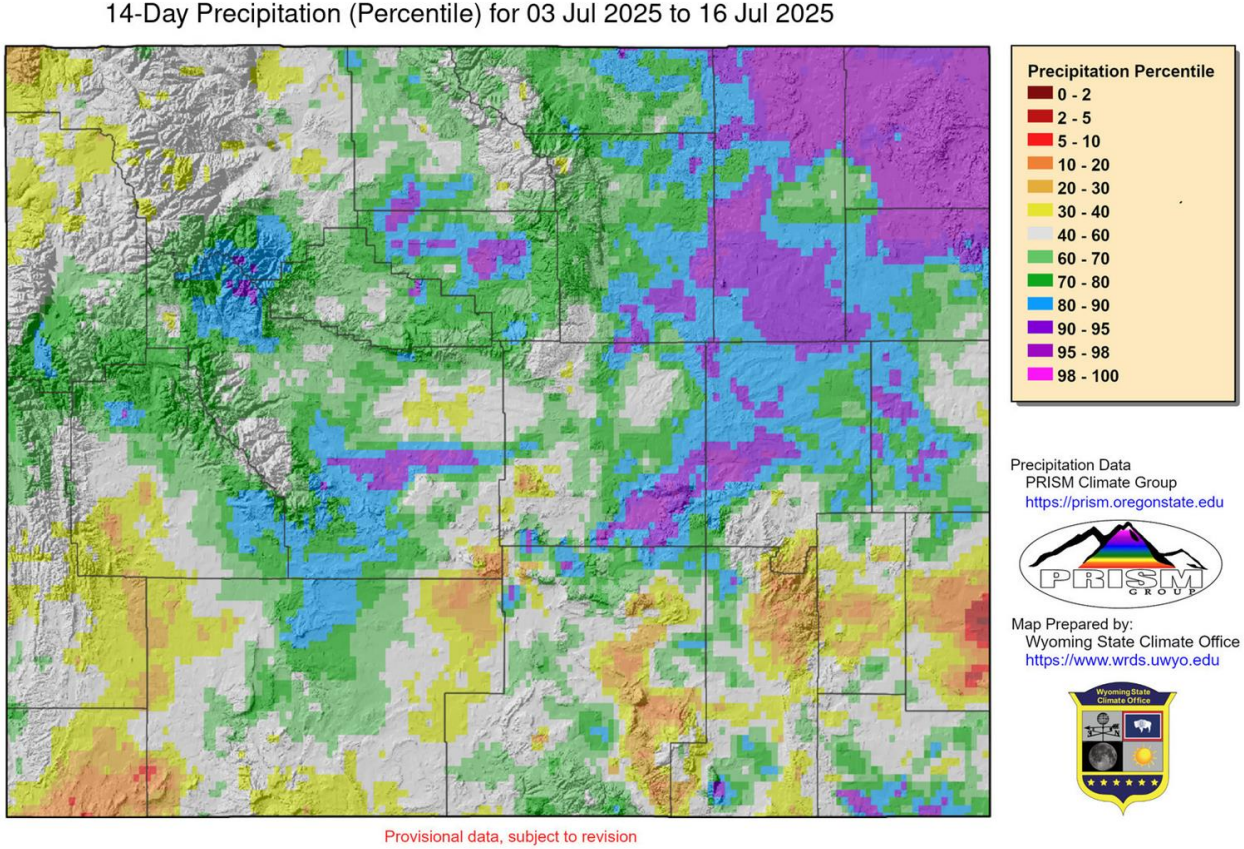
14-Day Precipitation Percentile (03 Jul 2025 to 16 Jul 2025)

Above Median:

- Northeast
- West Central
- North Central

Below Median (*Areas of Concern*):

- Scattered areas across the southern third of the state
- Eastern Goshen County



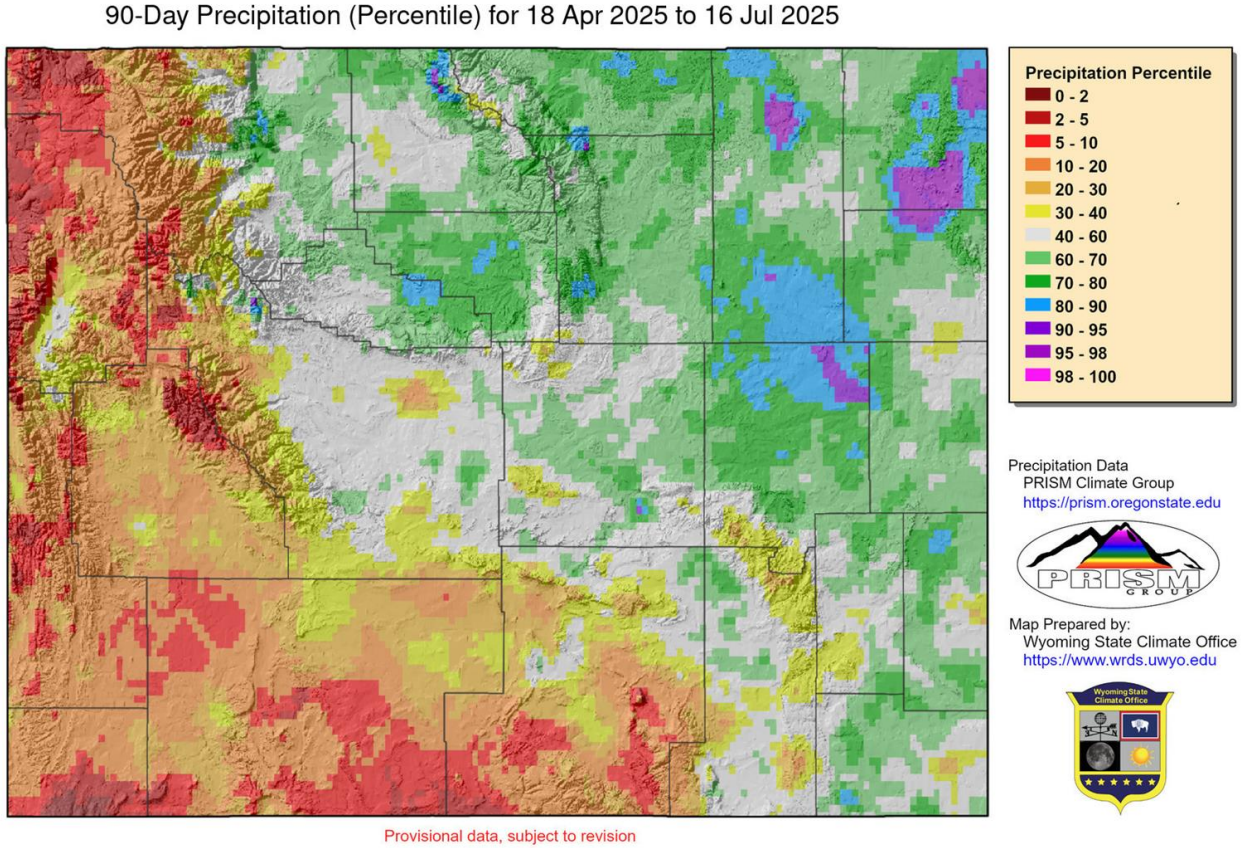
90-Day Precipitation Percentile (18 Apr 2025 to 16 Jul 2025)

Above Median:

- Bighorn Basin
- Northeast
- Goshen/Platte/Laramie Counties

Below Median (*Areas of Concern*):

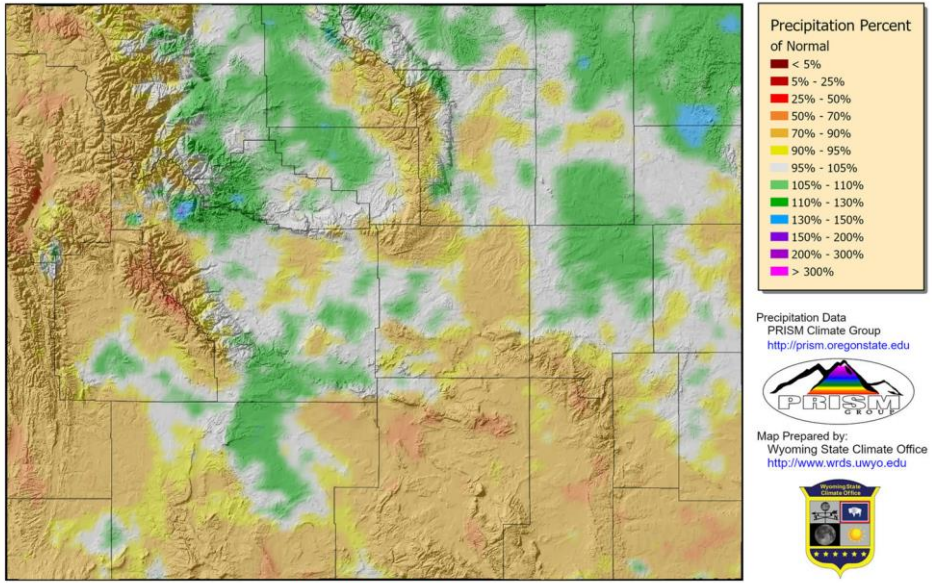
- West
- Southwest/South Central WY



“Year”-to-Date Precipitation (Percent of Average)

Current Water Year

Water-Year Precipitation (Percent of 1991-2020 Average) for 01 Oct 2024 to 16 Jul 2025

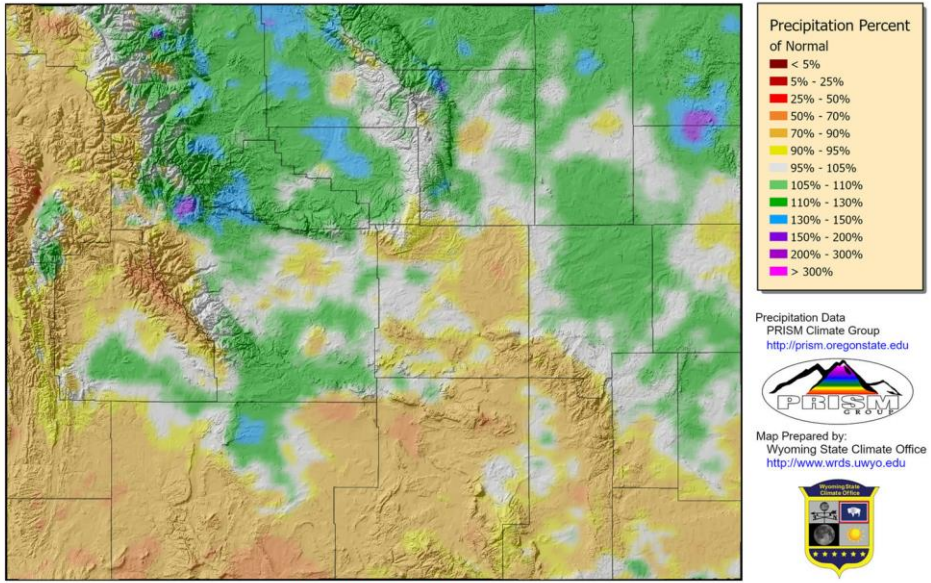


Provisional data, subject to revision

Monthly and Normal precipitation data from PRISM Climate Group, Copyright ©2024, PRISM Climate Group, Oregon State University, http://prism.oregonstate.edu
Map Created 17 Jul 2025 https://www.wrds.uwyo.edu
Daily averages created from PRISM daily precipitation grids

Current Calendar Year

Calendar-Year Precipitation (Percent of 1991-2020 Average) for 01 Jan 2025 to 16 Jul 2025



Provisional data, subject to revision

Monthly and Normal precipitation data from PRISM Climate Group, Copyright ©2024, PRISM Climate Group, Oregon State University, http://prism.oregonstate.edu
Map Created 17 Jul 2025 https://www.wrds.uwyo.edu
Daily averages created from PRISM daily precipitation grids

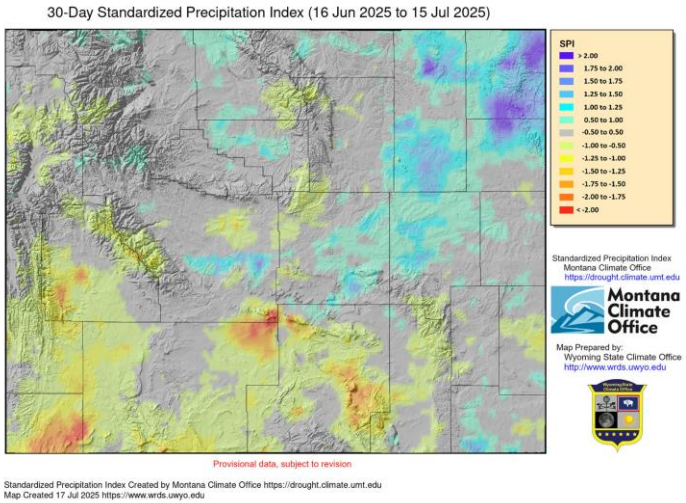
Note: a water year is October 1 through September 30 of the following year.

WRDS Water Resources Data System

Standardized Precipitation Index (SPI)

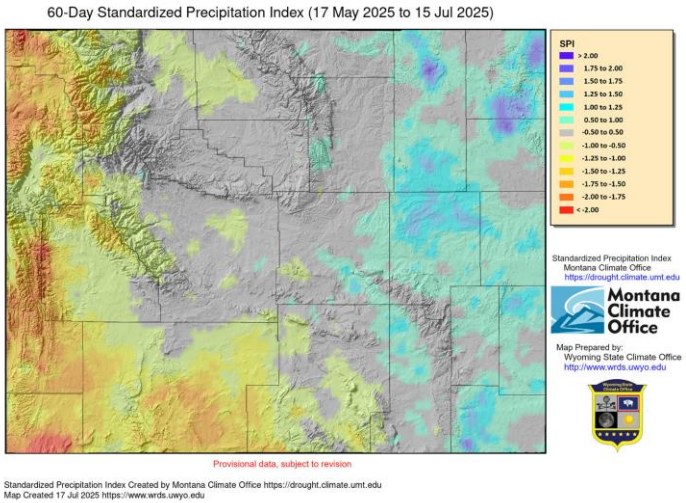
30-Day →

Jun 16 - Jul 15



60-Day →

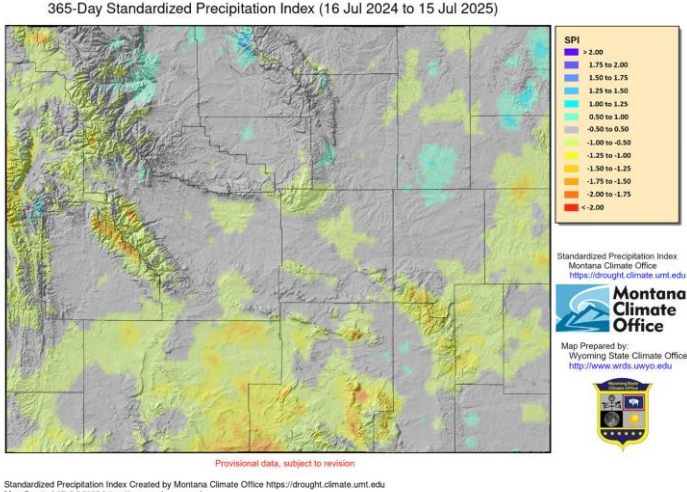
May 17 - Jul 15



Short term: Wet in the the northeast east Dry in southwest and southcentral of Wyoming at 30 and 60 days. All of west dry at 60, improvement in northwest at 30 days

Long term: Normal to dry statewide, stronger dry signal in south central Wyoming

1-Year →

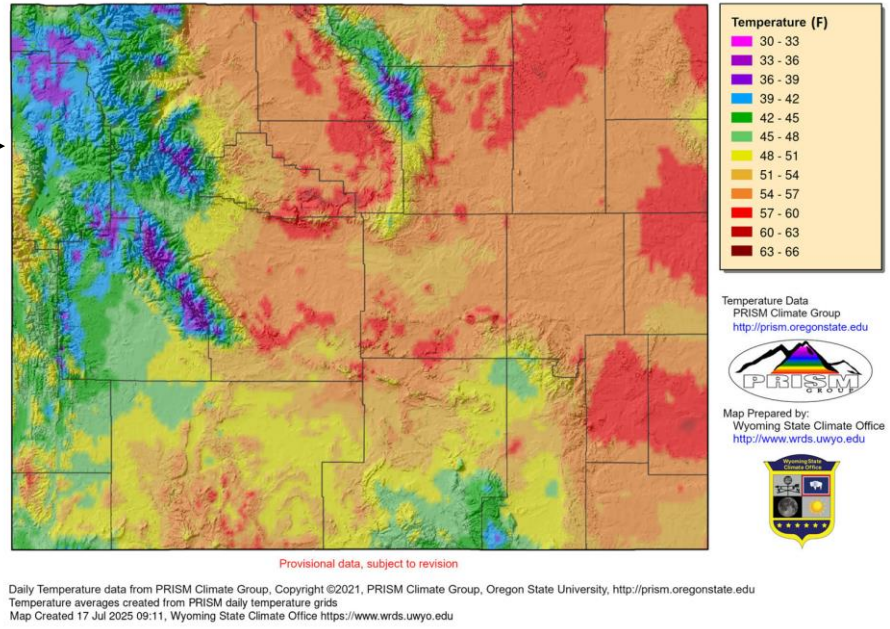


https://drought.climate.umt.edu

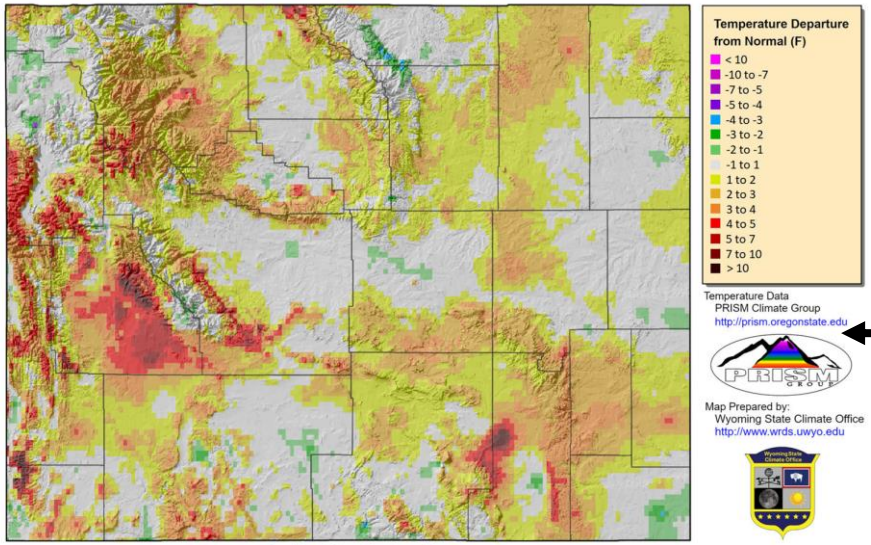
WRDS Water Resources Data System

14-Day Average Minimum Temperature (03 Jul to 16 Jul)

- Above freezing throughout the state
- Mid-50s east of Divide, 40s to 50s west with 30s to 40s in mountains



14-Day Minimum Temperature (Departure from 1991-2020 Normal) for 03 Jul 2025 to 16 Jul 2025

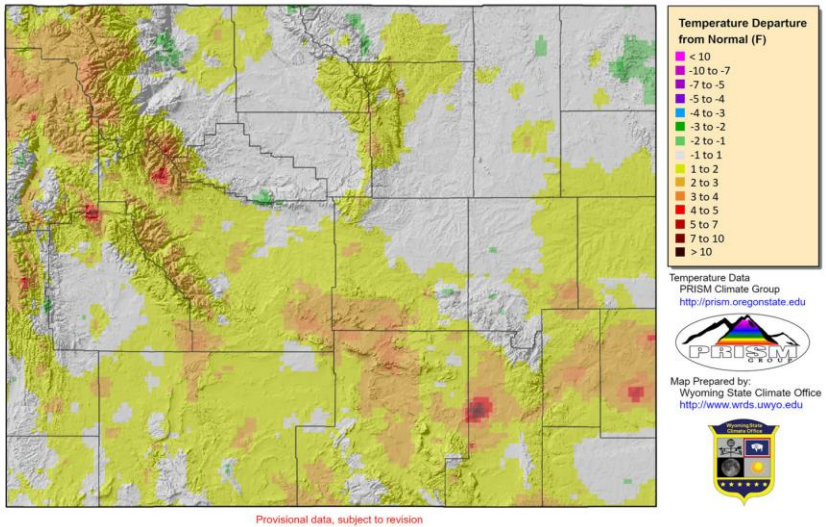


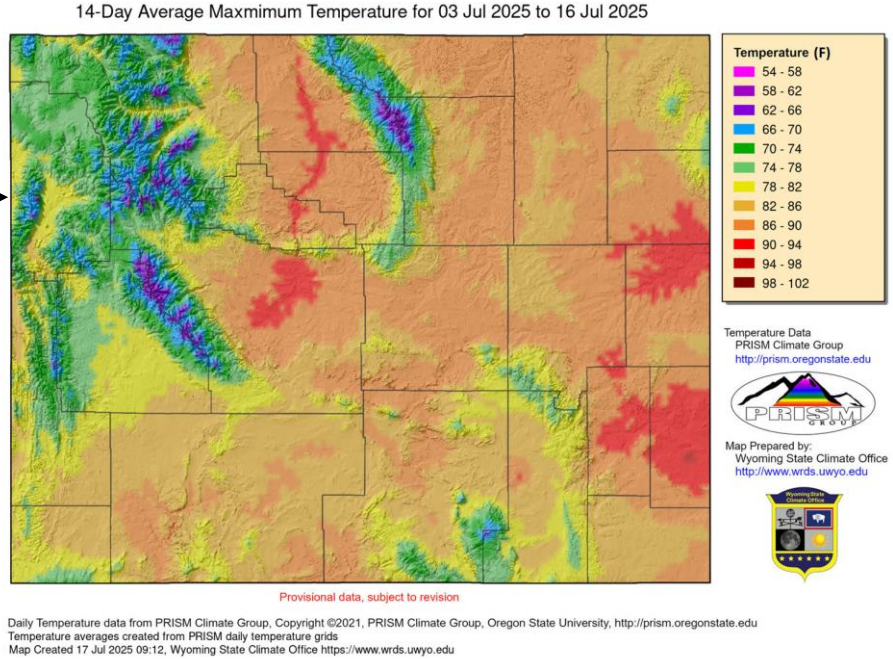
14-Day *Departure from* Normal Average Minimum Temperature

- Normal to above normal across most of the state
- Tetons, western base of Winds +7F above normal

14-Day Average Maximum Temperature (03 Jul to 16 Jul)

- Max Temps mostly in 80s (except up higher elevations)
- Low to mid 90s in Wind/BH Basins and parts of east
- Higher elevations in 70s



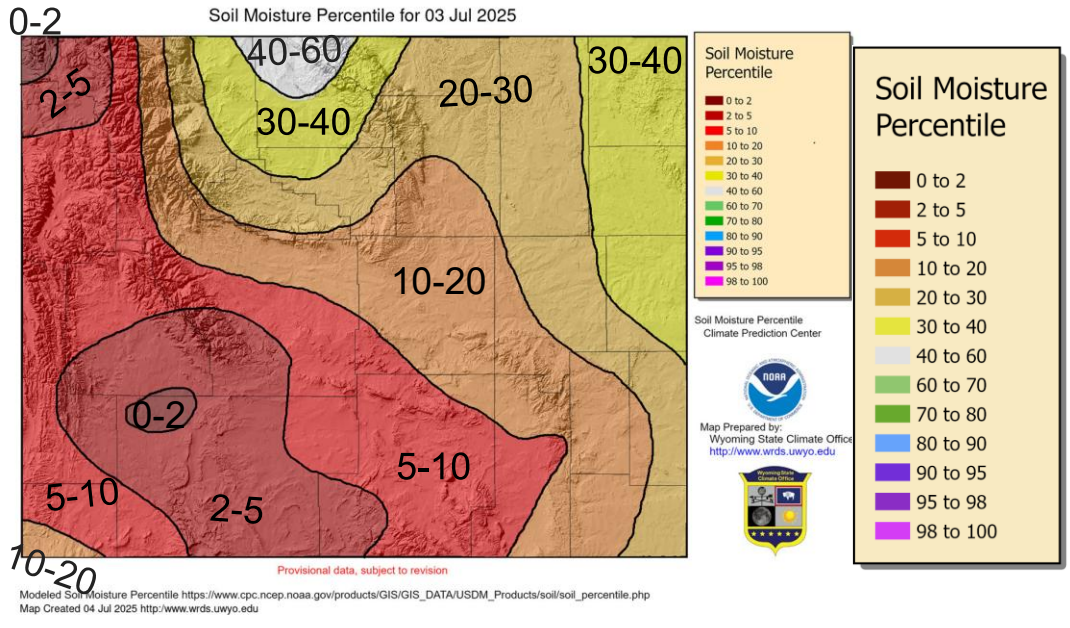


14- Day *Departure from* Normal Average Maximum Temperature

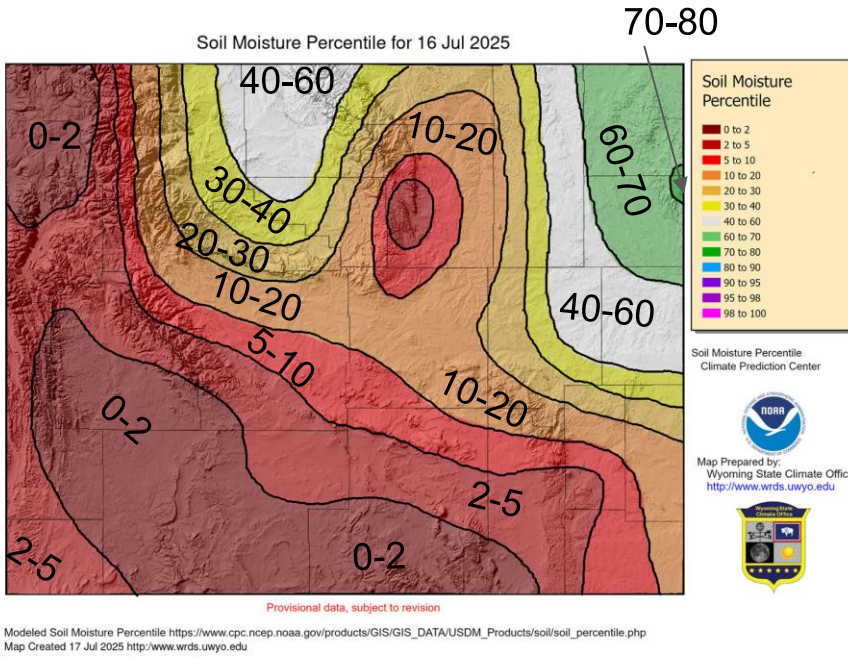
- Highs average to 4F above average, spotty areas warmer.

Soil Moisture Percentile

~Two Weeks Ago



16 Jul 2025



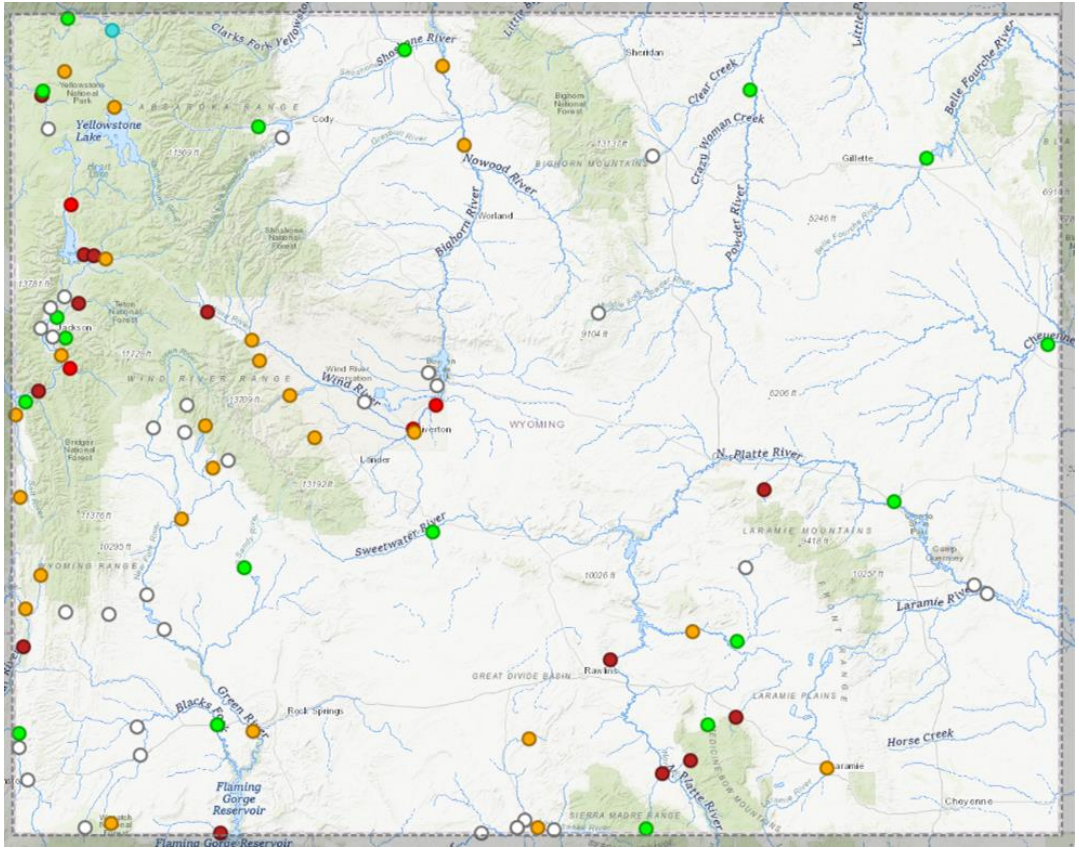
https://www.wrds.uwyo.edu/Soil/Current_SoilMoisture_Ptile.html

Status Quo or Degradations across Wyoming except for the Northeast and a little improvement in the Bighorn Basin

Current Streamflow Conditions

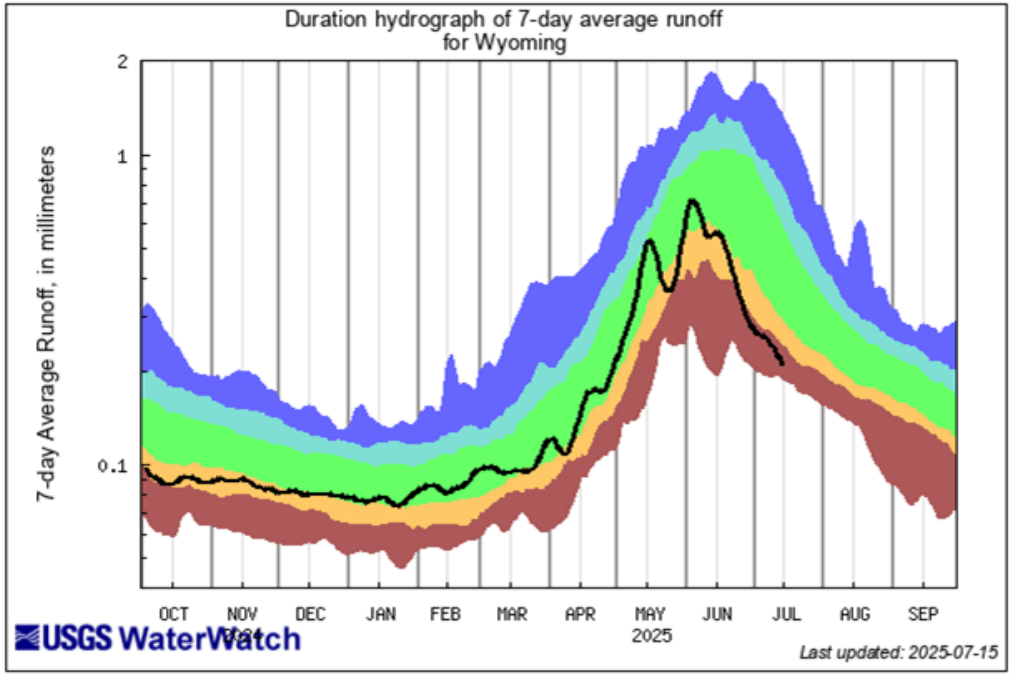
Streamflow Status

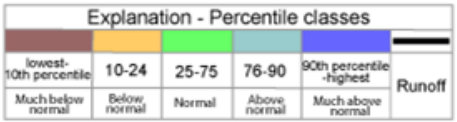
Streamflow: Status	
Above flood stage	
All-time high for this day	100th percentile (maximum)
Much above normal	>90th percentile
Above normal	76th – 90th percentile
Normal	25th – 75th percentile
Below normal	10th – 24th percentile
Much below normal	<10th percentile
All-time low for this day	0th percentile (minimum)
Not flowing	
Not ranked	
Measurement flag	
Recent measurement unavailable	



https://dashboard.waterdata.usgs.gov/

Where Are We In The Water Year?

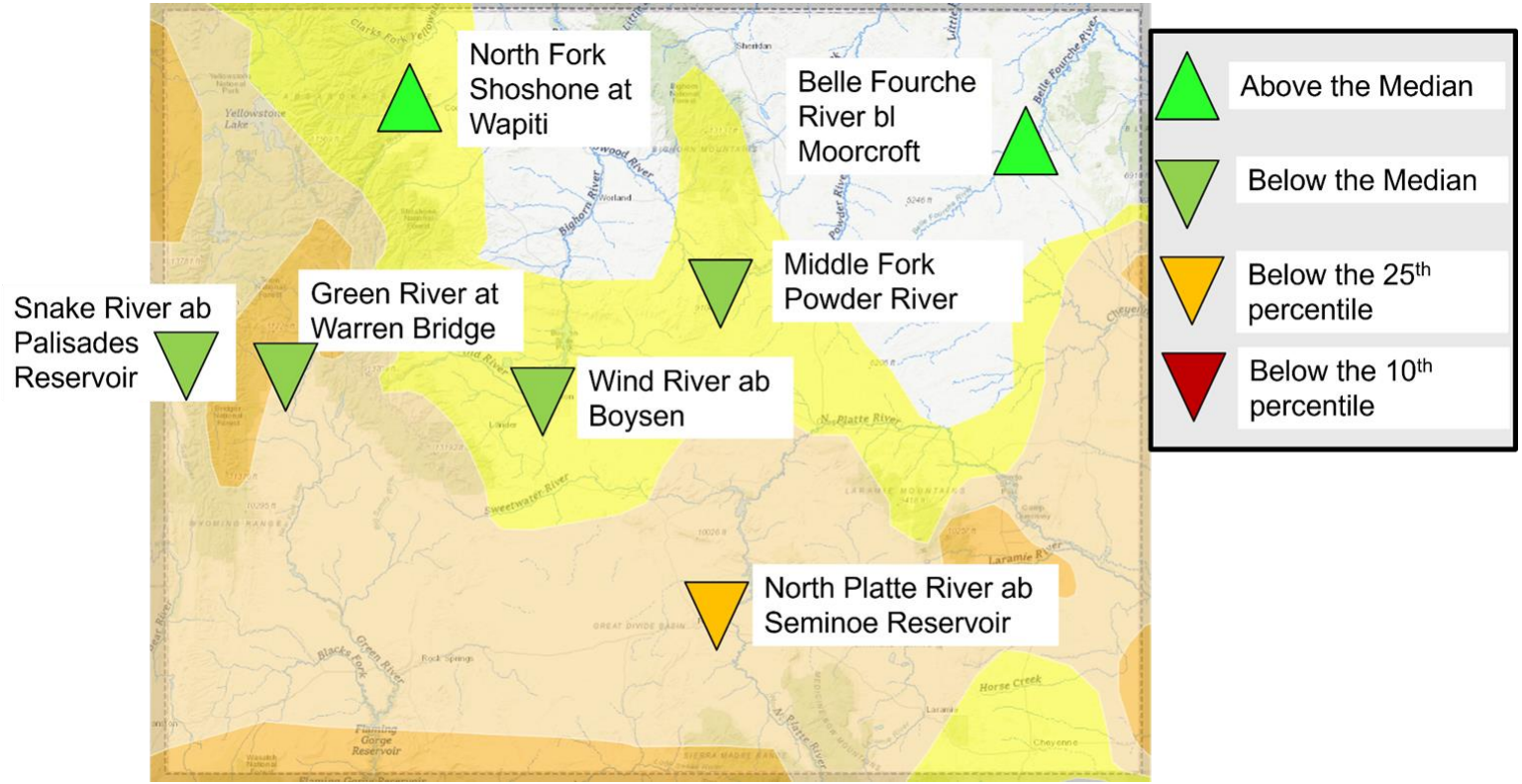




- Runoff has come and gone.
- Receding into low flow conditions
- Should be at higher flow conditions

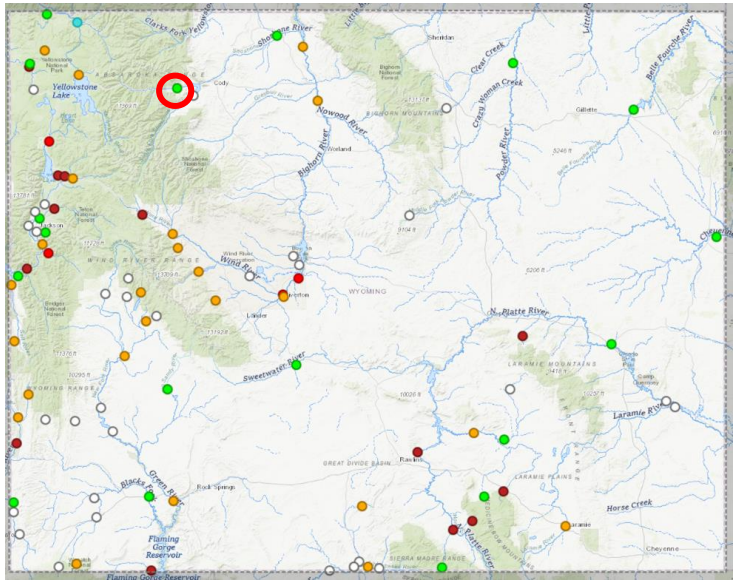
https://waterwatch.usgs.gov/

2025 Runoff Status: Cumulative Flow Compared to Period of Record Statistics



https://waterwatch.usgs.gov/

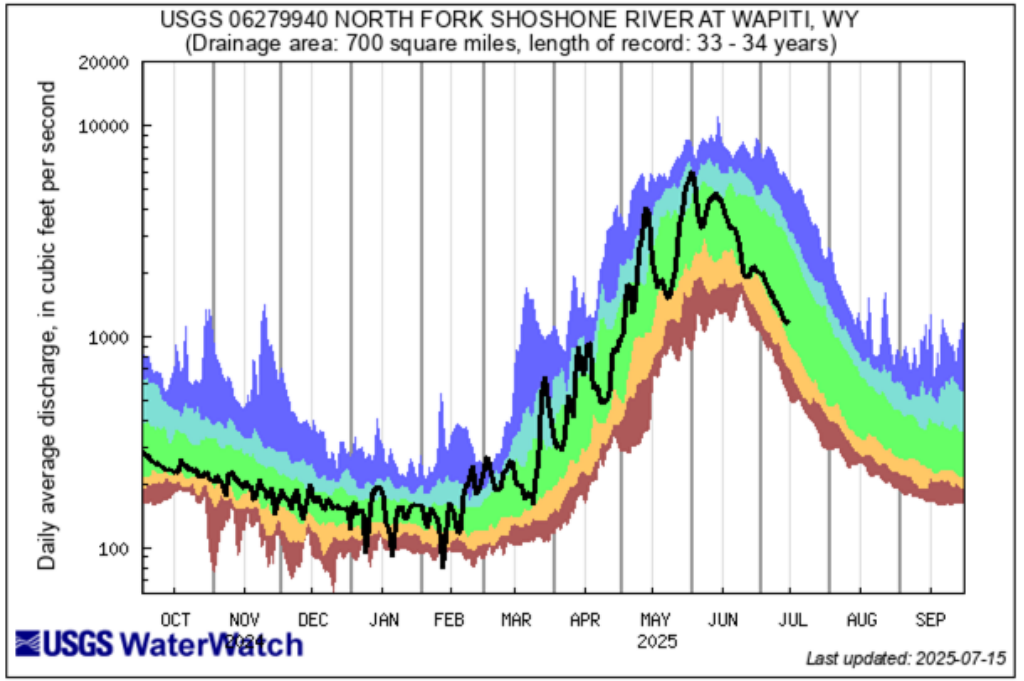
Select WY Streamflows

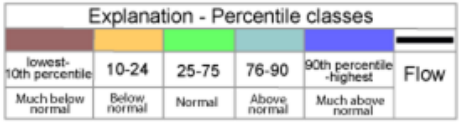


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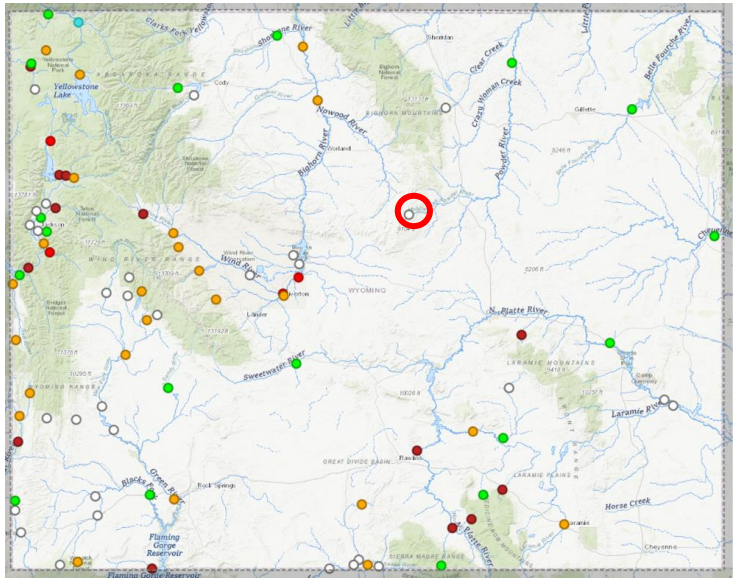
https://waterwatch.usgs.gov/

North Fork Shoshone River, at Wapiti, WY





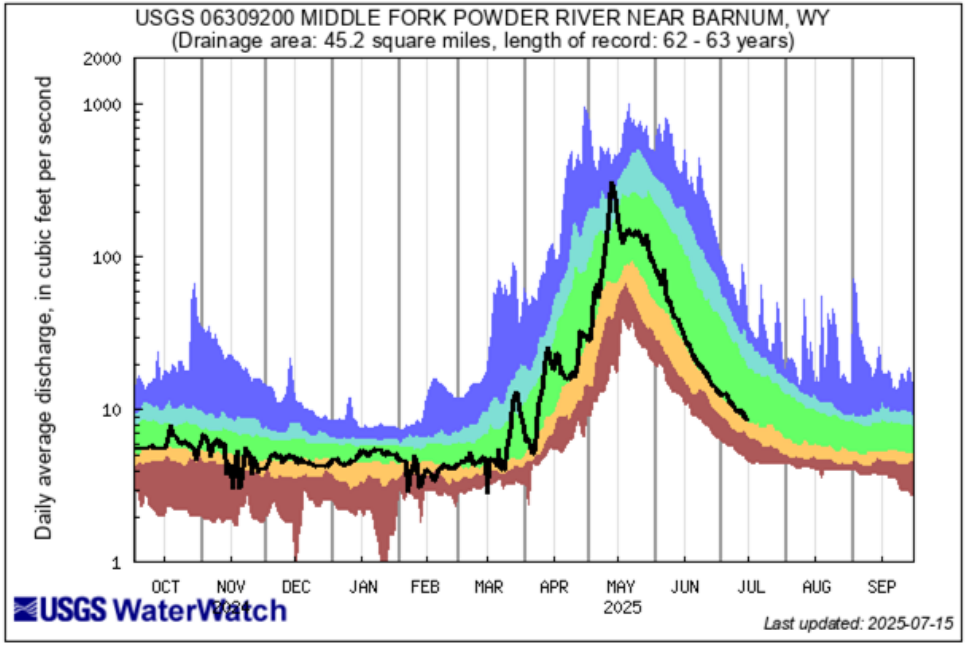
Select WY Streamflows

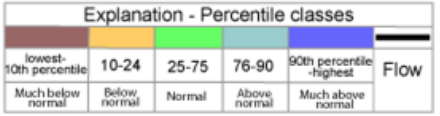


https://dashboard.waterdata.usgs.gov/

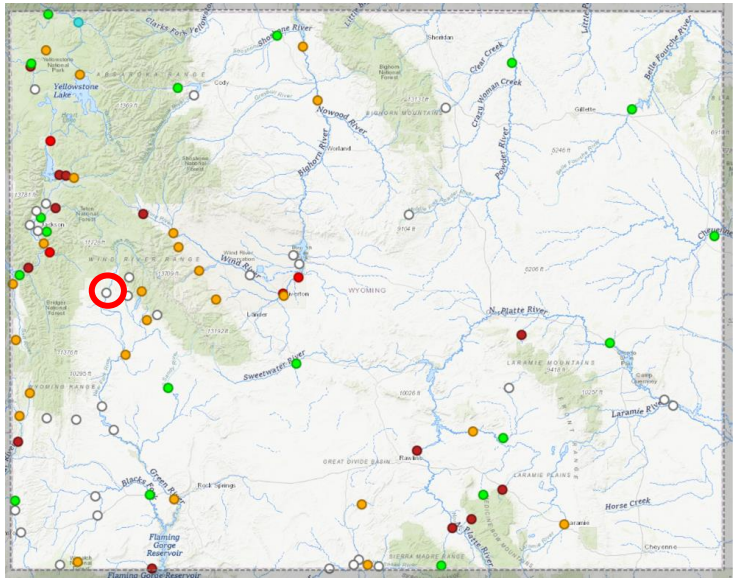
https://waterwatch.usgs.gov/

Middle Fork Powder River, near Barnum, WY

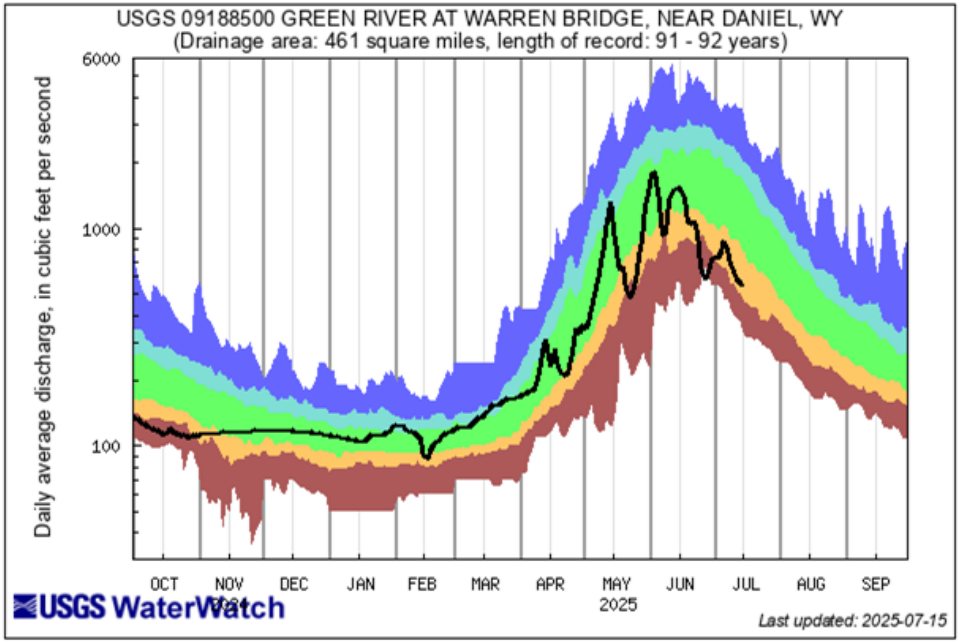


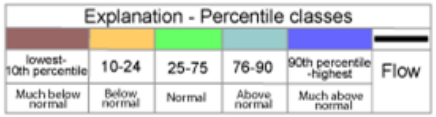


Select WY Streamflows



Green River at Warren Bridge, near Daniel WY

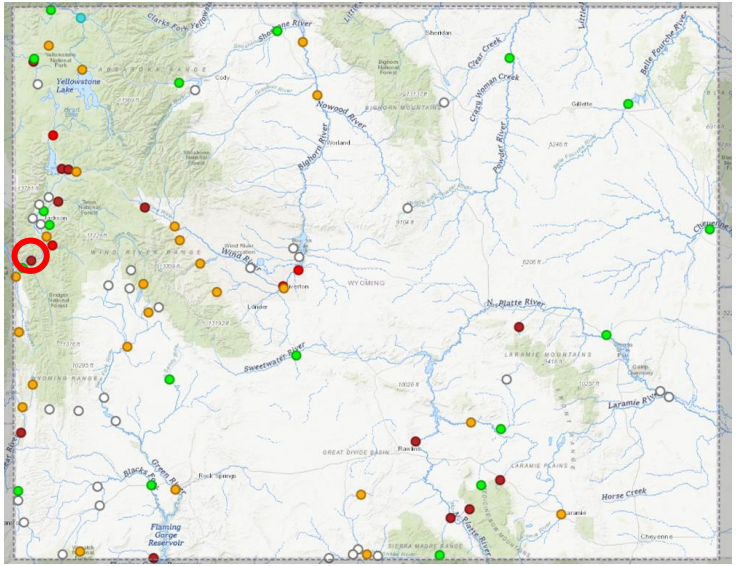




https://dashboard.waterdata.usgs.gov/

https://waterwatch.usgs.gov/

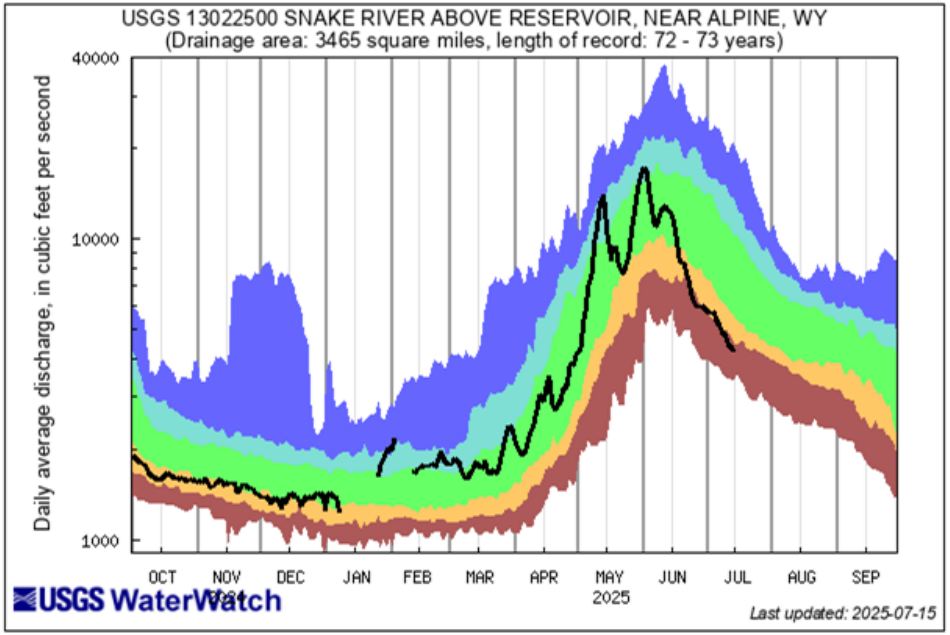
Select WY Streamflows

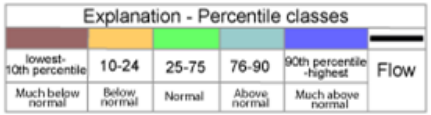


https://dashboard.waterdata.usgs.gov/

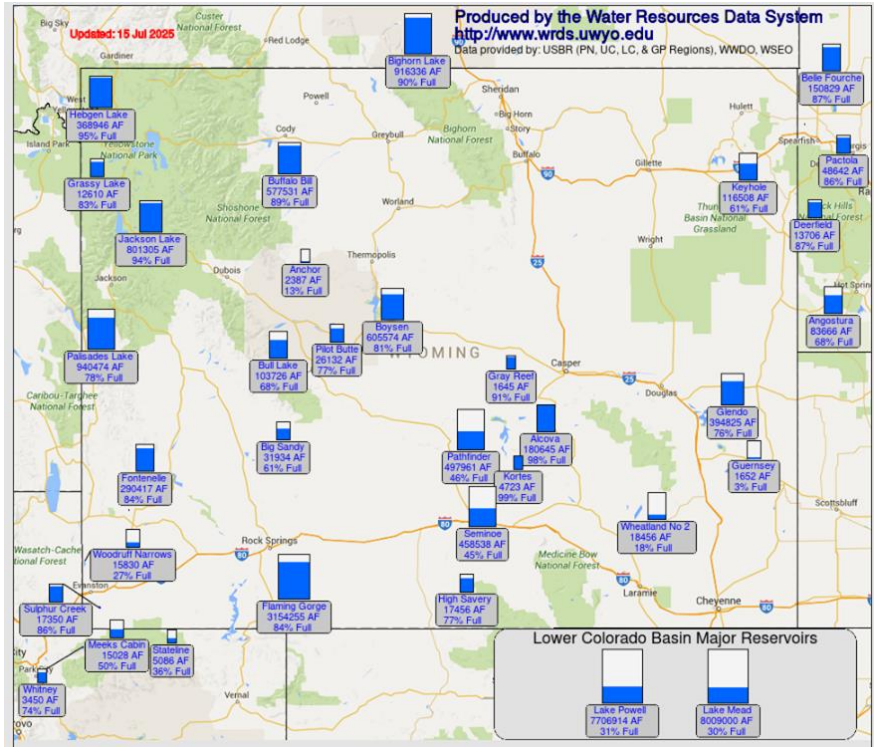
https://waterwatch.usgs.gov/

Snake River above Reservoir, near Alpine, WY





Wyoming Reservoirs

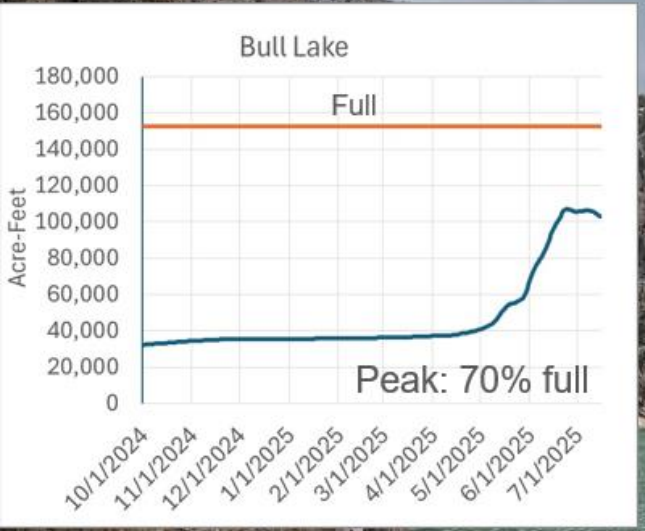


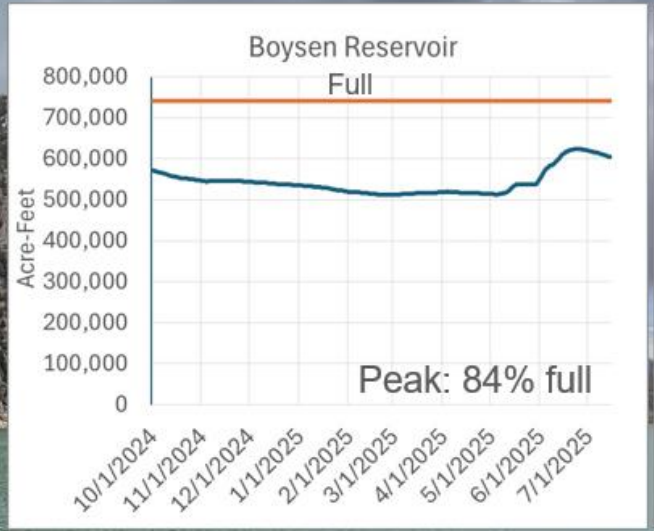
Reservoir Storage

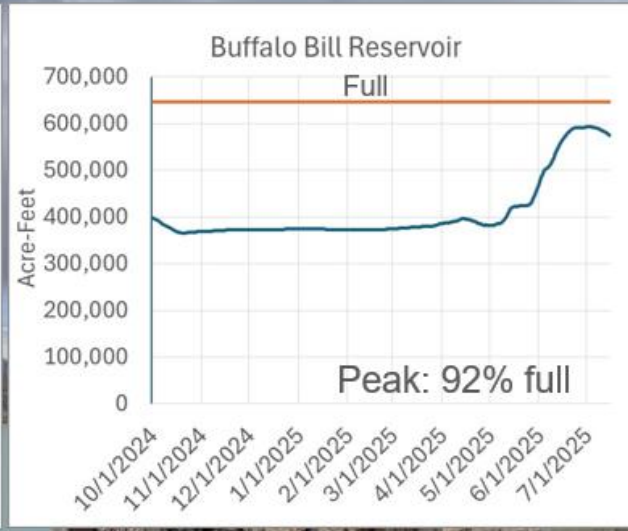
- Decreases in Storage
- ~80- 90 % full - Green, Bighorn,Snake
- ~45- 75% full- Platte, Belle Fourche

https://www.wrds.uwyo.edu/surface_water/teacups.html

Bighorn Storage

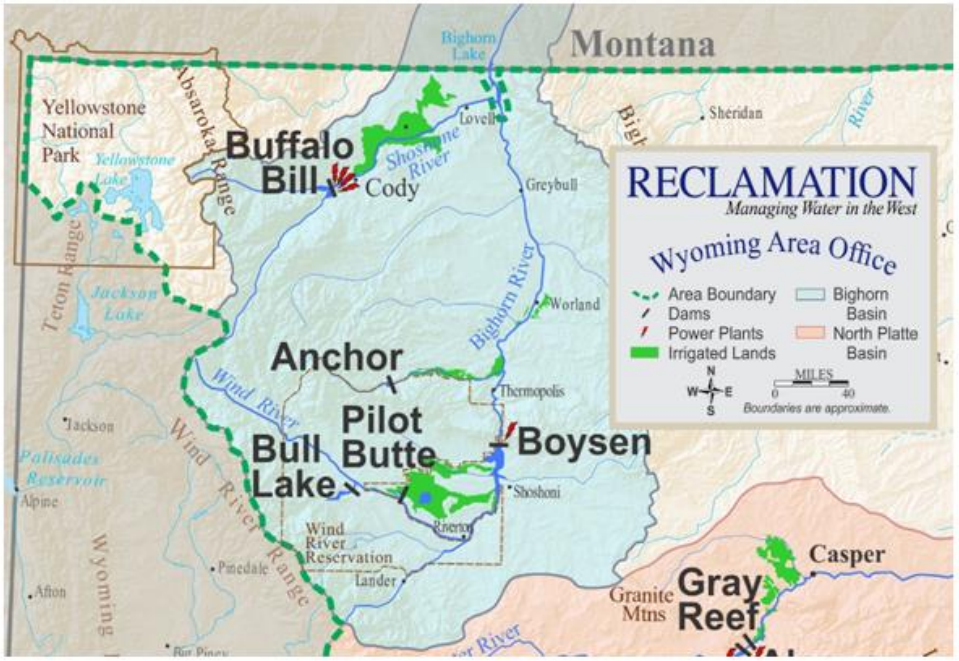






BUREAU OF RECLAMATION

Current Reservoir Conditions: Bighorn System

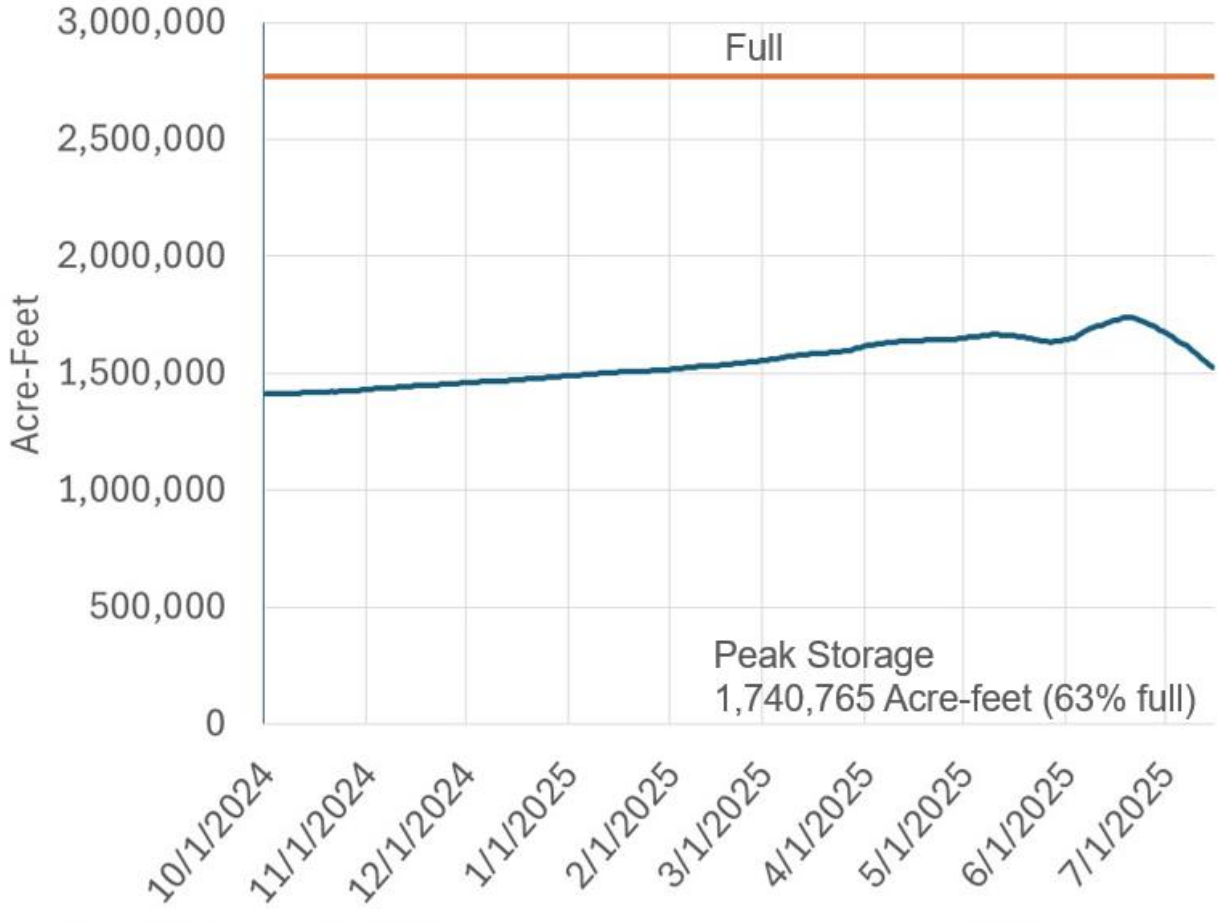


Bighorn System (July 15th):

Reservoir	Content	Capacity	% of Full	% of Avg	Releases
Bull Lake	103,206	152,500	68%	75%	600 cfs
Boysen	604,251	741,600	77%	95%	1150 cfs
Buffalo Bill	575,292	646,600	89%	94%	1400 cfs

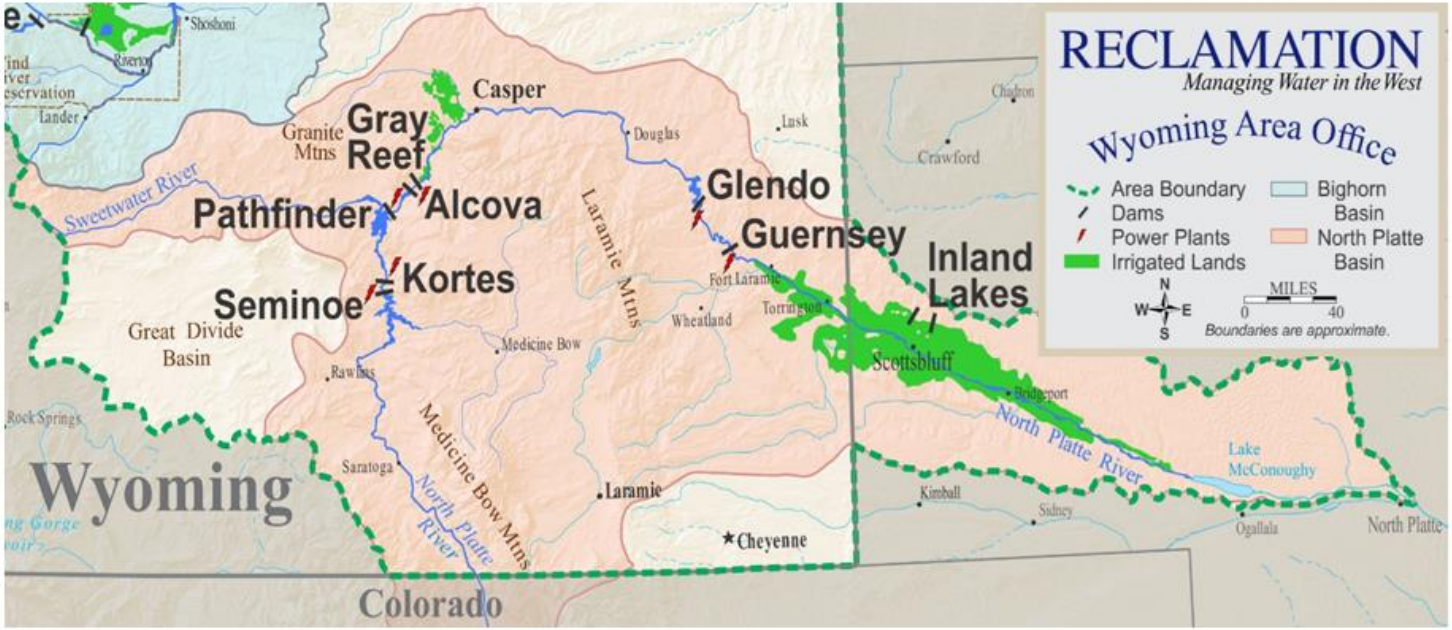
BUREAU OF RECLAMATION

North Platte System Storage



BUREAU OF RECLAMATION

Current Reservoir Conditions: North Platte System



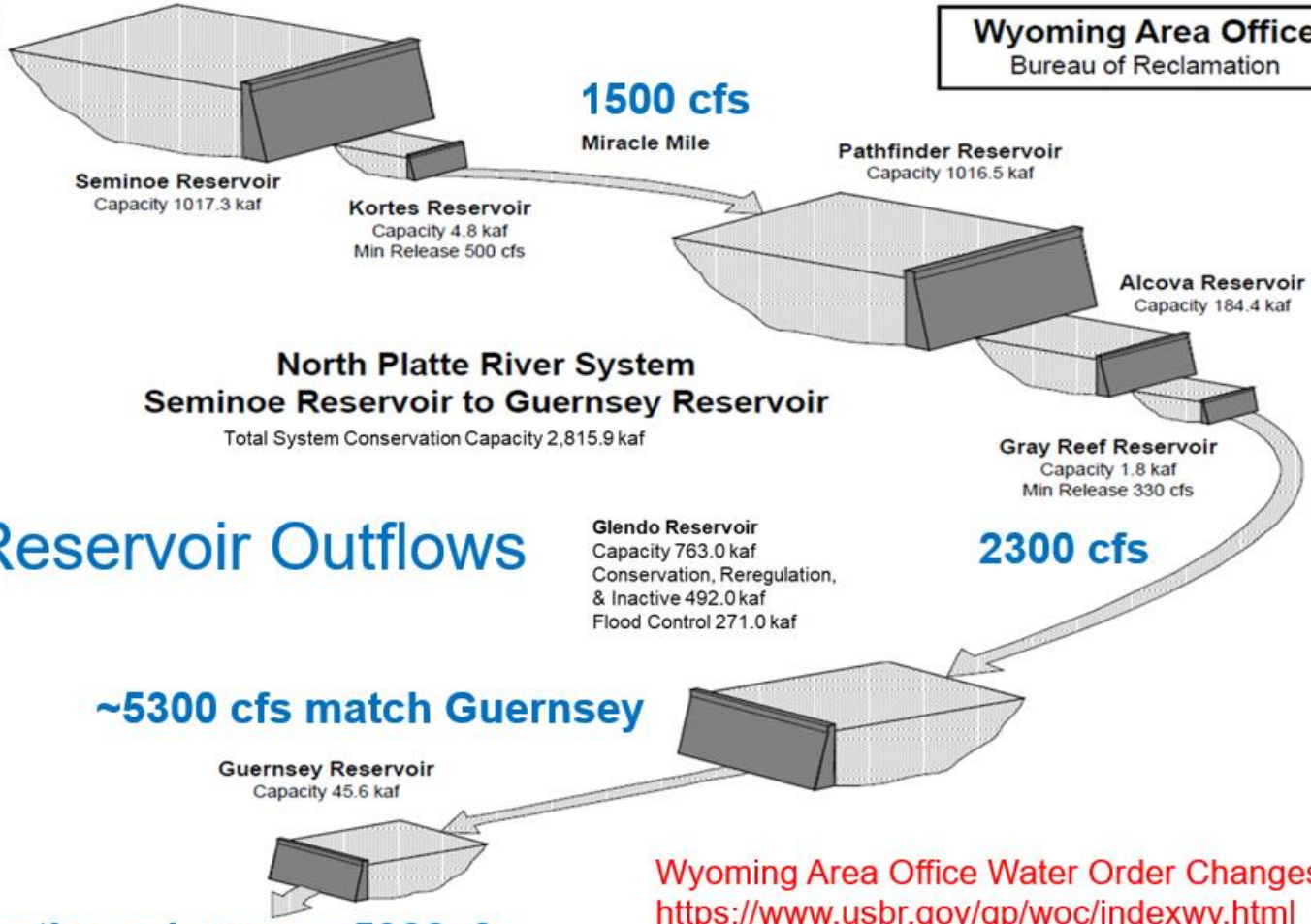
North Platte System (July 15th):

Reservoir	Content	Capacity	% of Full	% of Avg
Seminoe	458,538	1,017,300	45%	62%
Pathfinder	497,961	1,070,000	47%	72%
Glendo	394,825	492,000	80%	93%

— BUREAU OF —
RECLAMATION

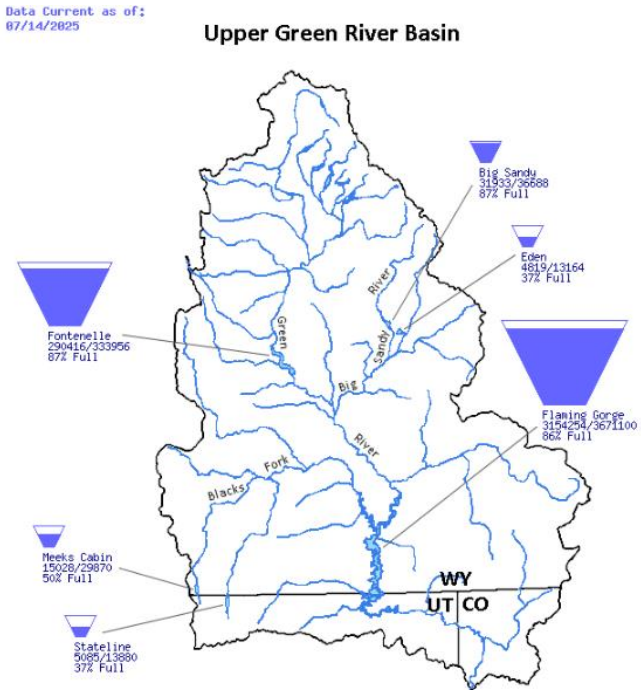
Wyoming Area Office
Bureau of Reclamation

Current Reservoir Outflows



Wyoming Area Office Water Order Changes –
https://www.usbr.gov/gp/woc/indexwy.html

Current Conditions: Upper Green



- Current Storage:
  - Fontenelle: 0.29 MAF (87% full)
  - Flaming Gorge: 3.15 MAF (86%)
- Current Releases:
  - Fontenelle: 850 cfs
  - Flaming Gorge: 1560 cfs

resourcemgr@usbr.gov

WY SEO Divisions and Superintendents

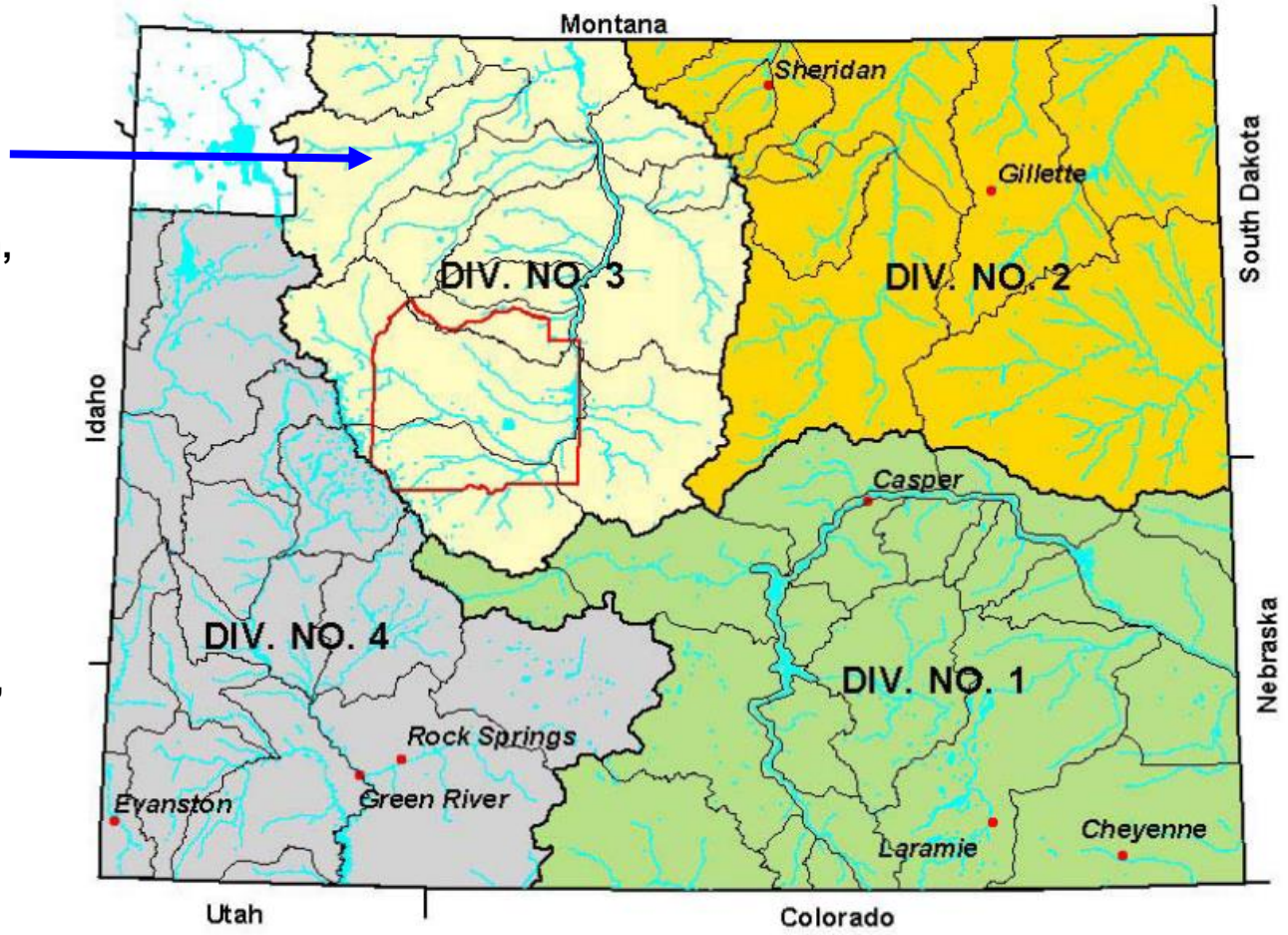
Contact information for calls and administration

Division 3

Joshua Fredrickson, 856-0747

Division 2

David Schroeder, 674-7012



Division 4

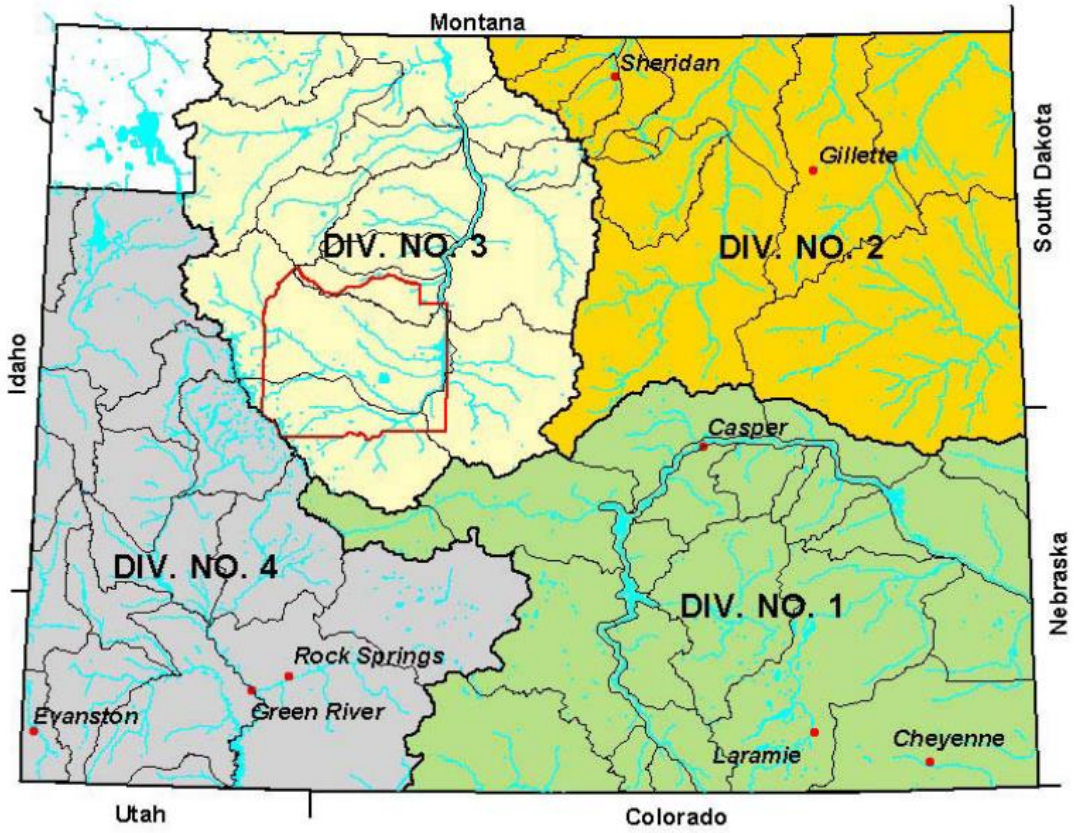
Kevin Payne, 279-3441

Division 1

Josh Deberard, 532-1272

WY SEO Divisions and Superintendents

Contact information for calls and administration



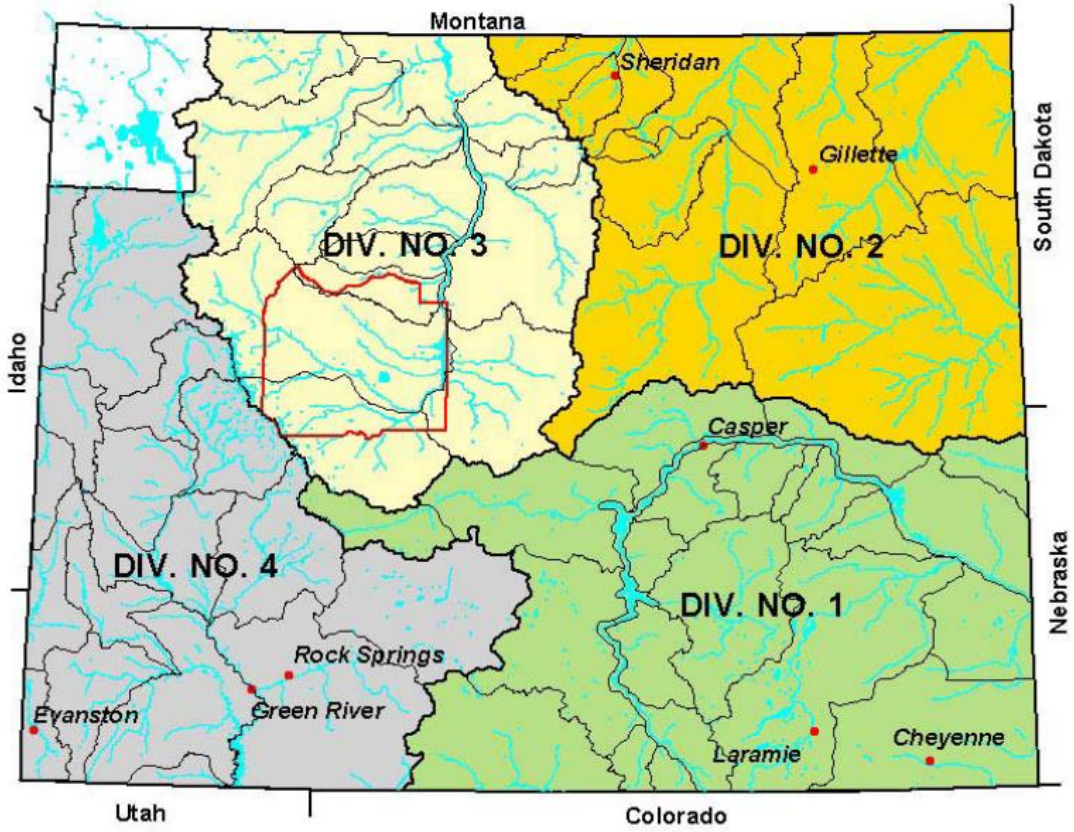
As of July 16

Streams in **Division 1** under regulation are:

- Little Laramie River: regulated to 1875 and 1881; and 1897
- Laramie River: regulated to 1875 and 1881; and 1879
- Bear Creek: regulated to 1891
- Horseshoe Creek: regulated to 1879 and 1890
- South Spring Creek and Heather Creek: regulated to 1880, and 1885
- Pass Creek: regulated to 1884

WY SEO Divisions and Superintendents

Contact information for calls and administration



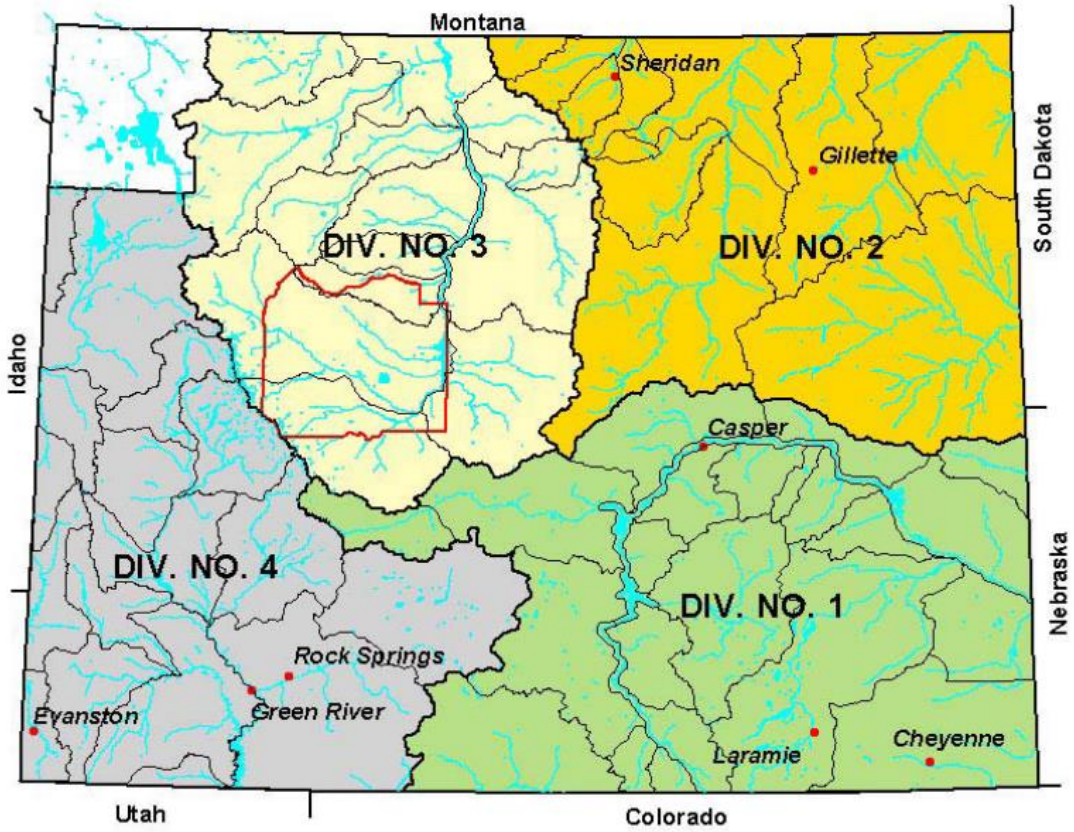
As of July 16:

Streams in **Division 1 cont.** under regulation are:

- Bates Creek: regulated to 1886 and 1888
- Laramie River: regulated to 1883, **1868**
- **Bear Creek**

WY SEO Divisions and Superintendents

Contact information for calls and administration



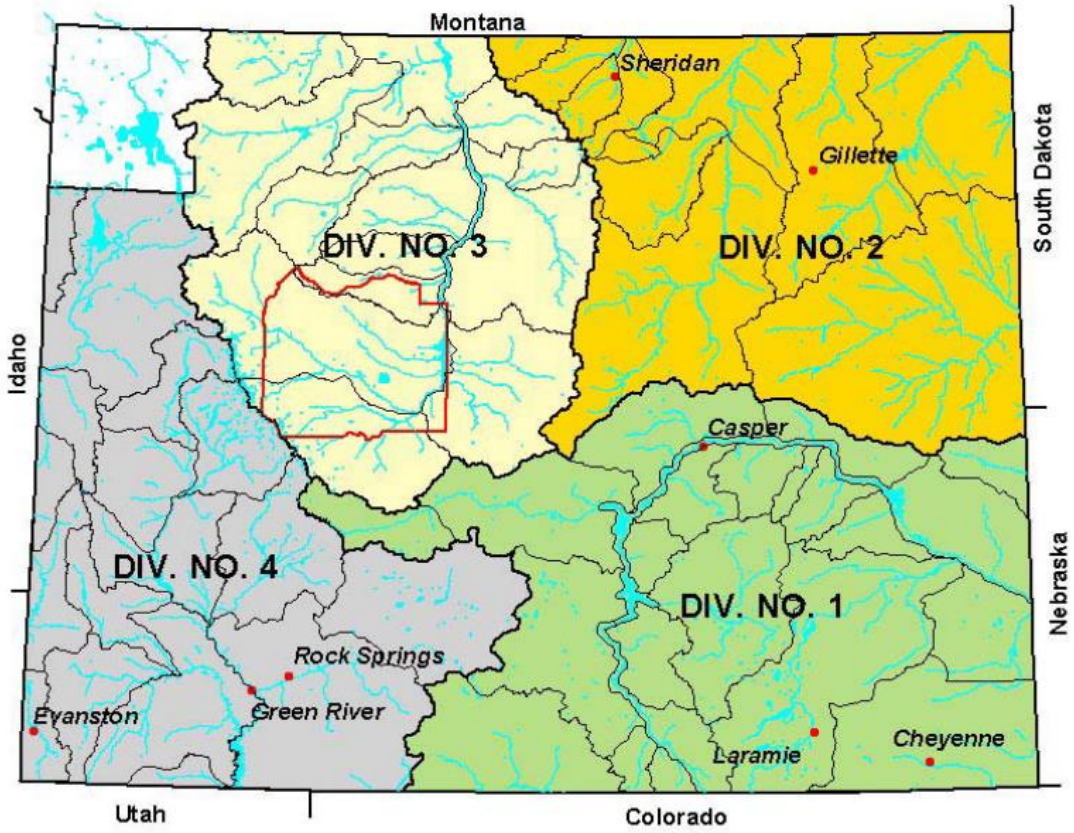
As of July 16

Streams in **Division 2** under regulation are:

- French Creek: regulated to 1884
- **Little Goose Creek: regulated to 1883, 1880**
- **Clear Creek: regulated to 1883**
- **Piney Creek / Rock Creek: regulated to 1885**
- **North Fork Powder River: regulated to 1890**

WY SEO Divisions and Superintendents

Contact information for calls and administration



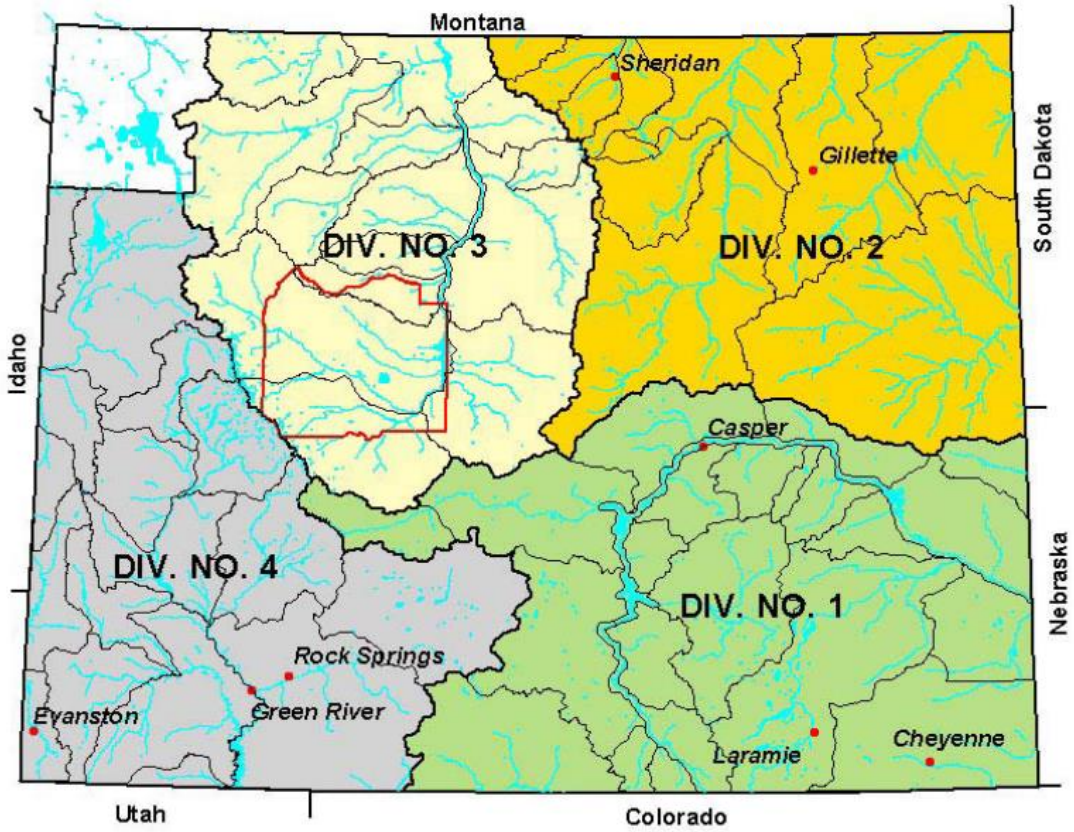
As of July 16:

Streams in **Division 3** under regulation are:

- Gooseberry Creek: regulated to 1907, 1906
- Greybull River: regulated to 1894
- Bennett-Little Rock Creek: regulated to 1900
- Owl Creek: regulated to 1901
- Gooseberry/Blake Denton Creek: regulated to 1906
- North Fork and Owl Creek: regulated to 1900

WY SEO Divisions and Superintendents

Contact information for calls and administration



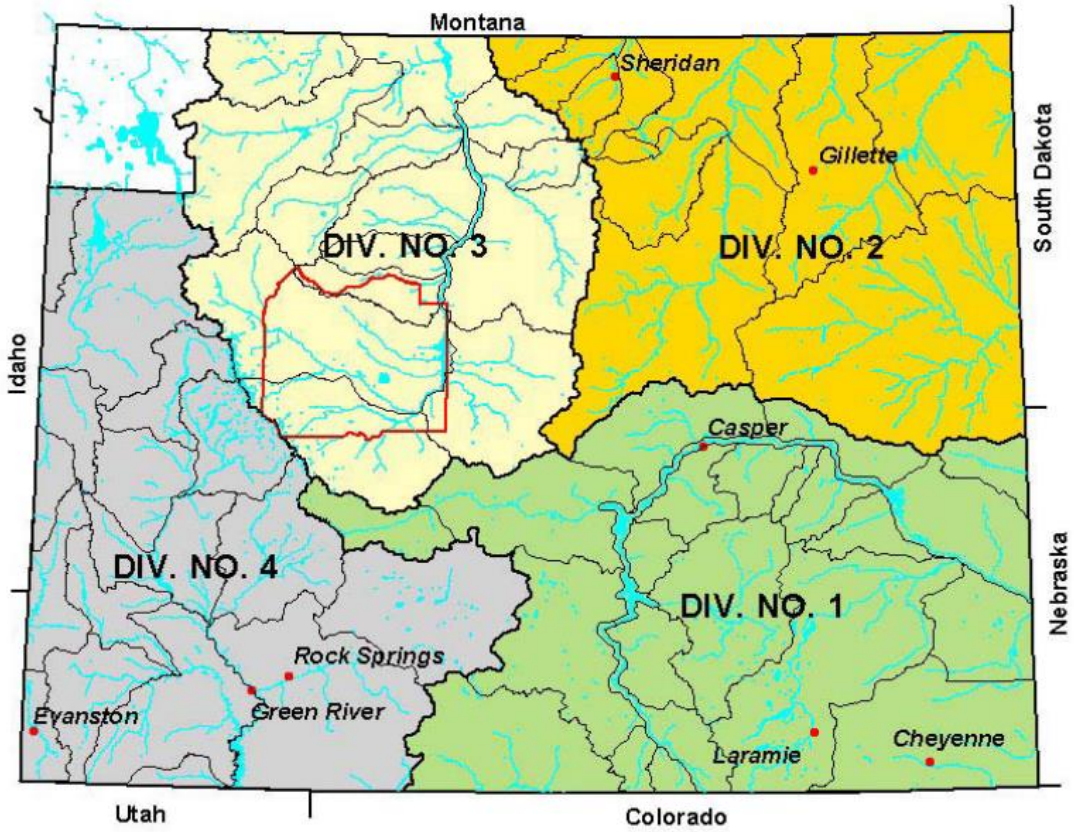
As of July 16:

Streams in **Division 4** under regulation are:

- Smith's Fork River: regulated to 1887, 1910, 1953
- Burnt Fork: regulated to 1878
- Smith's Fork River: regulated to 1887
- South Piney: regulated to 1886
- Henrys Fork: regulated to 1899
- Bear River: regulated to 1878
- Green River: regulated to 1898

WY SEO Divisions and Superintendents

Contact information for calls and administration



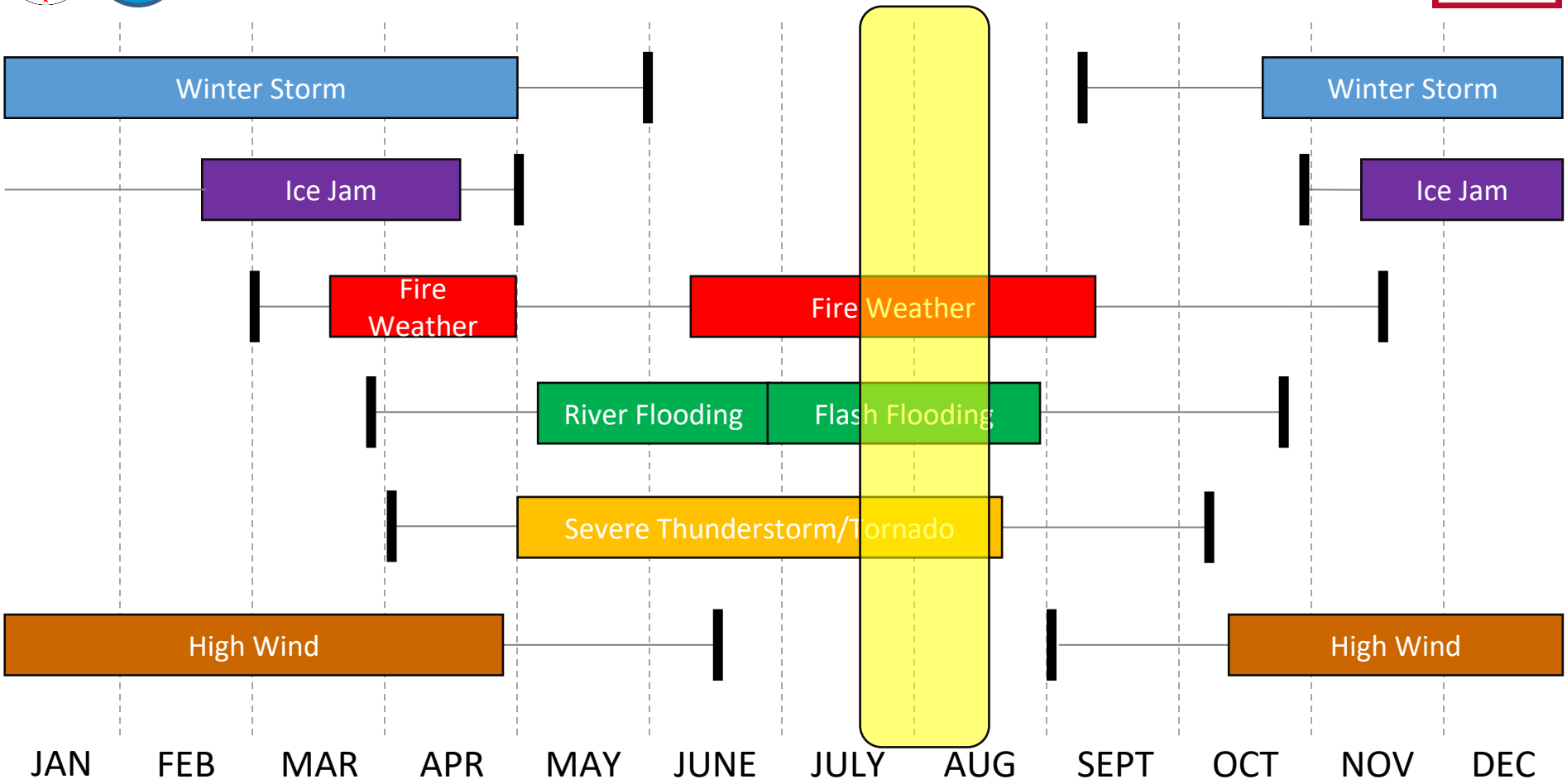
As of July 16:

Streams in **Division 4 cont.** under regulation are:

- Beaver Dam Creek : regulated to 1947
- Hams Fork: regulated to 1890
- Bear River: regulated for compact compliance
- **Bear River: regulated to 1874**
- **Mill Creek: regulated to 1871**
- **West Beaver: regulated to 1882**

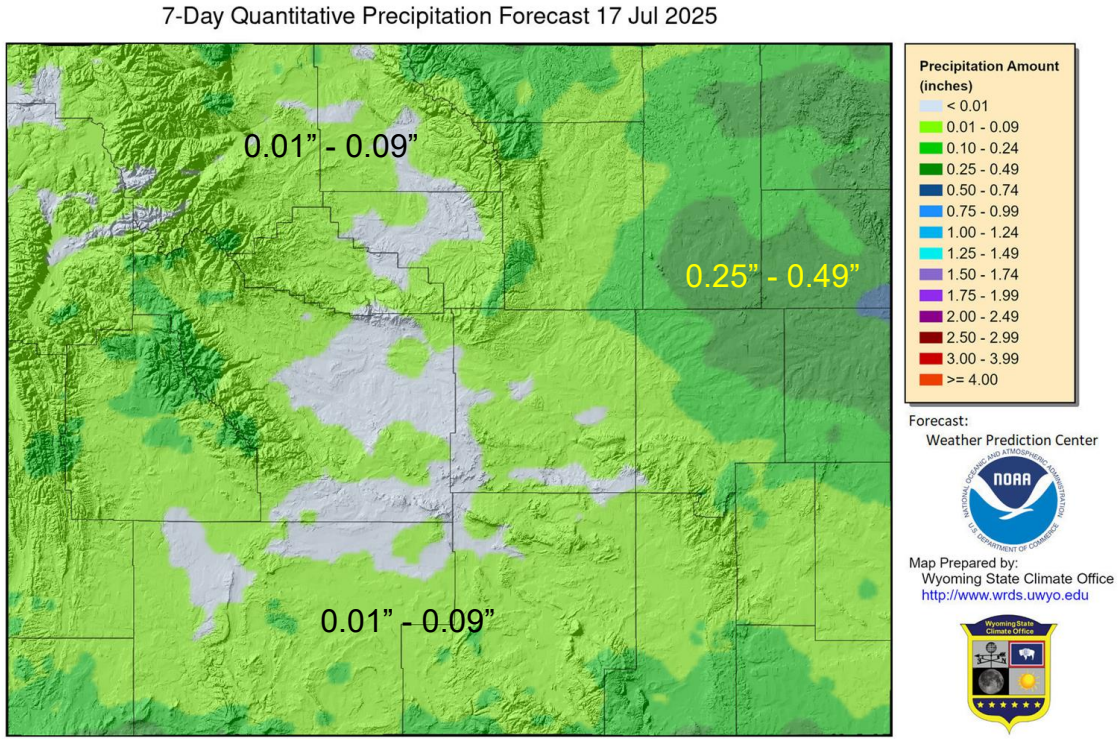
Weather Info & Forecasts

NWS Wyoming - Typical Hazard Calendar



7-Day Total Precipitation Forecast

(Jul 17 - Jul 24)



The Quantitative Precipitation Forecast shows the liquid amount of forecasted precipitation over the next 7 days
The Forecast is created by the National Weather Service Weather Prediction Center
Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, National Centers for Environmental Prediction,
and Weather Prediction Center - https://www.wpc.ncep.noaa.gov
Map Layout Created 17 Jul 2025 https://www.wrds.uwyo.edu

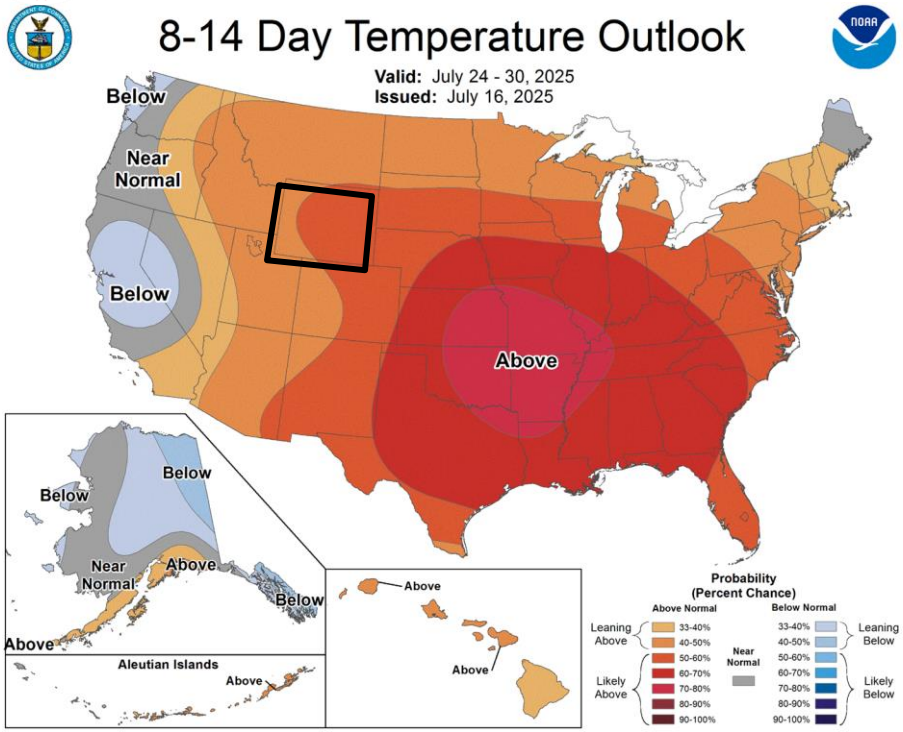
- No widespread rain likely across state in the next week
- Isolated to scattered thunderstorms today through Saturday will bring areas of light to moderate rainfall amounts
- Dry conditions expected Sunday through mid-week

https://bit.ly/7_dayQPForecast

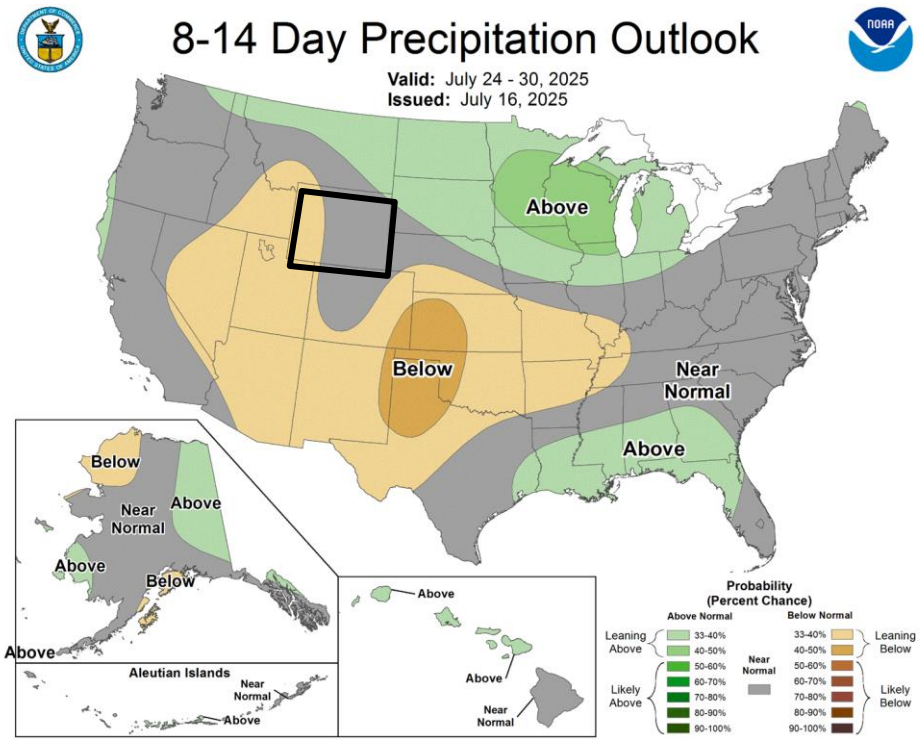
8-14 Day Outlooks

(Jul 24 - Jul 30)

https://bit.ly/CPC8_14Day



- Above normal temperatures likely for most of the state. Leaning to above normal in the west.
- Interactive Version: cpc.ncep.noaa.gov/products/predictions/814day/interactive/index.php

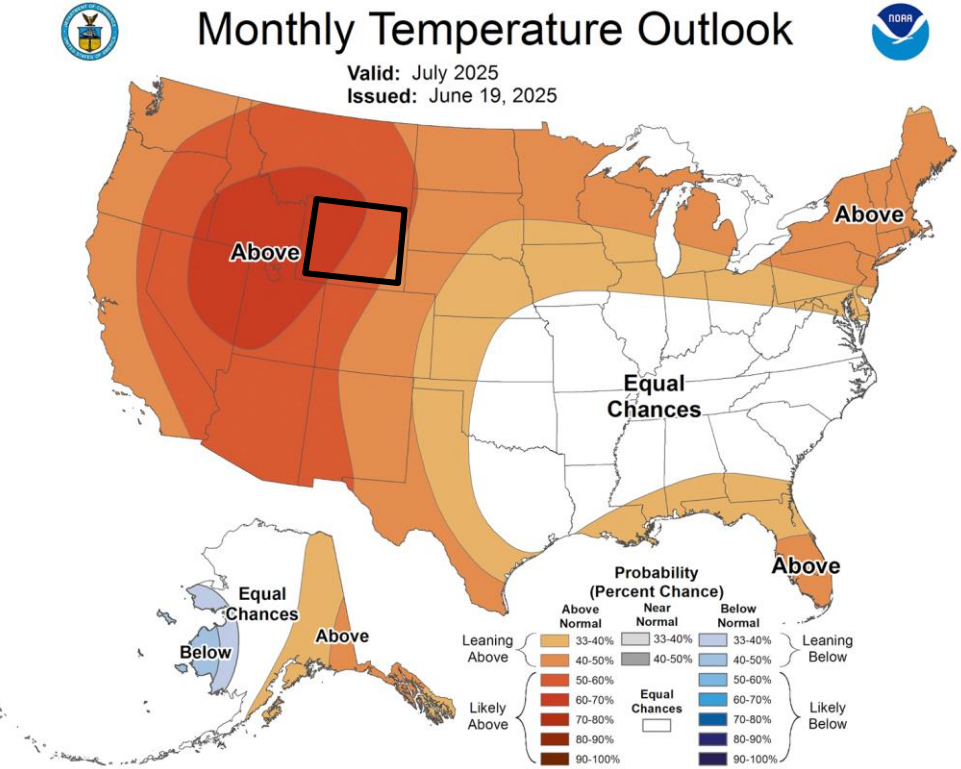


- Lean towards near normal for eastern 2/3rds, with drier than average conditions in the west.

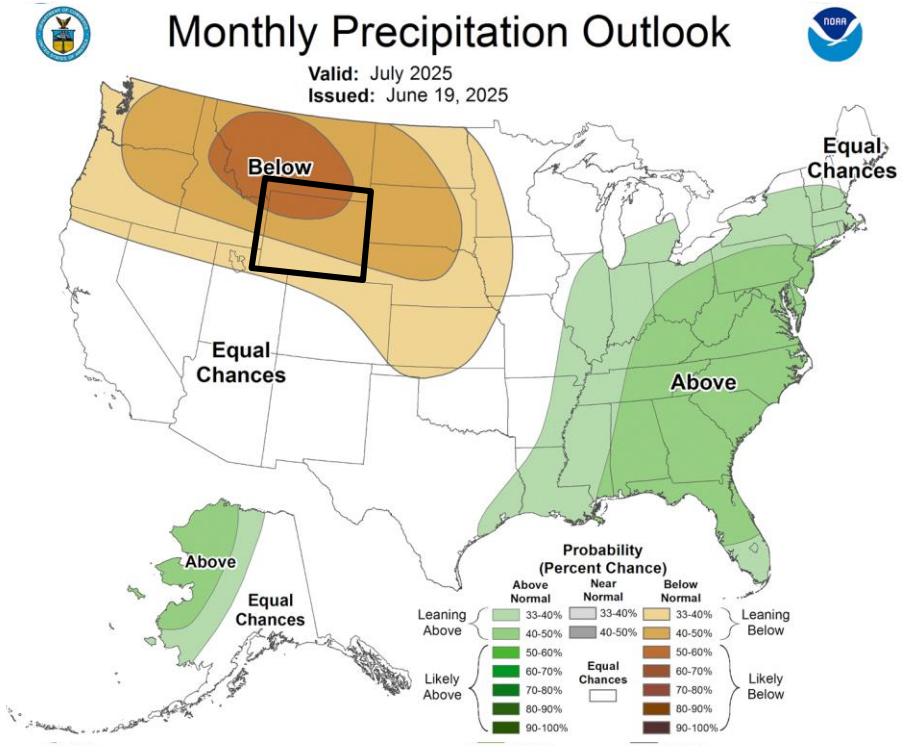
1-Month Outlooks

(August)

cpc.ncep.noaa.gov/products/predictions/30day/



- Likely above normal statewide

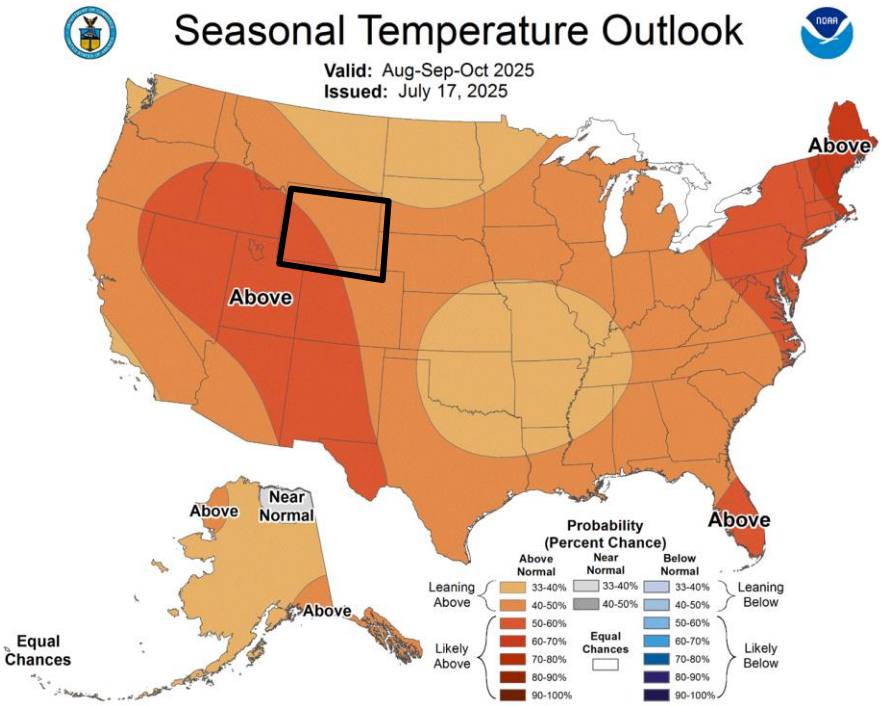


- Lean toward drier for most of state for August.

Summer Outlook

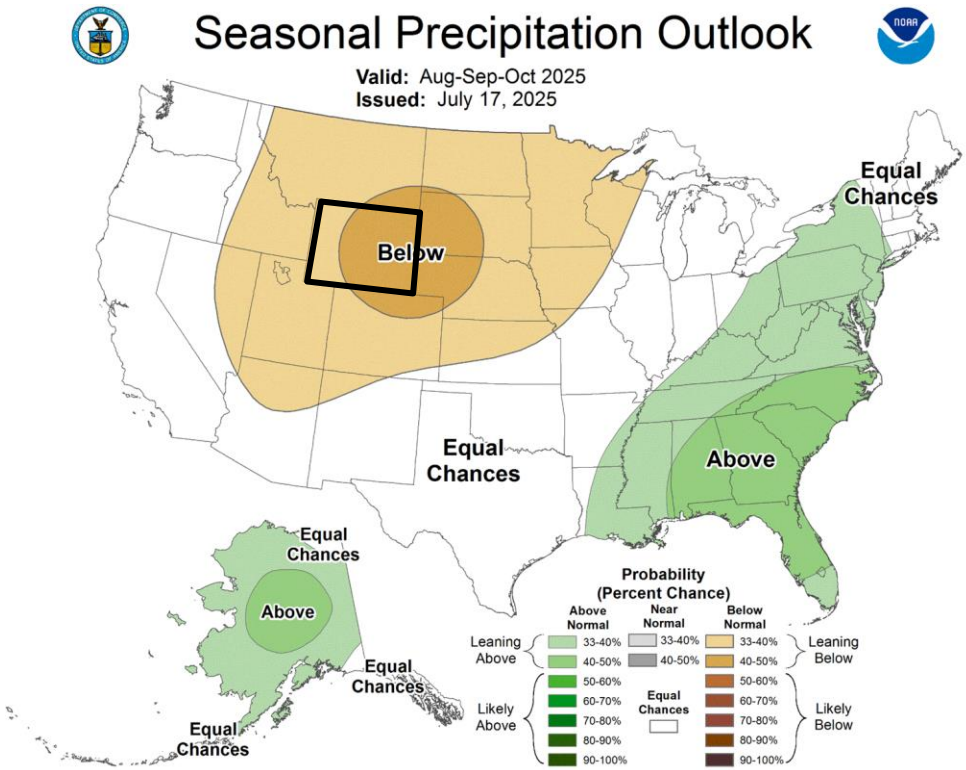
https://bit.ly/CPC_Seasonal

(Aug-Sep-Oct)



- Likely above normal temps in the southwest and leaning above elsewhere

(Aug-Sep-Oct)



- Lean toward drier than average, especially in the central and east.

Highlight of the Month:

USGS Drought Viewer

USGS
science for a changing world

WYOMING-MONTANA DROUGHT VIEWER APPLICATION

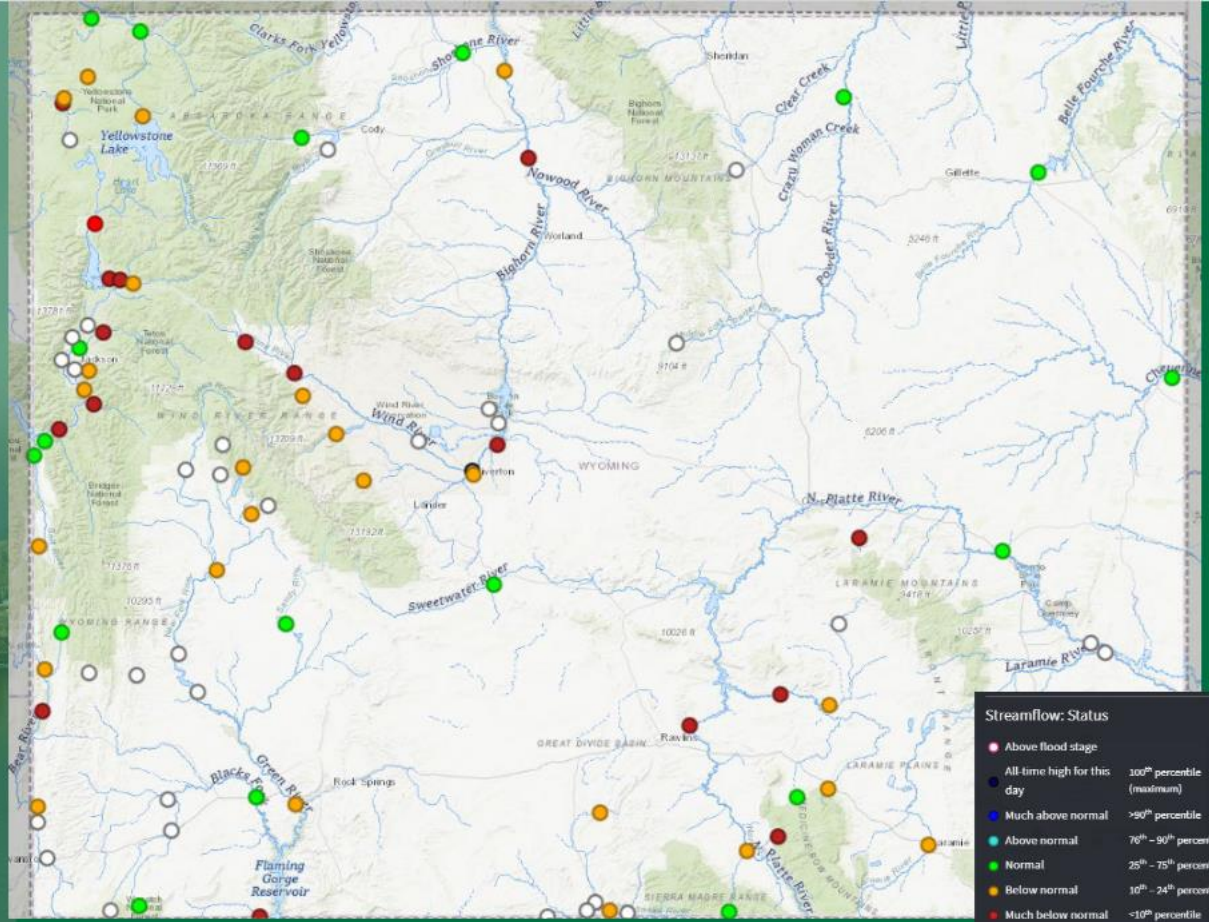
July 17, 2025

U.S. Department of Interior
U.S. Geological Survey
Wyoming –Montana Water Science Center

This information is preliminary and is subject to revision. It is being provided to meet the n
for timely best science. The information is provided on the condition that neither the U.S.
Geological Survey nor the U.S. Government shall be held liable for any damages resulting from
the authorized or unauthorized use of the information

WY STREAM GAGES:

- 92 Sites for:
  - Water Resource Management
  - Infrastructure Design
  - Environmental Protection
  - Public Safety

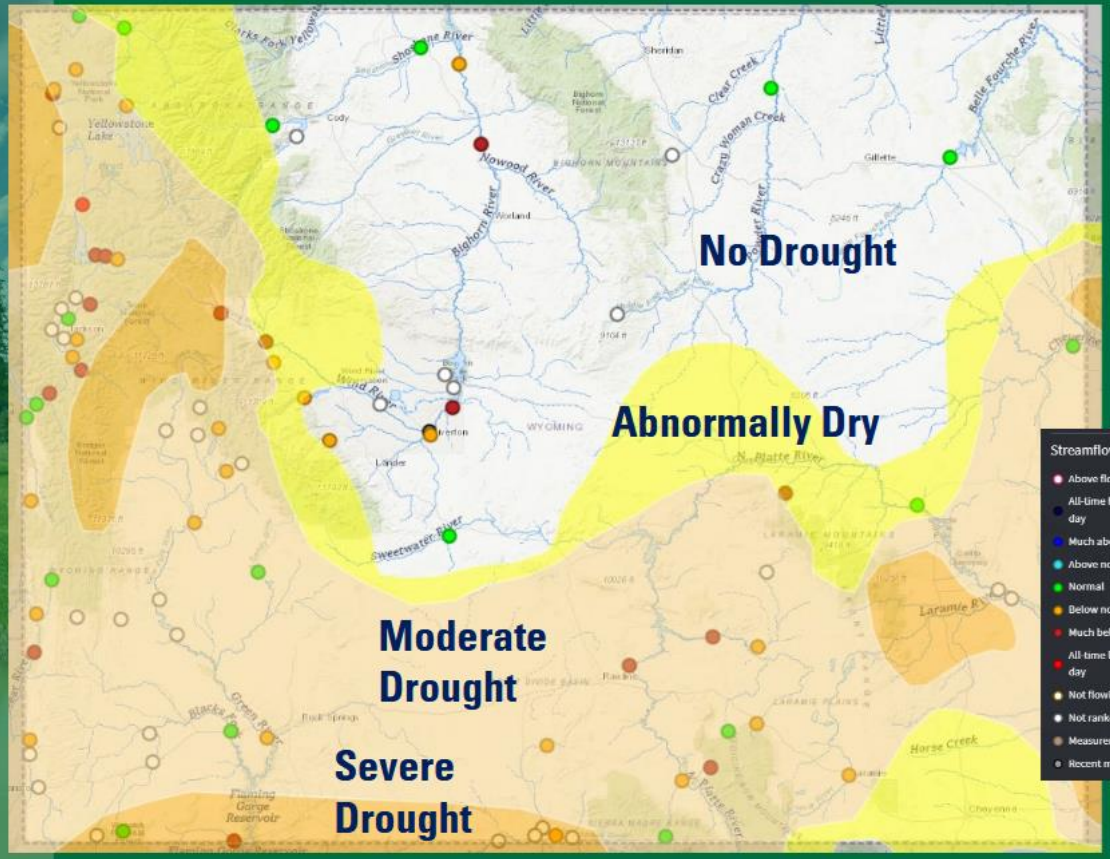


Preliminary Information-Subject to Revision. Not for Citation or Distribution
Source: National Water Information Dashboard
https://dashboard.waterdata.usgs.gov/app/nwd

USGS
science for a changing world

STREAM GAGES and DROUGHT:

- Not all sites are good or timely indicators of drought.
- Statistics based to various lengths of record.
- USDM indicator percentiles.

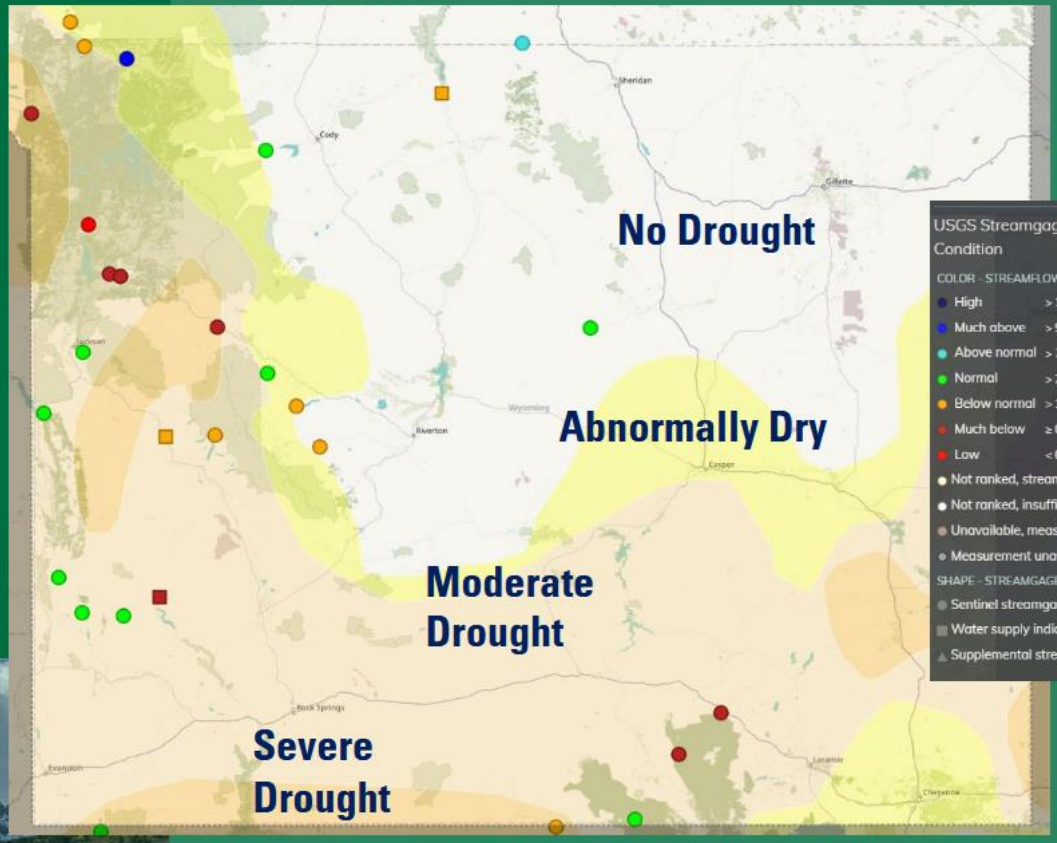


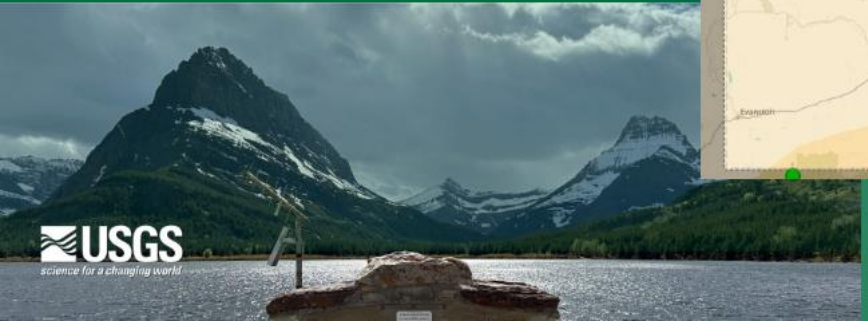
Preliminary Information-Subject to Revision. Not for Citation or Distribution
Source: National Water Information Dashboard
https://dashboard.waterdata.usgs.gov/app/nwd

USGS
science for a changing world

WY-MT DROUGHT VIEWER

- Sentinel Gages
- Water Supply Indicator Gages
- Common Period of Record
  - 1991-2020

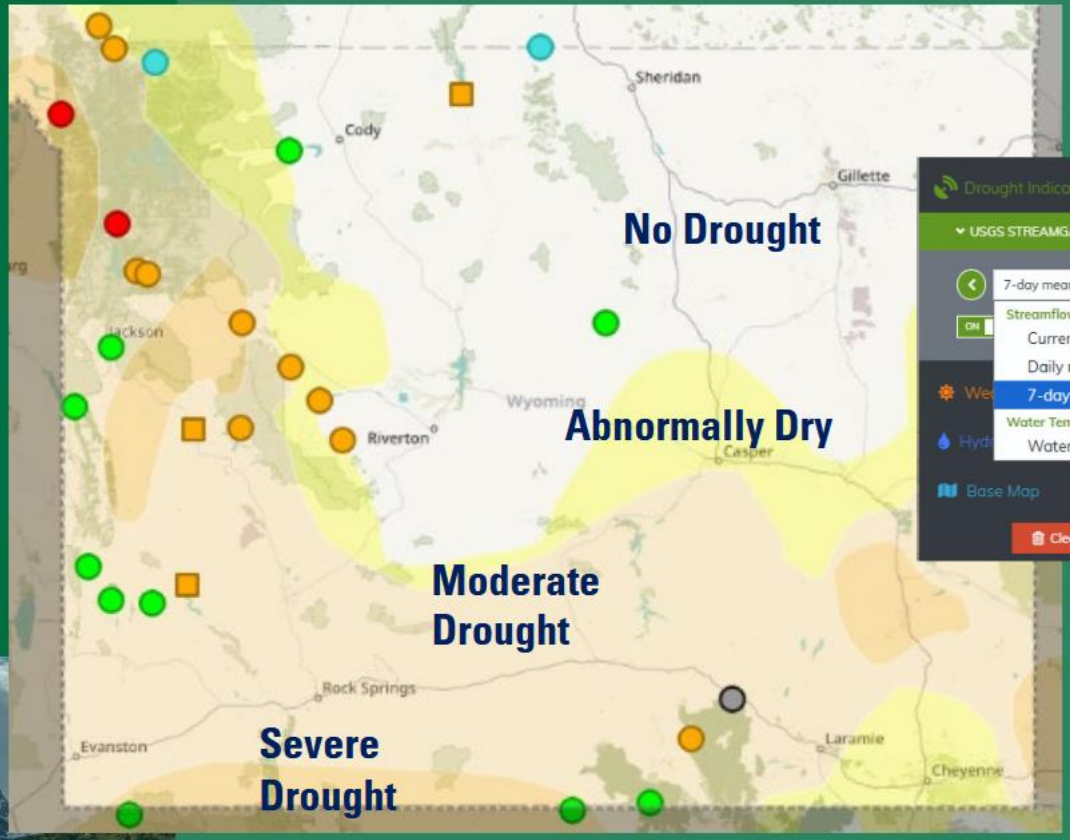




Preliminary Information-Subject to Revision. Not for Citation or Distribution
Source: USGS WY-MT Drought Viewer
https://webapps.usgs.gov/wy-mt-drought-viewer/

STREAMFLOW OPTIONS

- Real -Time
- Daily Mean
- 7 Day Average

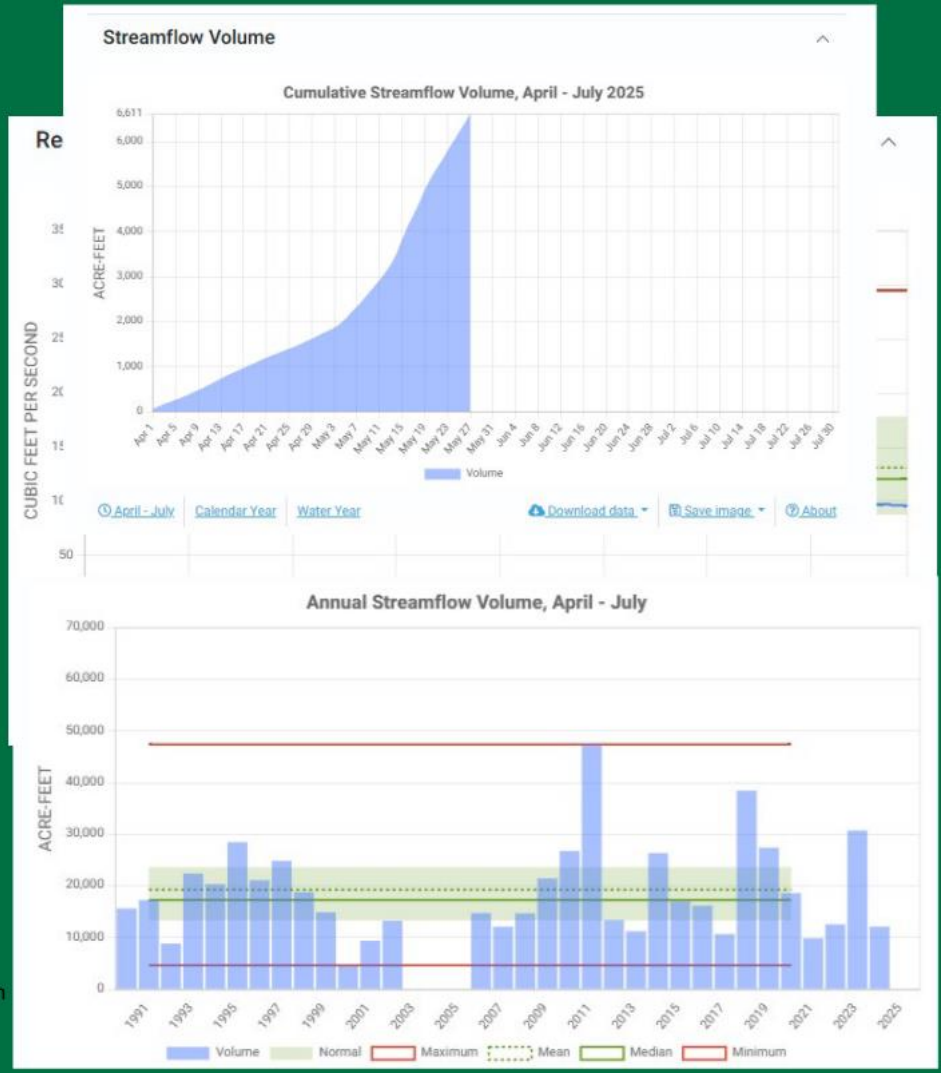




Preliminary Information-Subject to Revision. Not for Citation or Distribution
Source: USGS WY-MT Drought Viewer
https://webapps.usgs.gov/wy-mt-drought-viewer/

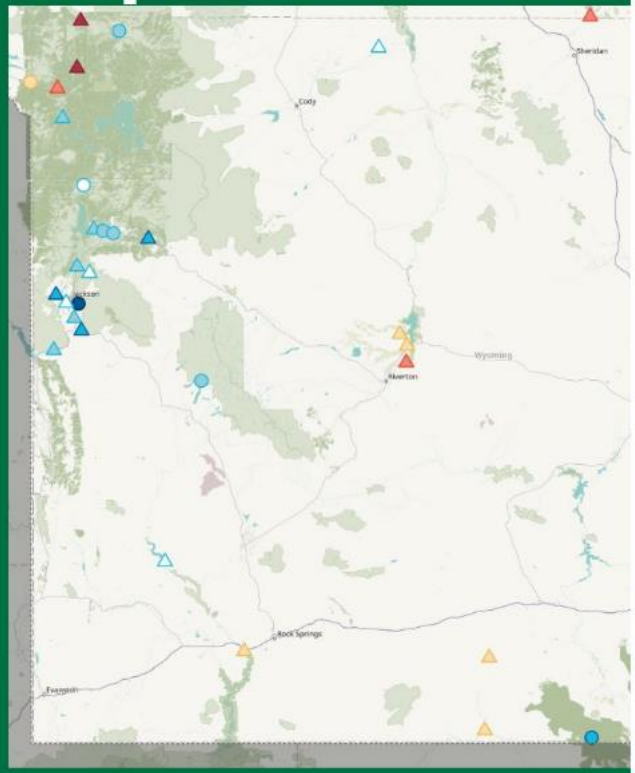
STREAMFLOW VISULATION

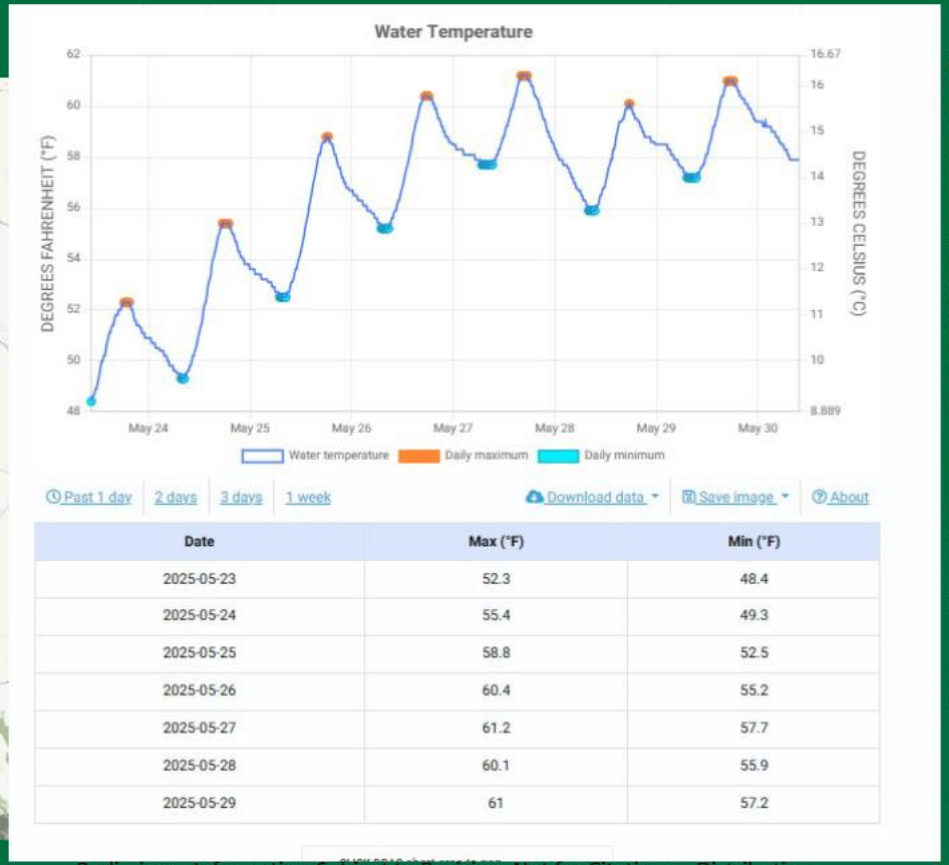
- Real-time
  - Max, quartiles, Min.
- Cumulative Volume
  - (April 1- July 31)
    - Current year
    - Historic



Preliminary Information-Subject to Revision. Not for Citation or Distribution
Source: USGS WY-MT Drought Viewer
https://webapps.usgs.gov/wy-mt-drought-viewer/

WY-MT DROUGHT VIEWER - Temperature





Date	Max (°F)	Min (°F)
2025-05-23	52.3	48.4
2025-05-24	55.4	49.3
2025-05-25	58.8	52.5
2025-05-26	60.4	55.2
2025-05-27	61.2	57.7
2025-05-28	60.1	55.9
2025-05-29	61	57.2

29 sites collecting water temperature data

Preliminary Information-Subject to Revision. Not for Citation or Distribution
Source: USGS WY-MT Drought Viewer
https://webapps.usgs.gov/wy-mt-drought-viewer/



USGS science for a changing world

Contact/Links

https://webapps.usgs.gov/wy-mt-drought-viewer/

https://www.usgs.gov/centers/wy-mt-water

Wyoming-Montana Water Science Center

- Aaron Fiaschetti- Hydrologist (afiaschetti@usgs.gov)
- (406) 457-5927

Photos by Brett Price, Kannon Welhouse, and Joshua Donnelly , U.S. Geological Survey
Kayak Measurement of Clark Fork River near Plains
ADCP measurement Clark Fork River by Missoula
Swiftcurrent Gage House
Flathead Polson Cableway
Milk River at Eastern Crossing

Webinar Advertisement

Navigating Drought in the Missouri River Basin

https://bit.ly/3Gwo63X

Monday 28 July 2025 1000-1100 MDT

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Wyoming State Engineer's Office
307-777-6150

The Wyoming Conditions Monitoring Team (WCMT) organized and hosted this webinar. The WCMT is a collaborative effort of state, federal, tribal, and university partners that monitor conditions & impacts throughout the state on a weekly basis – and communicate this information to the U.S. Drought Monitor among others.

Learn more at:
https://drought.wyo.gov

Thank you!

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