WY Conditions & Outlooks:

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

February 20, 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
- **Outlooks:**
  - Temperature & Precipitation
- **Highlight of the Month:**
  - Coalitions & Collaboratives: Post wildfire efforts
- **Questions**

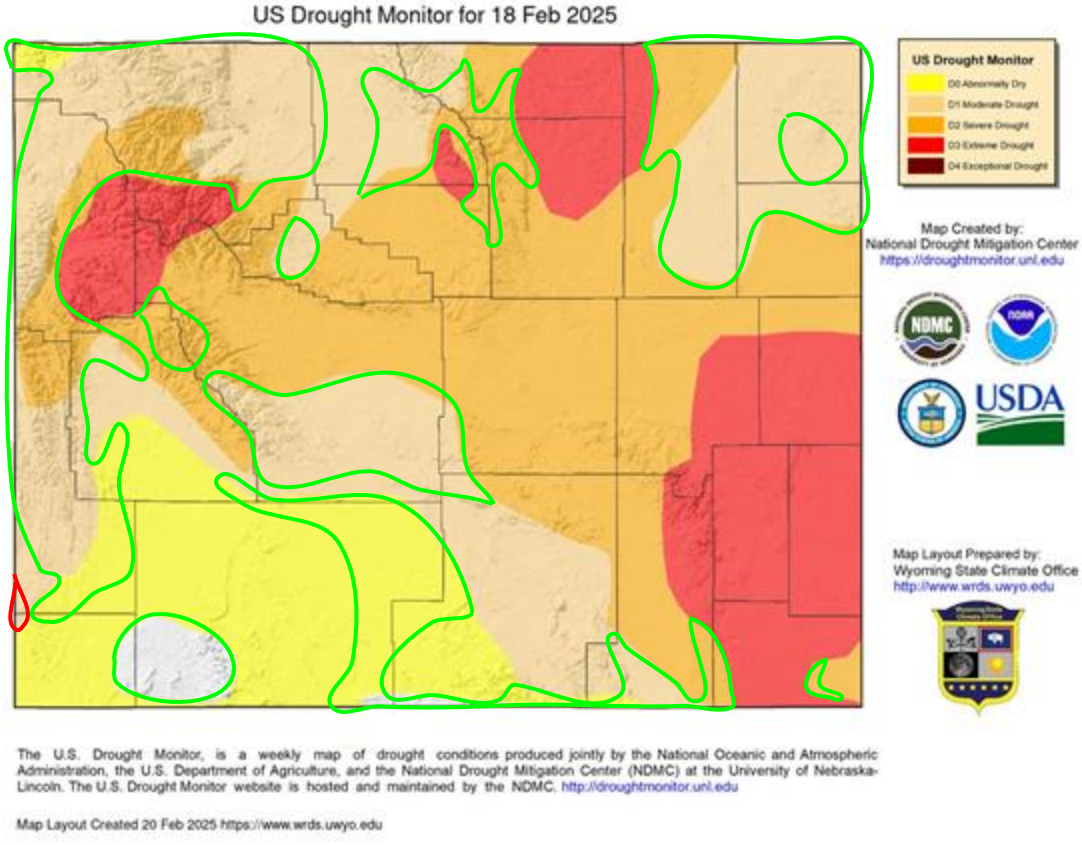
Current Conditions

US Drought Monitor for February 18, 2025

(Released Thursday, February 20th, 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



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

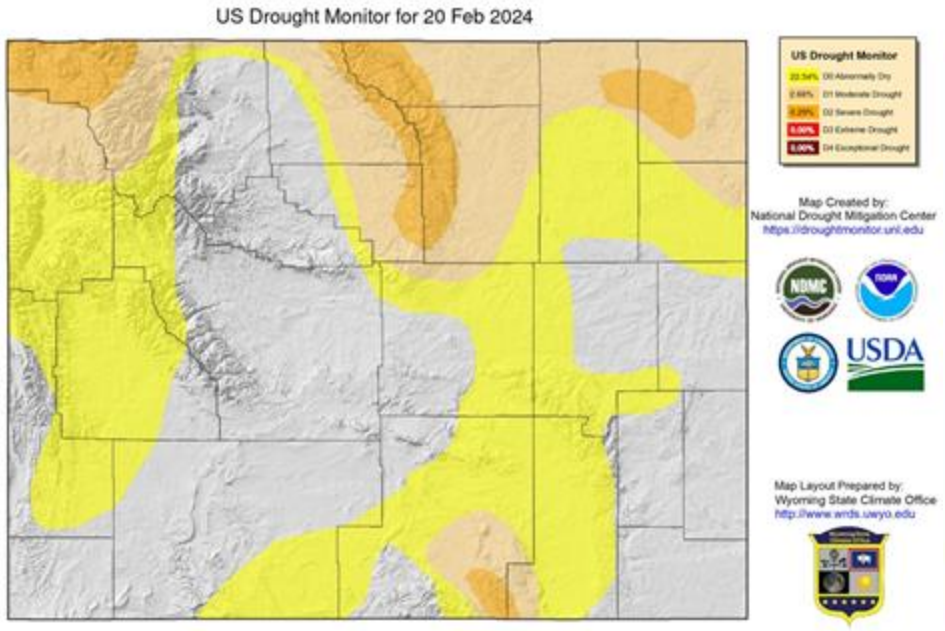
Improvements except in east central Wyoming with one small **Degradation** in the far west (Lincoln/Unita Border area).

https://droughtmonitor.unl.edu

droughtmonitor.unl.edu

WRDS
Water Resources Data System

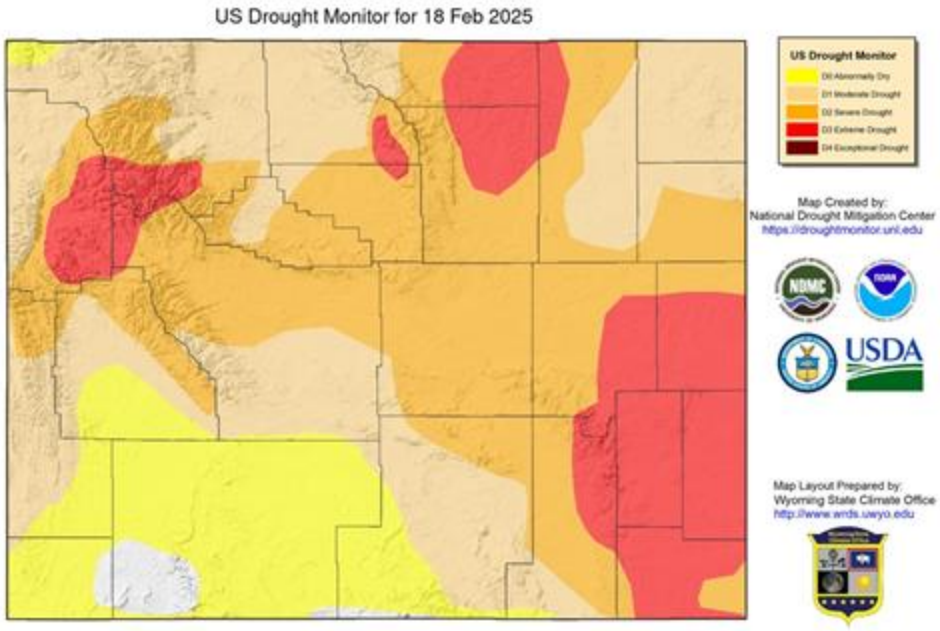
One Year Ago



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 22 Feb 2024 http://www.wrds.uwyo.edu

Today



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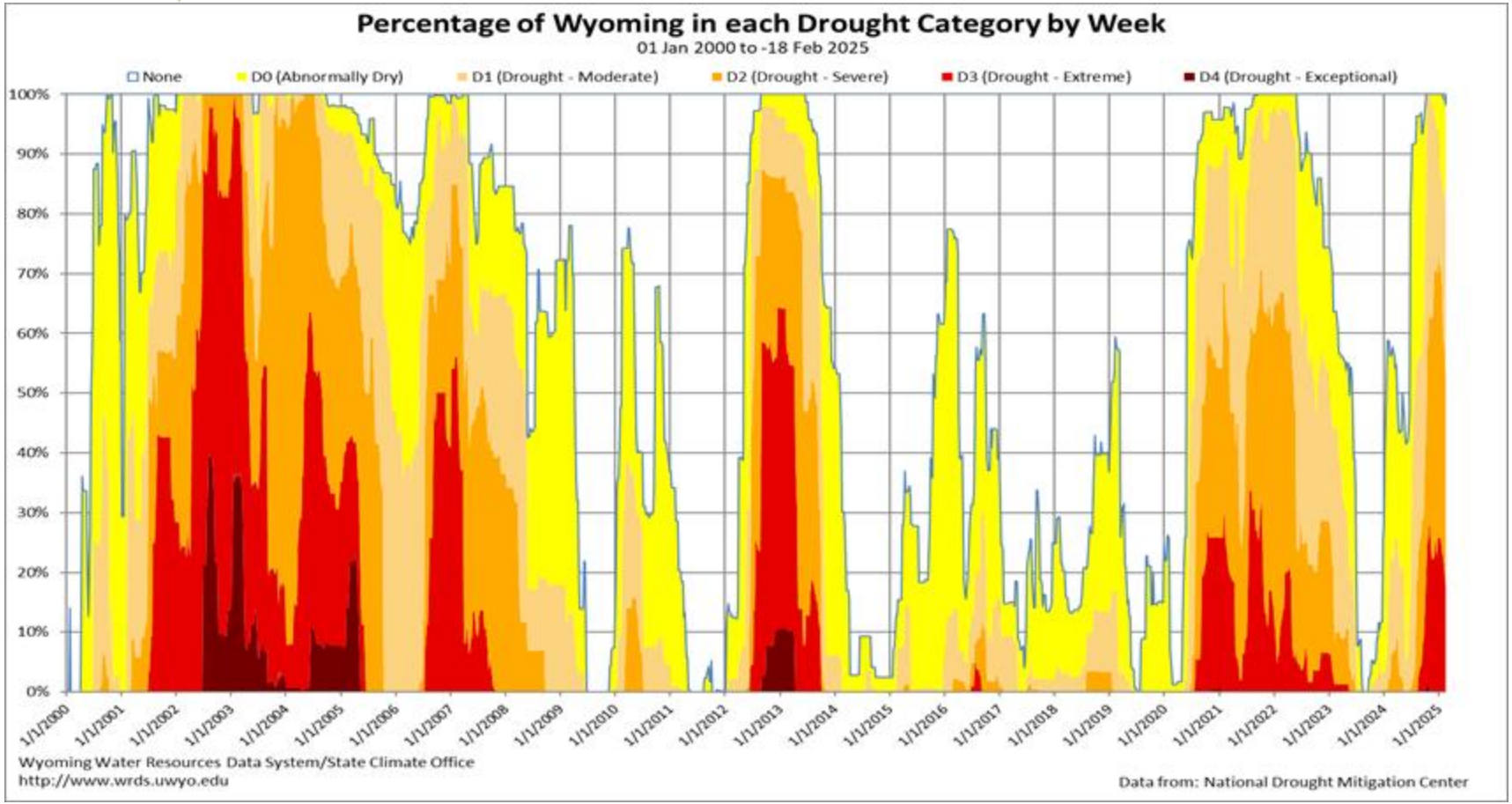
Map Layout Created 20 Feb 2025 https://www.wrds.uwyo.edu

USDA NDMC

https://droughtmonitor.unl.edu

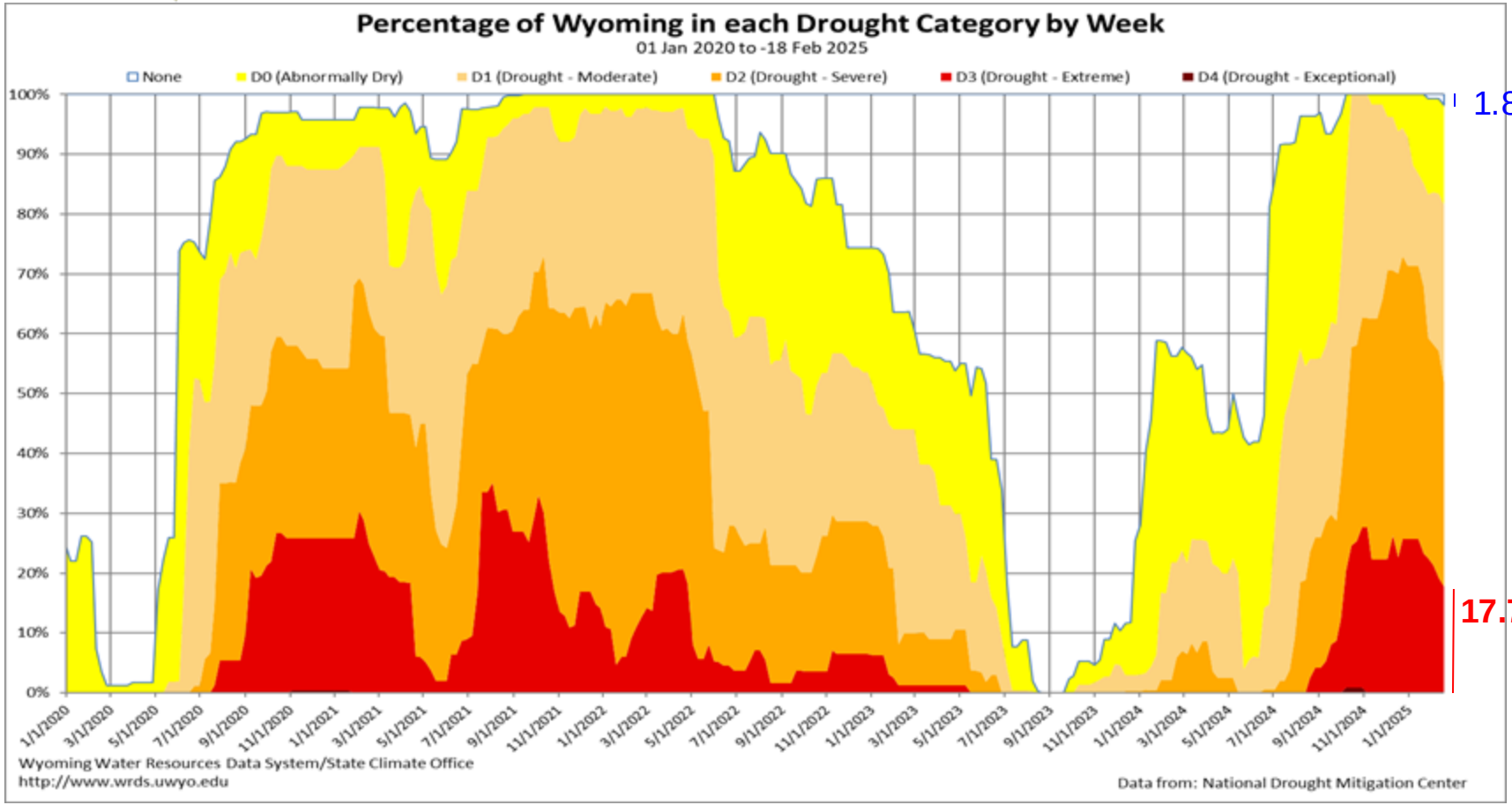
droughtmonitor.unl.edu

Wyoming Area Affected: 98.17% D0-D4 ; 81.53% D1-D4



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

WRDS
Water Resources Data System



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

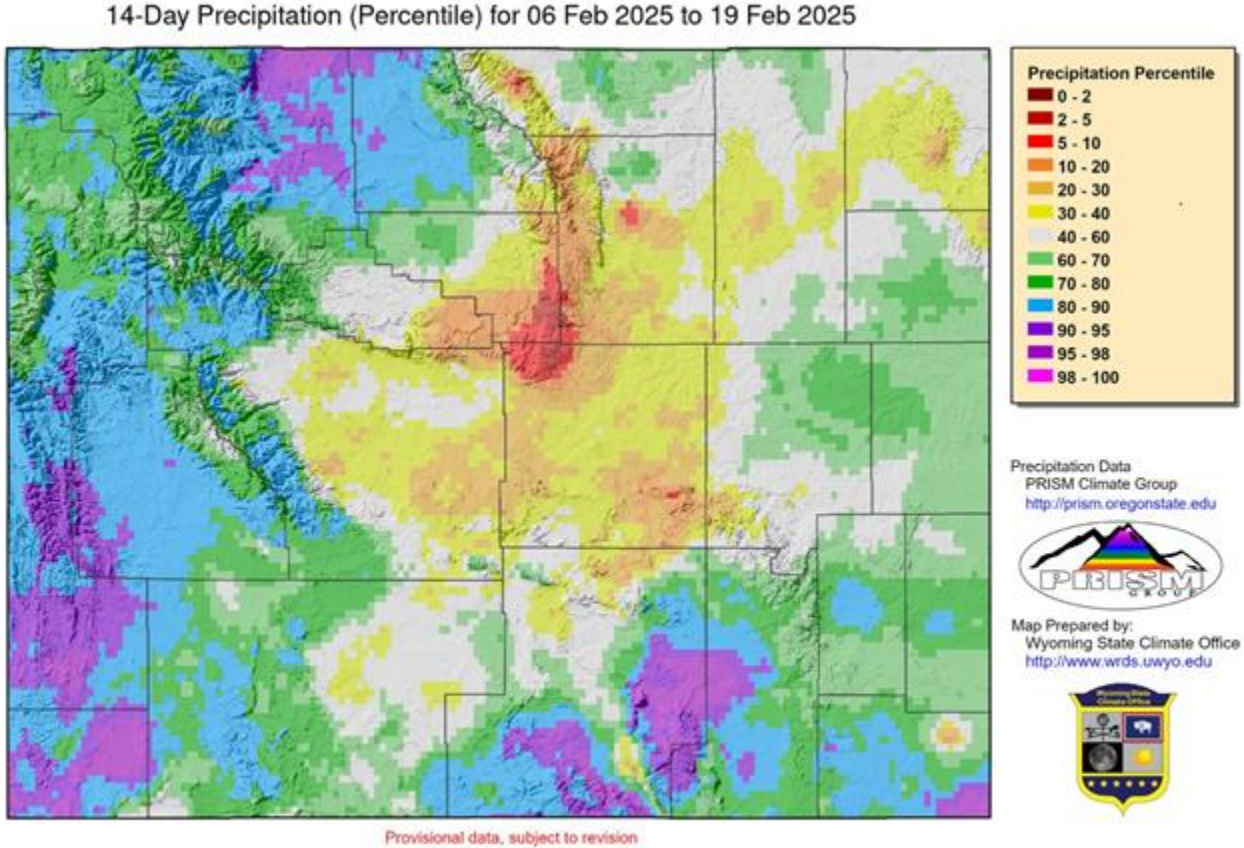
14-Day Precipitation Percentile (06 Feb 2025 to 19 Feb 2025)

Above Median:

- West, South, East

Below Median (Areas of Concern):

- Southern Bighorns
- Natrona County
- Johnson County



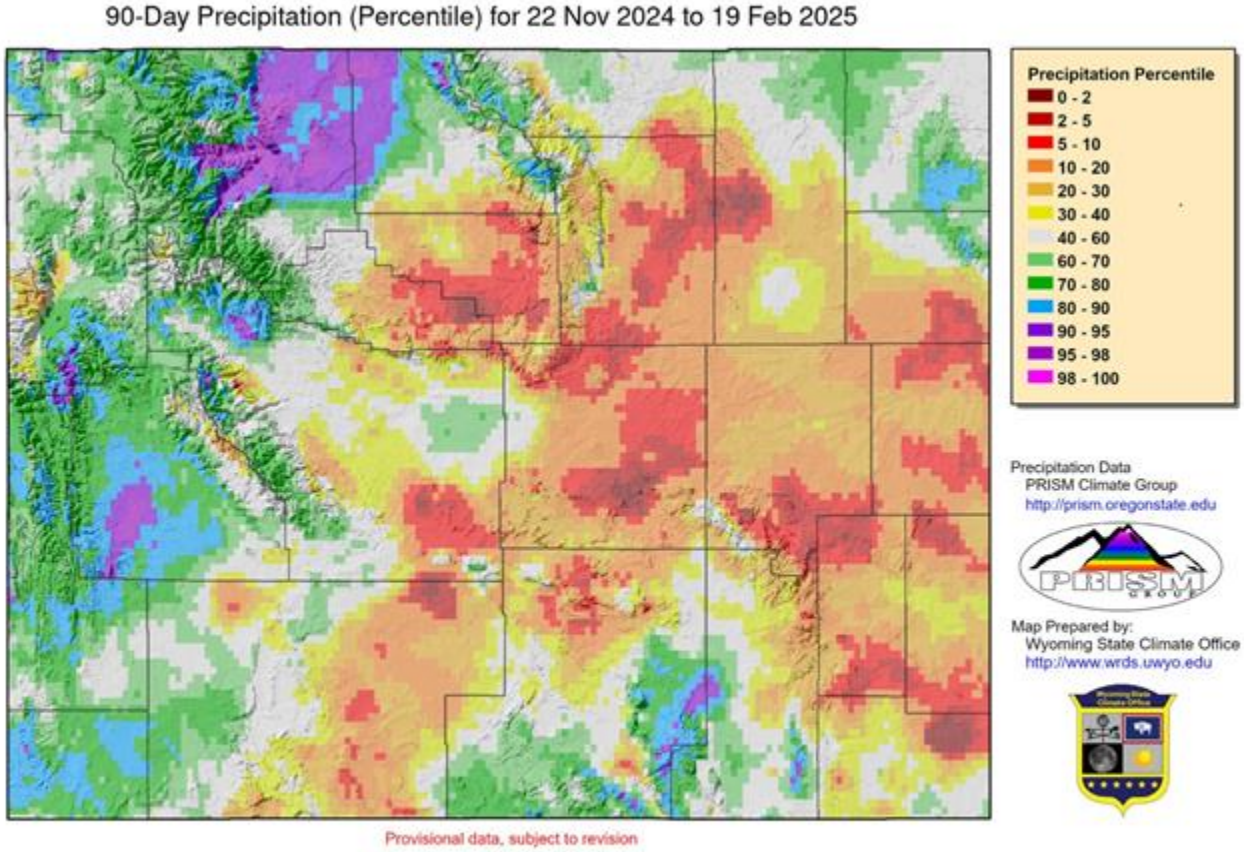
90-Day Precipitation Percentile (22 Nov 2024 to 19 Feb 2025)

At or Above Median:

- West and North

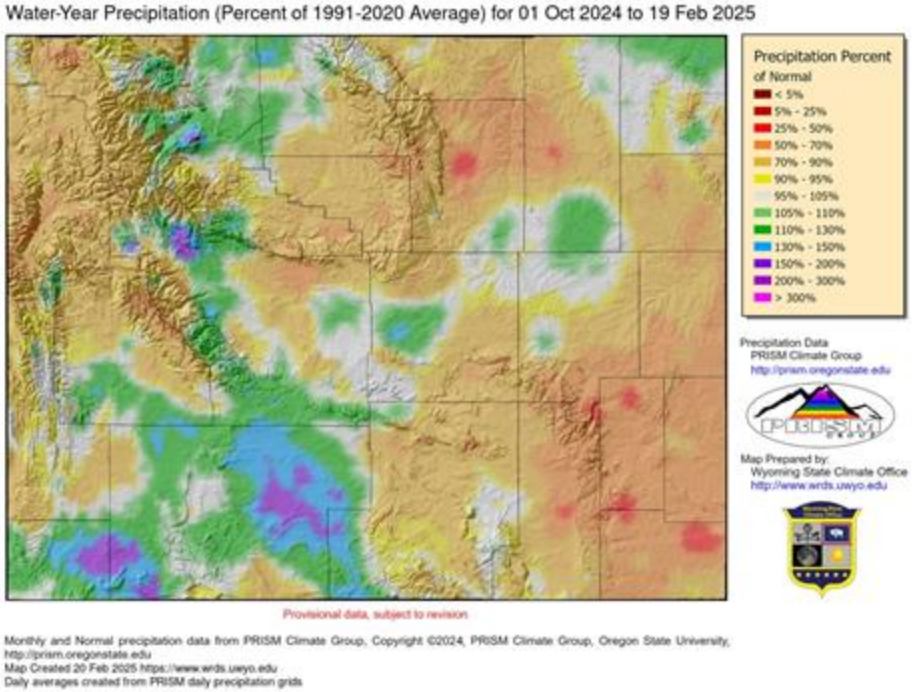
Below Median (Areas of Concern):

- East
- Washakie/Hot Springs
- Natrona/Campbell
- Southern Bighorn Basin

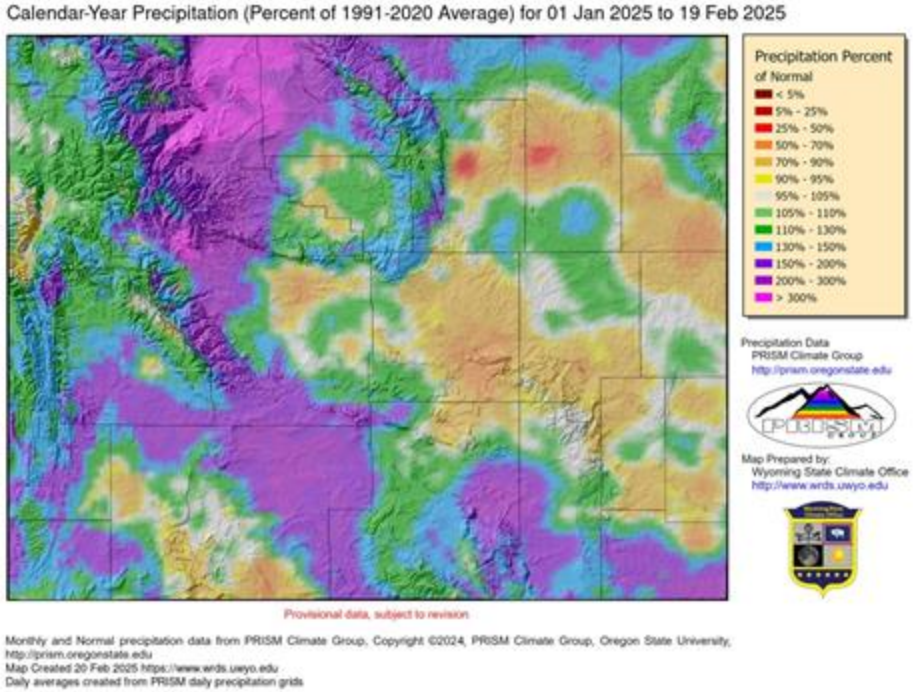


“Year”-to-Date Precipitation (Percent of Average)

Current Water Year



Current Calendar Year

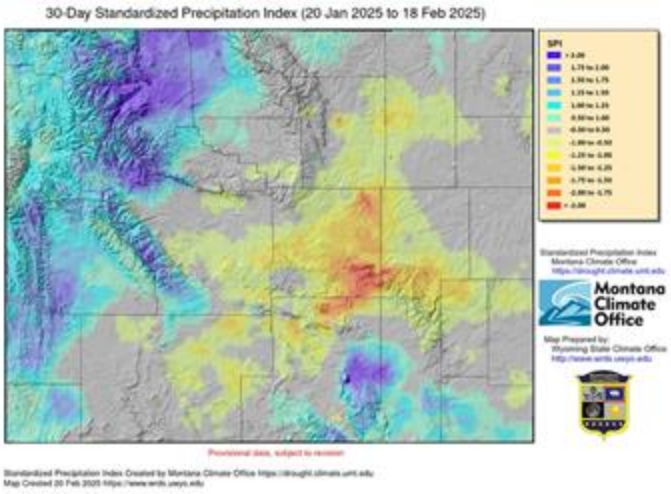


Note: a water year is October 1 through September 30 of the following year.

WRDS Water Resources Data System

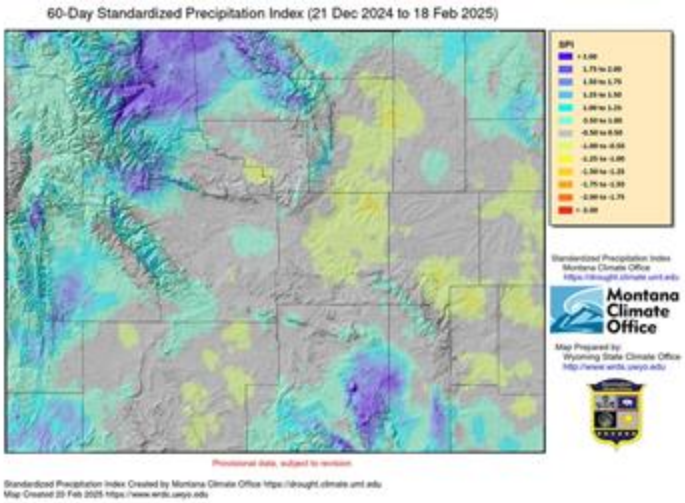
30-Day →

Jan 20 - Feb 18



60-Day →

Dec 21 - Feb 18

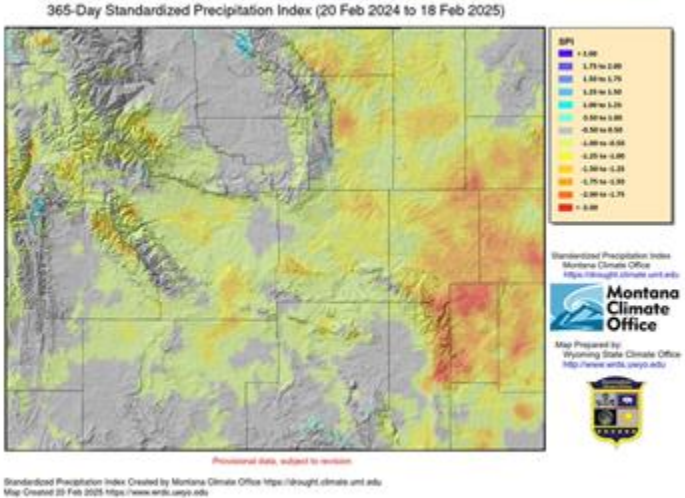


Standardized Precipitation Index (SPI)

Short term: Wet or Normal Northwest, West, and South. Drier in Central Wyoming at 30- vs 60-Day timeframes. (deteriorating conditions there)

Long term: Dry in East extending through Central WY.

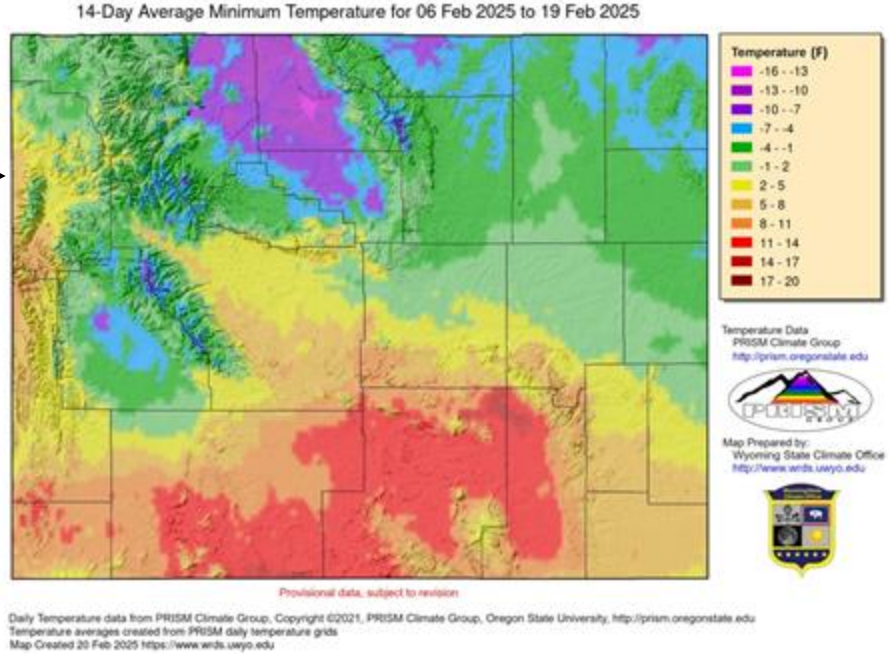
1-Year →



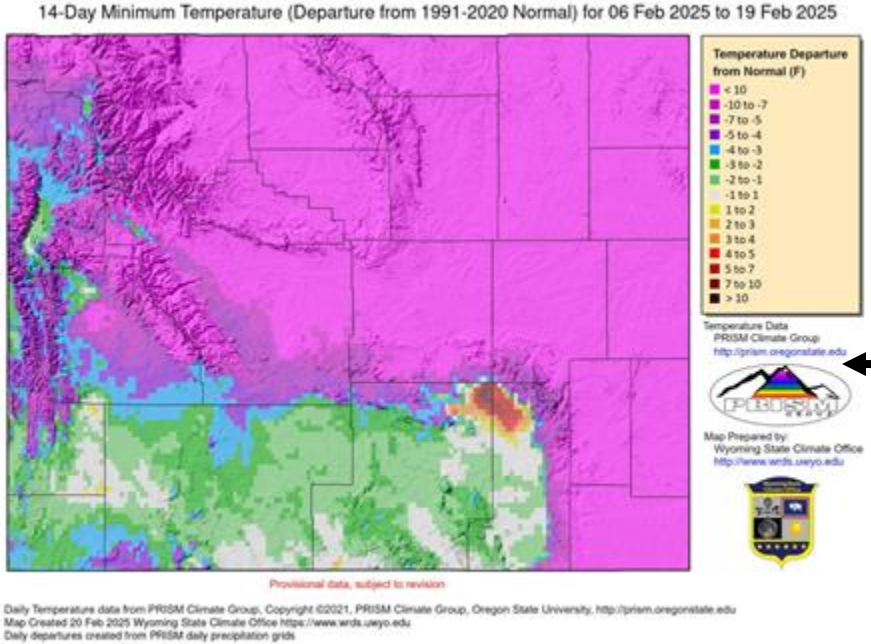
https://drought.climate.umt.edu

14-Day Average Minimum Temperature (06 Feb to 19 Feb)

- Minimums below freezing statewide
- BH Basin coolest with avg min temps below -10F



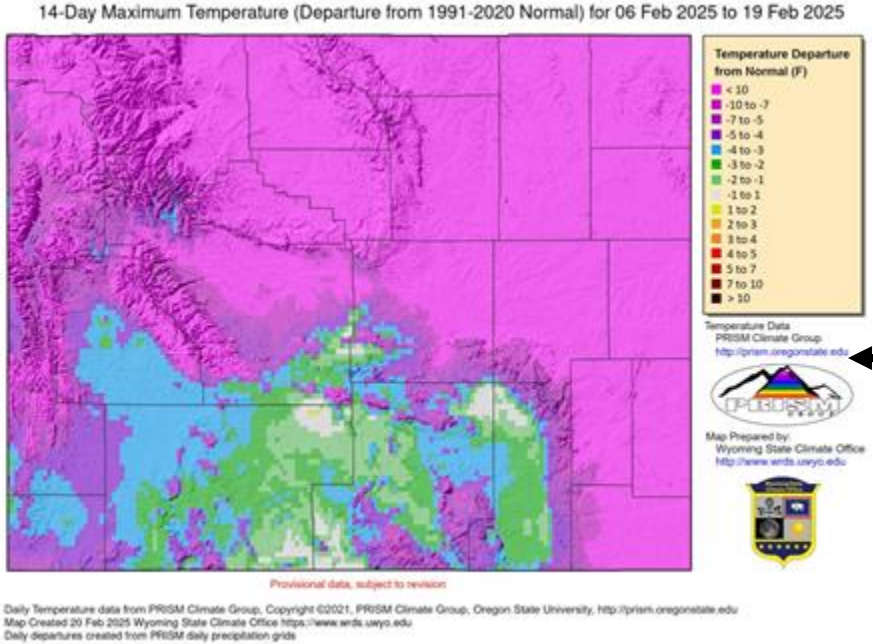
14-Day *Departure from* Normal Average Minimum Temperature

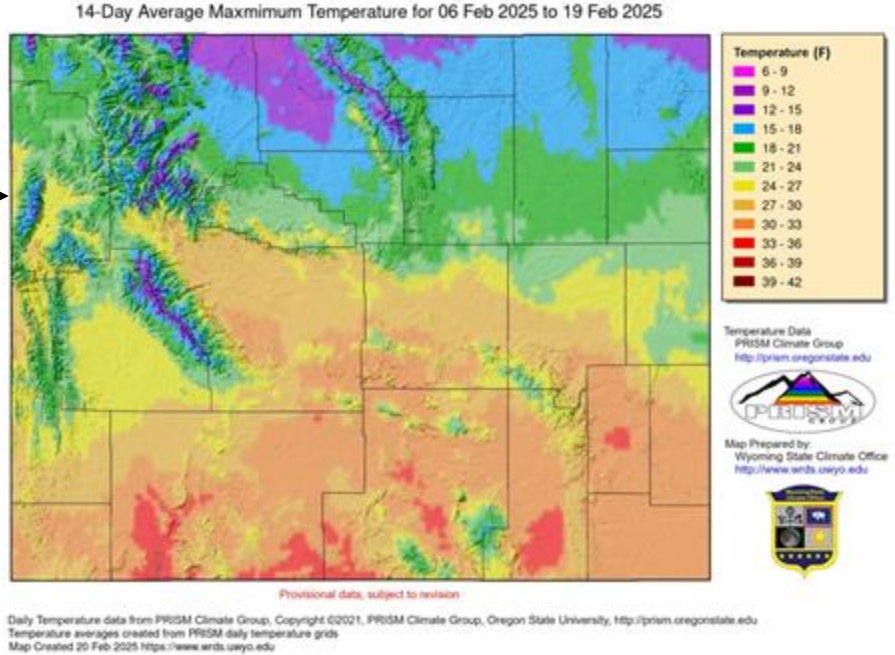


- North half and E of Laramie Rng > 10F below normal
- Much of south normal to 1-2F below normal.
- Except the bubble in NE Carbon/NW Albany >10F above normal

14-Day Average Maximum Temperature (06 Feb to 19 Feb)

- Much of south with highs above 32F
- Coolest in lower elevation north





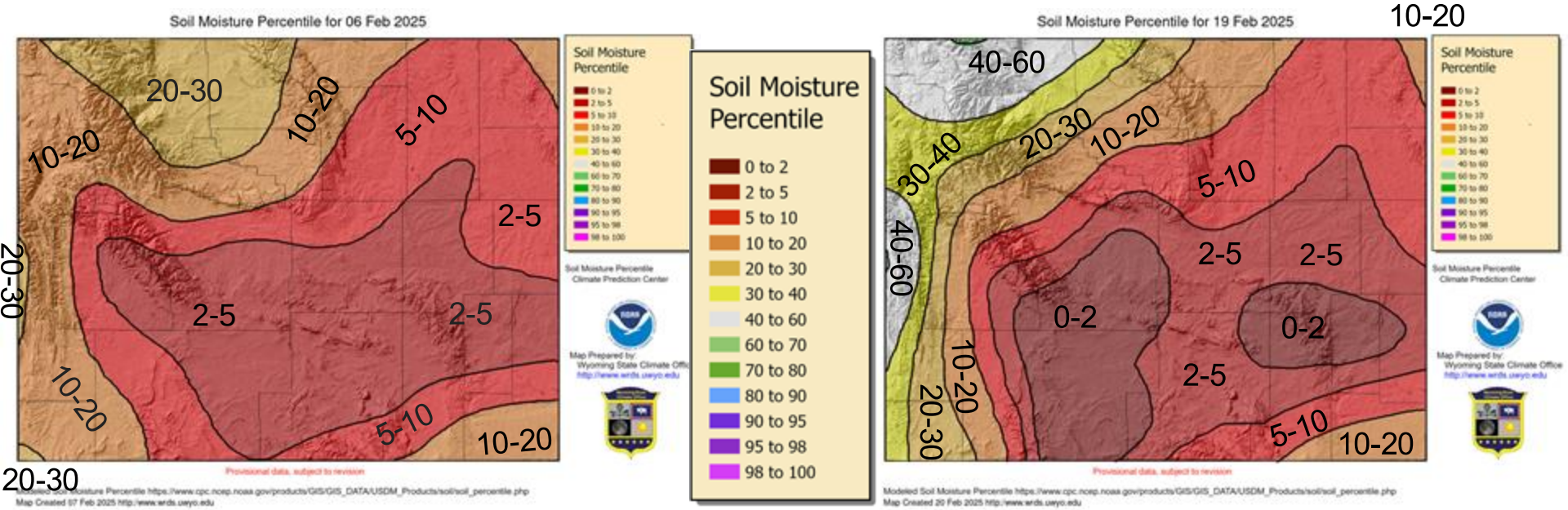
14- Day *Departure from* Normal Average Maximum Temperature

- Entire state below normal.
- North and East >10F below normal
- Lower elevation South normal to 2-4F below normal

Soil Moisture Percentile

~Two Weeks Ago

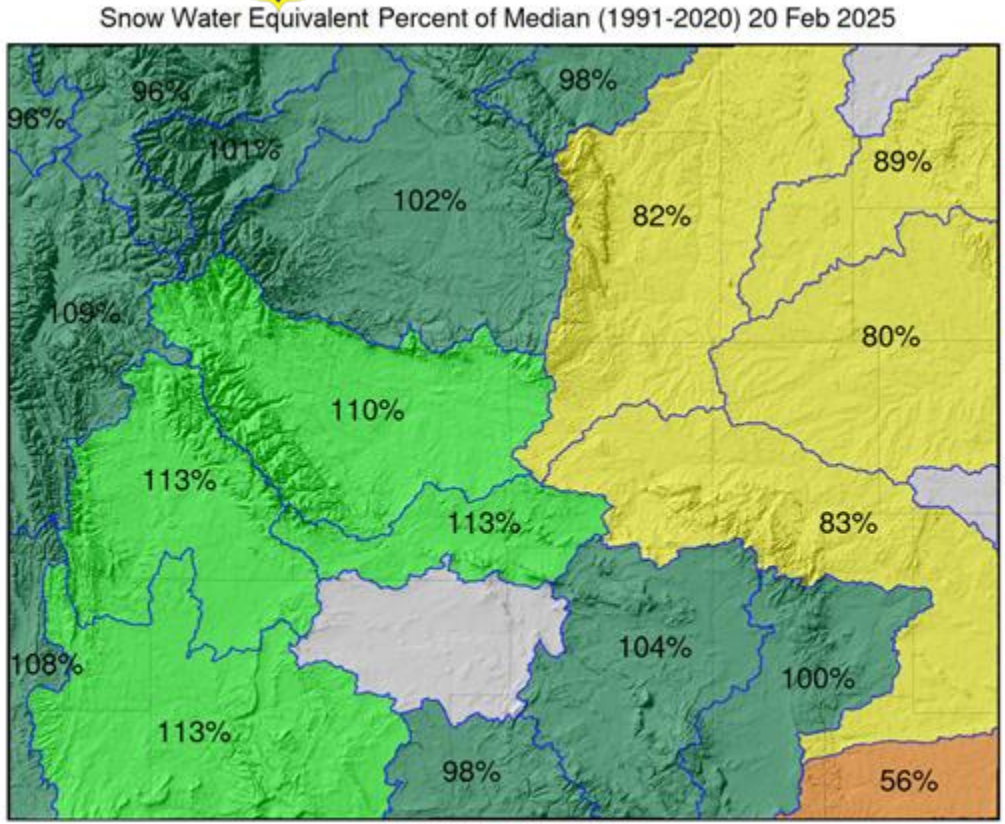
19 Feb 2025



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

Improvements in the west with status quo, and even some declines in the central & south central areas.

Basin Snow Water Equivalent - Percent of Median



SWE Percent

- No Data
- 0% to 24%
- 25% to 49%
- 50% to 74%
- 75% to 89%
- 90% to 109%
- 110% to 124%
- 125% to 149%
- 150% to 174%
- 175% to 199%
- >=200%

Snow Water Equivalent Data
NRCS
https://www.nrcs.usda.gov

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

Provisional data, subject to revision

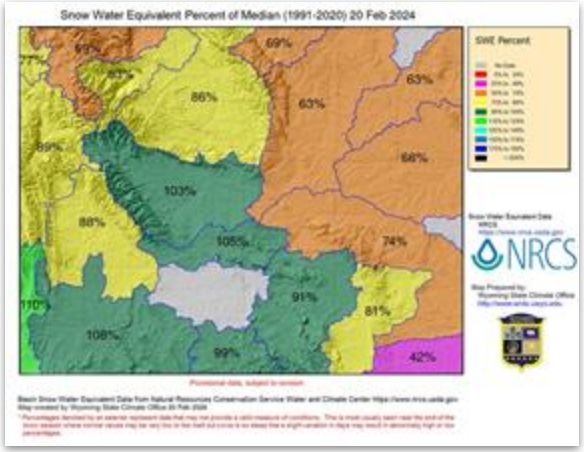
Basin Snow Water Equivalent Data from Natural Resources Conservation Service Water and Climate Center https://www.nrcs.usda.gov
Map created by Wyoming State Climate Office 20 Feb 2025

* Percentages denoted by an asterisk represent data that may not provide a valid measure of conditions. This is most usually seen near the end of the snow season where normal values may be very low or the melt out curve is so steep that a slight variation in days may result in abnormally high or low percentages.

2025 — 20 February

2024

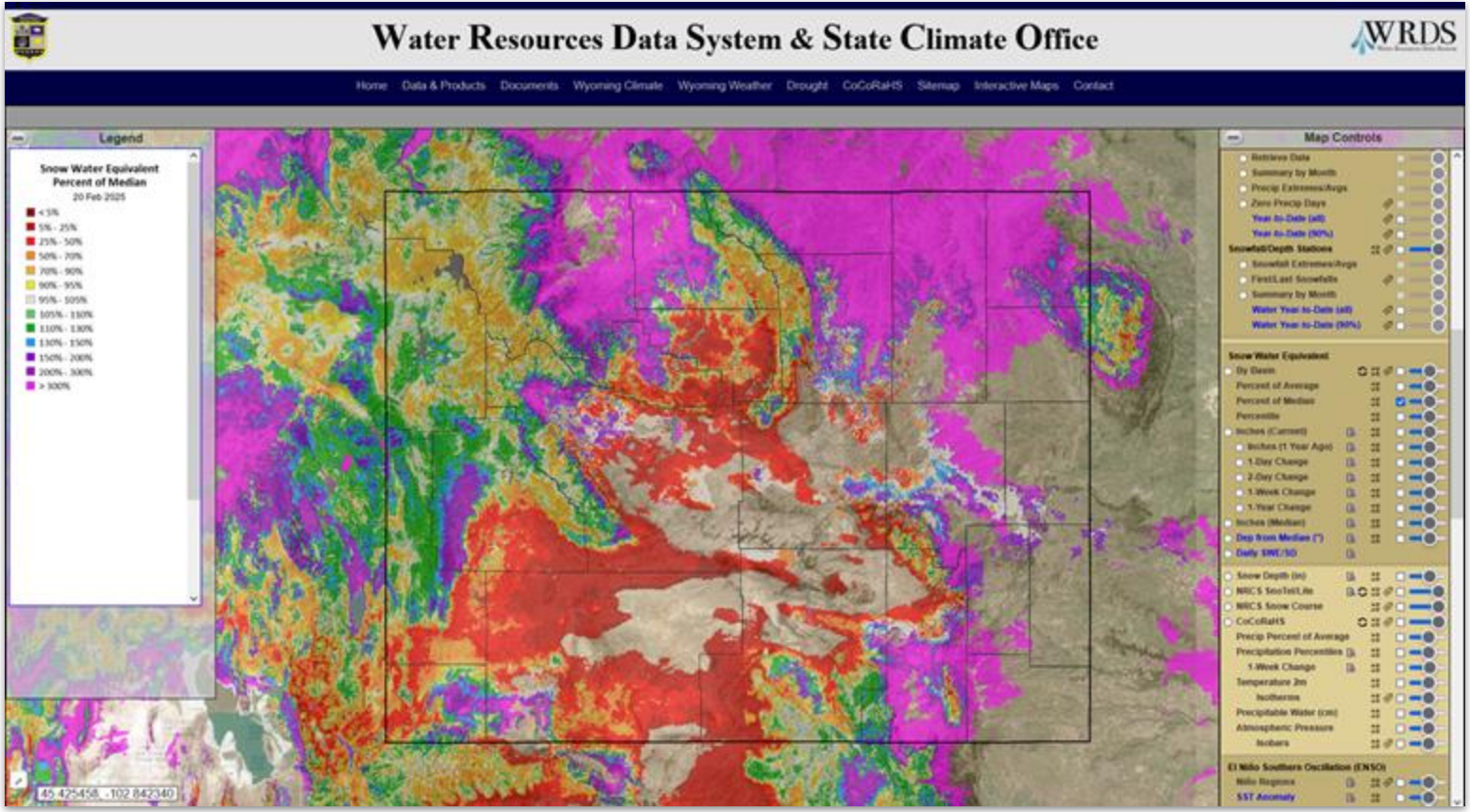
One Year Ago



https://www.wrds.uwyo.edu/wrds/nrcs/snowmap/snowmap.html

Snow Water Equivalent - Percent from Median

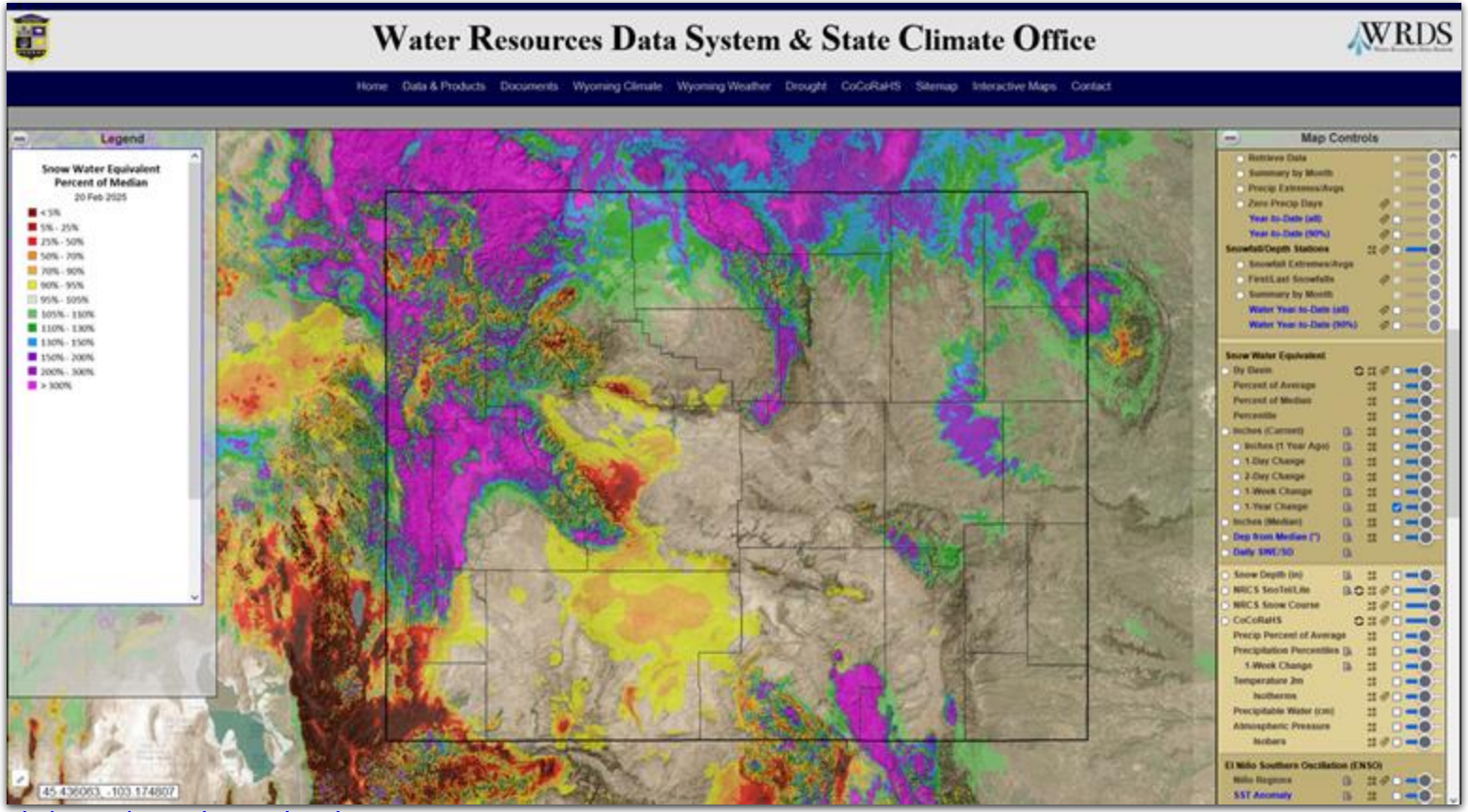
20 February 2025



https://www.wrds.uwyo.edu/wace/wacehome.html

Snow Water Equivalent - Percent from Median

1-Year Change



https://www.wrds.uwyo.edu/wace/wacehome.html

Basin Snow Pack Status - 20 Feb 2025

Peak Snow Water Equivalent Dates and Totals by Basin With Meltout Dates

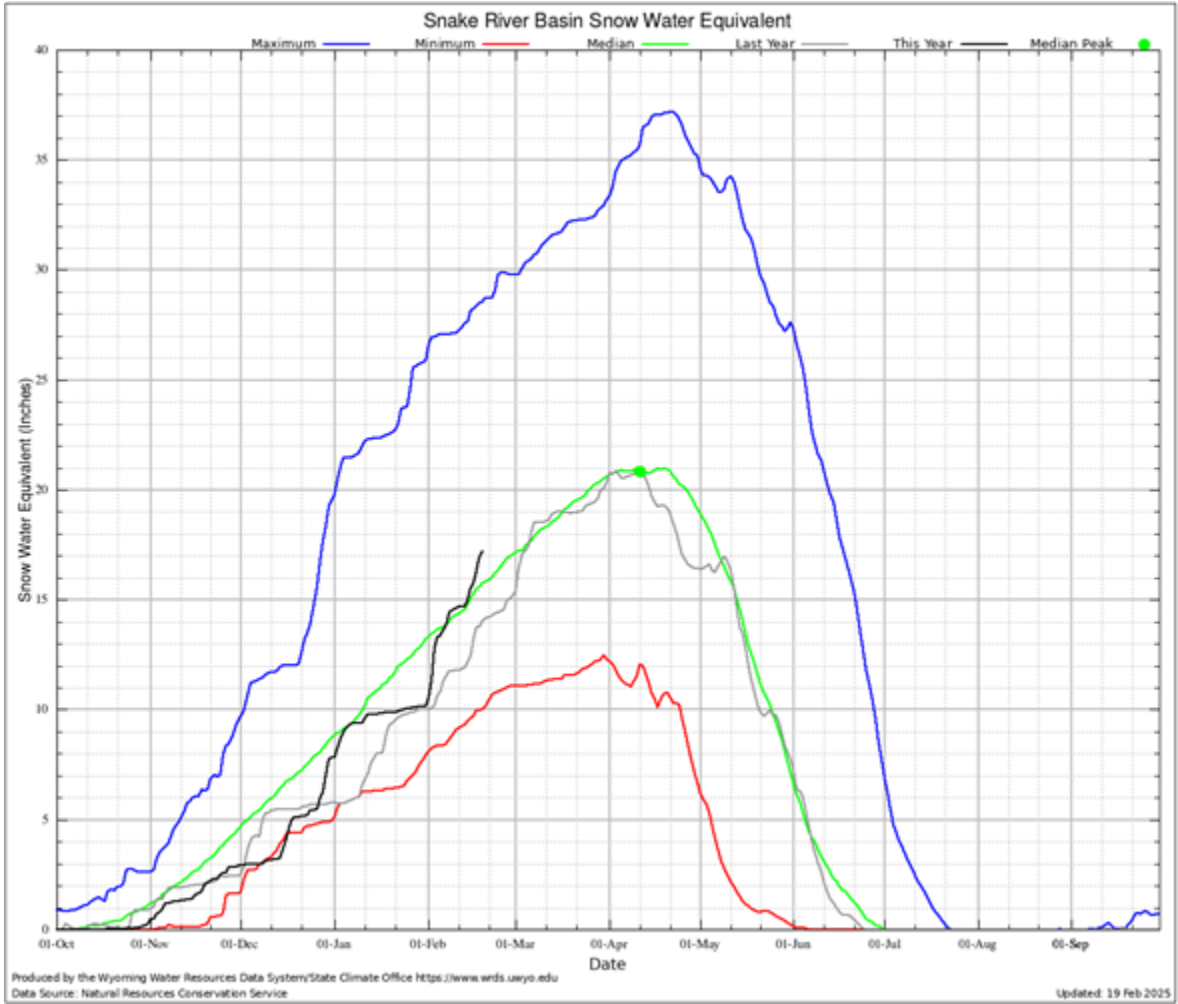
This year's "to-date" peak snow water equivalent (SWE) compared to median.
Red indicates **earlier** peak date or **lower** SWE compared to median
Blue indicates **later** peak date or **higher** SWE compared to median
Click Column Headers to Sort

Basin Click to View Chart	This Year Peak Date	This Year Peak SWE (inches)	Days Early/Late	Peak SWE Dif (inches)	Percent of Median Peak SWE	Median Peak Date	Median Peak SWE (inches)	Current SWE	Median Meltout Date
Belle Fourche	19 Feb 2024	4.60	-37	-2.3	67%	28 Mar IMG	6.87 IMG		01 May IMG
Bighorn	20 Feb 2024	7.50	-63	-4.2	64%	24 Apr IMG	11.74 IMG		21 Jun IMG
Cheyenne	19 Feb 2024	4.60	-37	-2.9	61%	28 Mar IMG	7.50 IMG		01 May IMG
Laramie	20 Feb 2024	10.74	-54	-5.2	68%	15 Apr IMG	15.90 IMG		13 Jun IMG
Little Snake	20 Feb 2024	14.97	-45	-5.9	72%	06 Apr IMG	20.90 IMG		20 Jun IMG
Lower Green	20 Feb 2024	9.80	-47	-4.0	71%	08 Apr IMG	13.84 IMG		13 Jun IMG
Lower North Platte	20 Feb 2024	6.33	-53	-6.4	50%	14 Apr IMG	12.75 IMG		29 May IMG
Madison	20 Feb 2024	15.18	-53	-8.6	64%	14 Apr IMG	23.75 IMG		25 Jun IMG
Powder	20 Feb 2024	5.26	-53	-5.3	50%	14 Apr IMG	10.61 IMG		10 Jun IMG
Shoshone	20 Feb 2024	12.73	-63	-5.3	70%	24 Apr IMG	18.08 IMG		29 Jun IMG
Snake	20 Feb 2024	17.31	-50	-3.5	83%	11 Apr IMG	20.85 IMG		29 Jun IMG
South Platte	20 Feb 2024	3.20	-40	-3.4	48%	01 Apr IMG	6.60 IMG		26 Apr IMG
Sweetwater	20 Feb 2024	10.37	-57	-4.7	69%	18 Apr IMG	15.03 IMG		06 Jun IMG
Tongue	20 Feb 2024	7.34	-67	-6.0	55%	28 Apr IMG	13.30 IMG		09 Jun IMG
Upper Bear	19 Feb 2024	12.74	-49	-5.1	72%	09 Apr IMG	17.81 IMG		15 Jun IMG
Upper Green	20 Feb 2024	12.98	-50	-3.0	81%	11 Apr IMG	15.96 IMG		19 Jun IMG
Upper North Platte	20 Feb 2024	17.08	-55	-7.3	70%	16 Apr IMG	24.35 IMG		28 Jun IMG
Wind	20 Feb 2024	9.57	-59	-4.4	69%	20 Apr IMG	13.97 IMG		25 Jun IMG
Yellowstone	20 Feb 2024	15.25	-63	-6.0	72%	24 Apr IMG	21.24 IMG		01 Jul IMG

Data from Natural Resources Conservation Service SnoTel Network

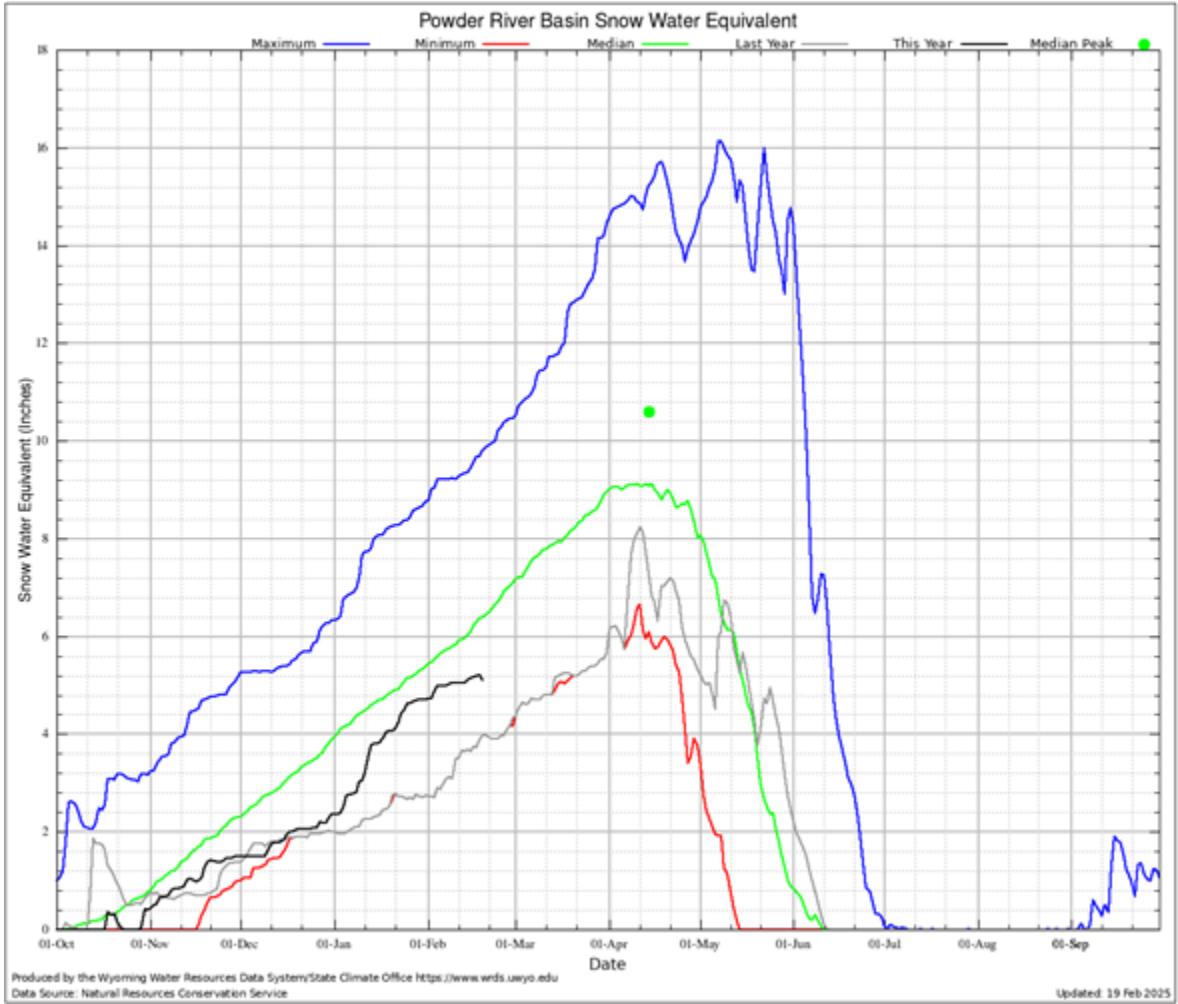
https://www.wrds.uwyo.edu/Snow/BasinPeakSWE.html

Snake River Basin Snow Water Equivalent



https://www.wrds.uwyo.edu/Snow/BasinPeakSWE.html

Powder River Basin Snow Water Equivalent

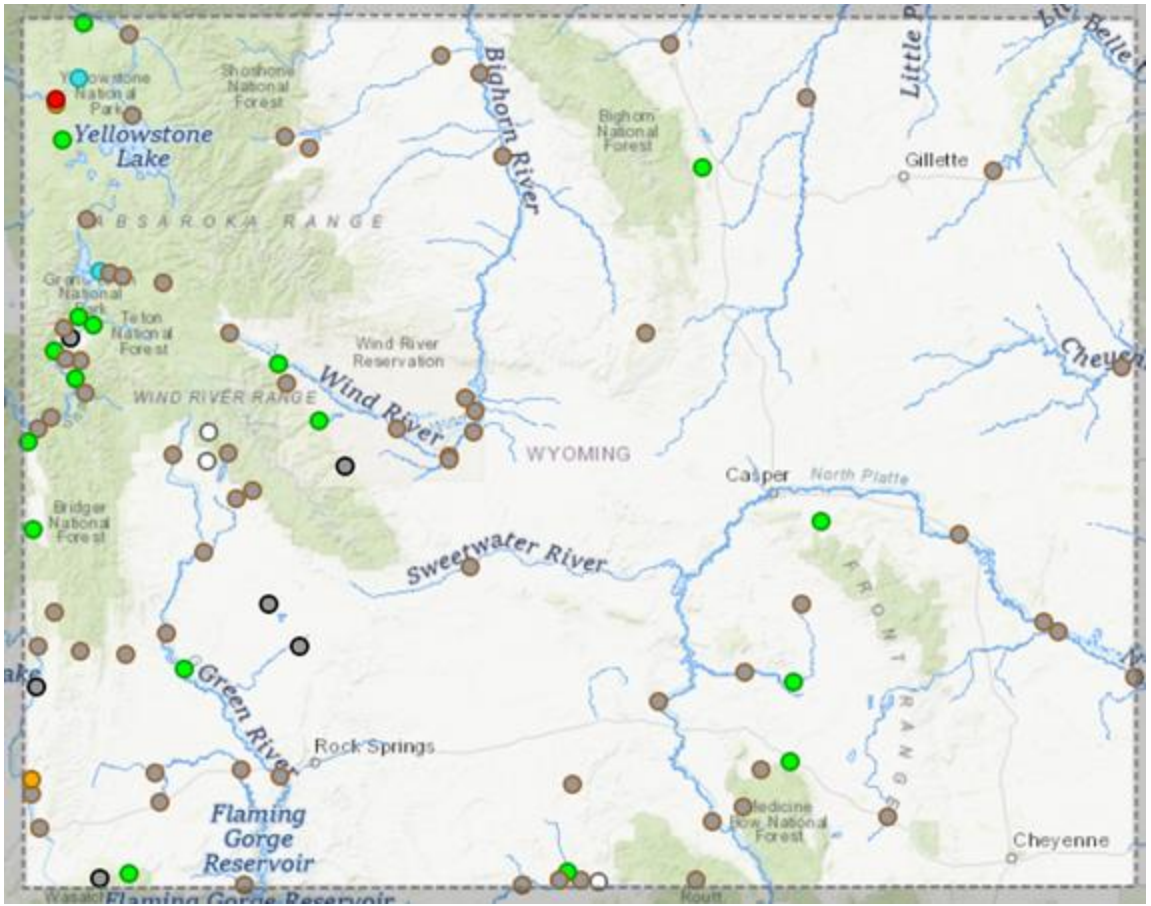


https://www.wrds.uwyo.edu/Snow/BasinPeakSWE.html

Current Streamflow Conditions

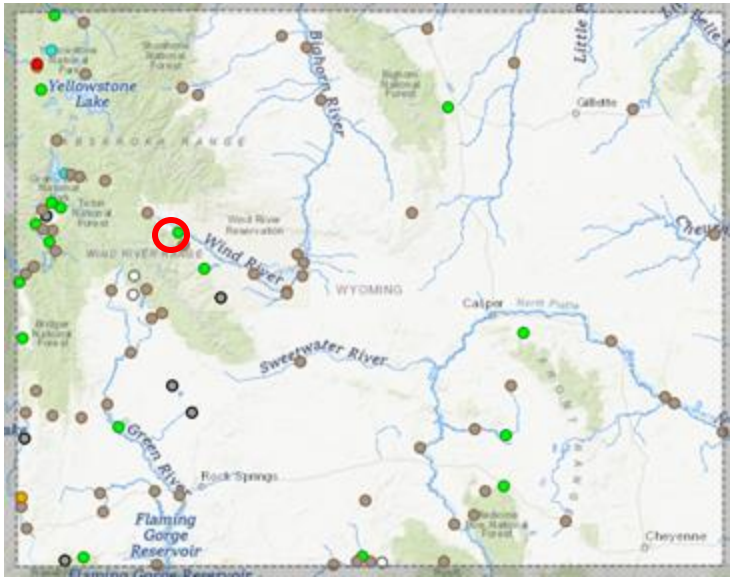
Streamflow Status





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

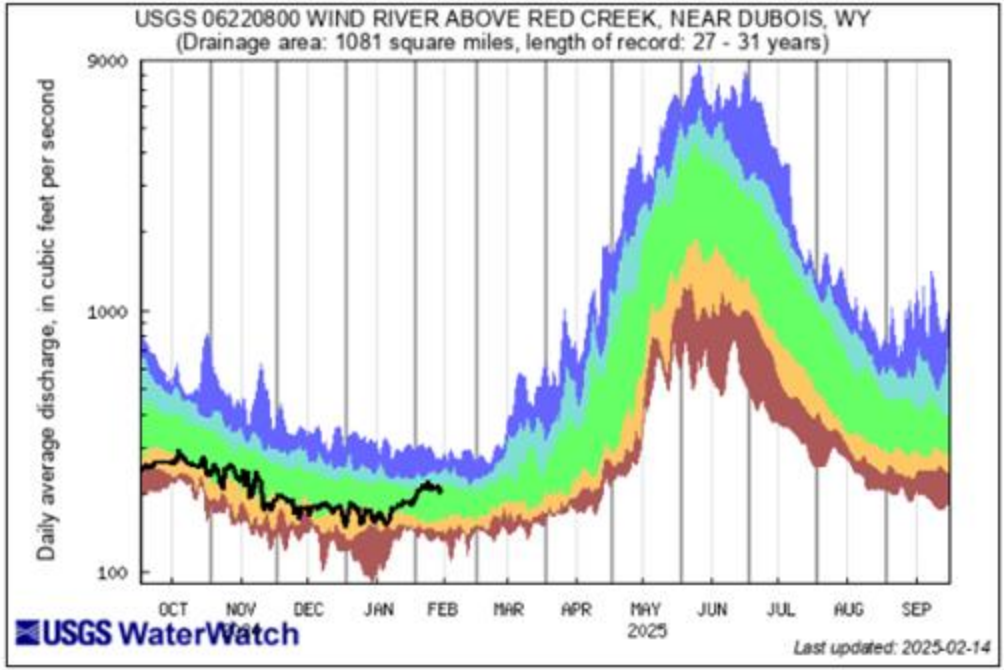
Select WY Streamflows



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

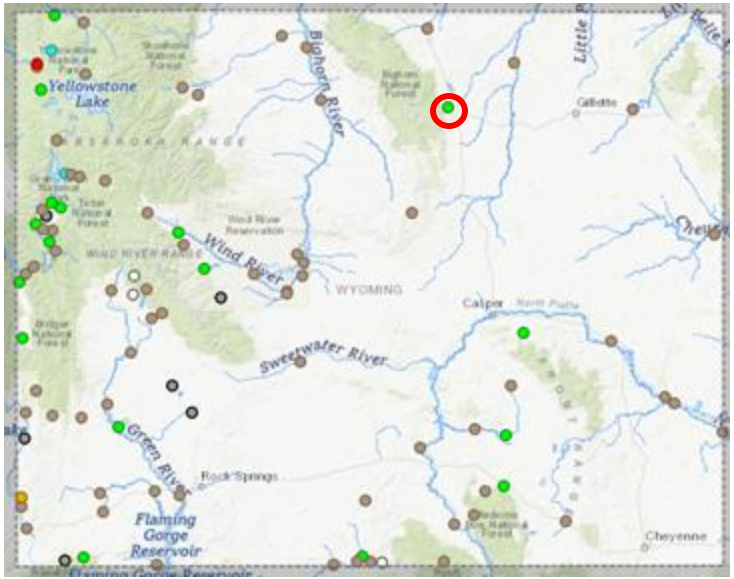
https://waterwatch.usgs.gov/

Wind River above Red Cr, nr Dubois, WY





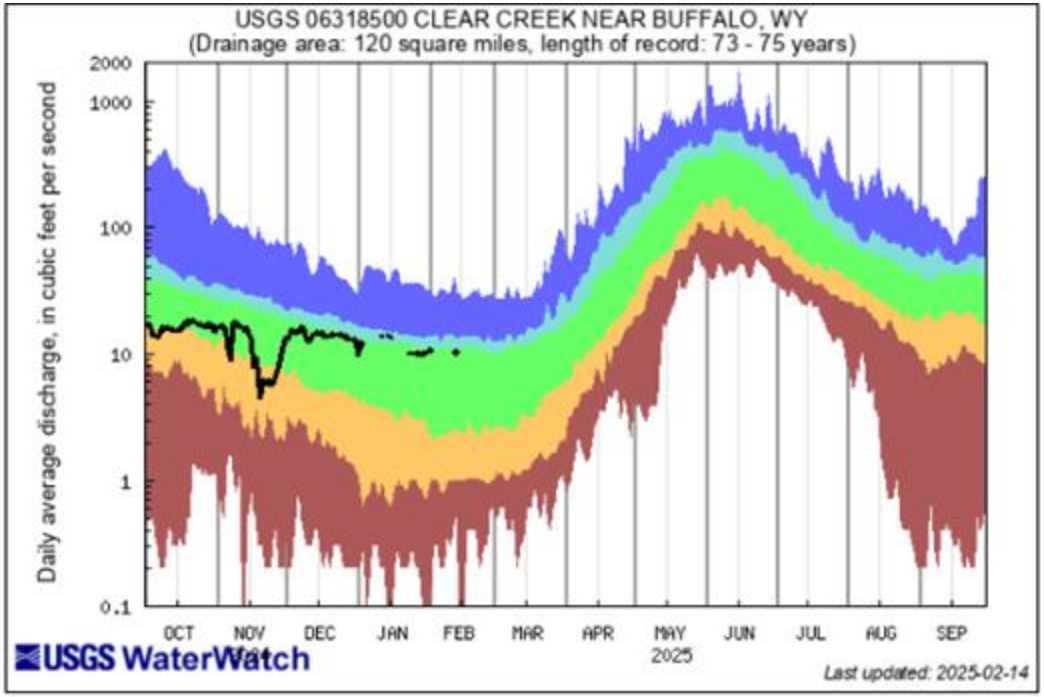
Select WY Streamflows



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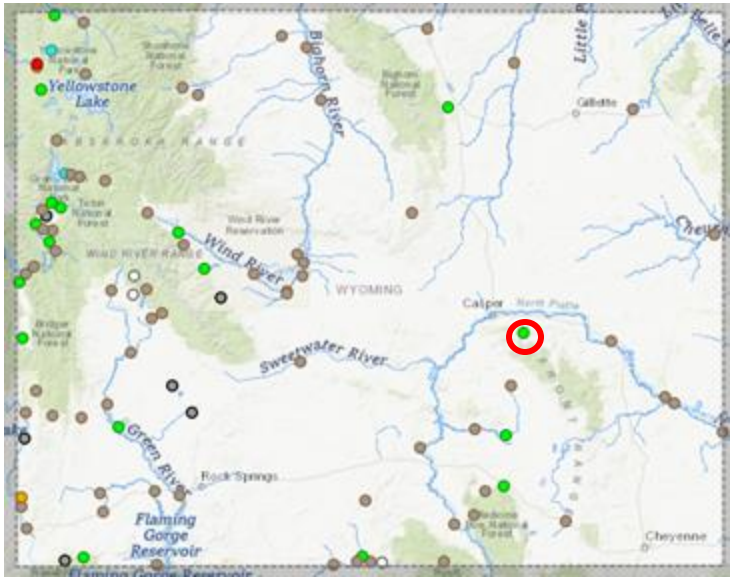
https://waterwatch.usgs.gov/

Clear Creek near Buffalo, WY





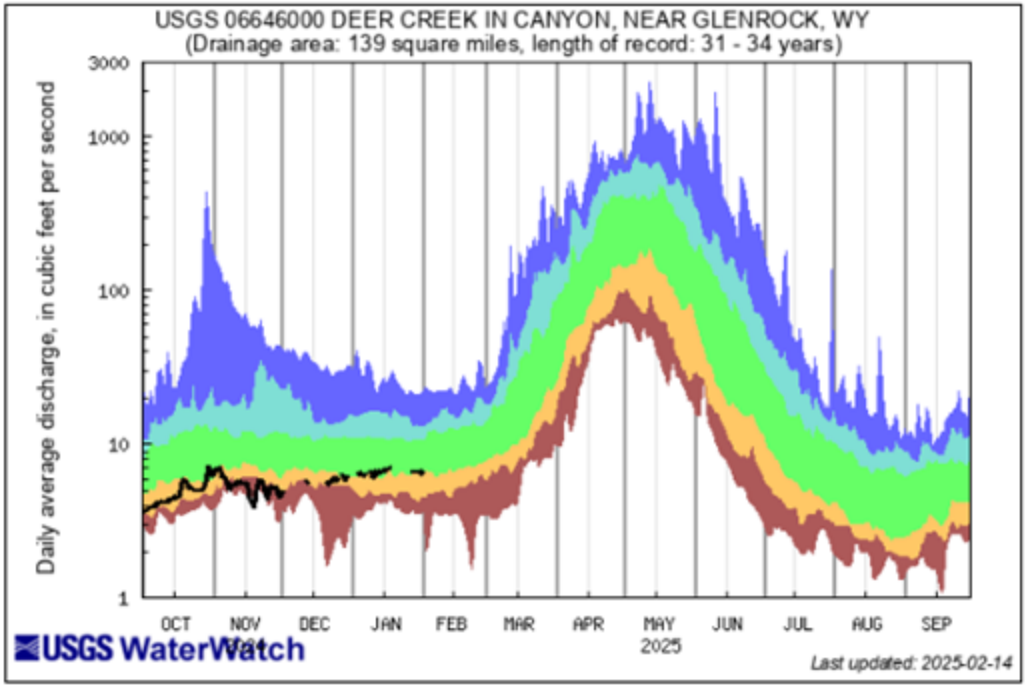
Select WY Streamflows

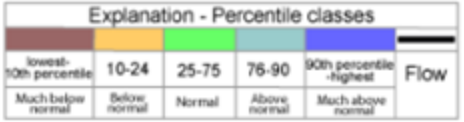


https://dashboard.waterdata.usgs.gov/

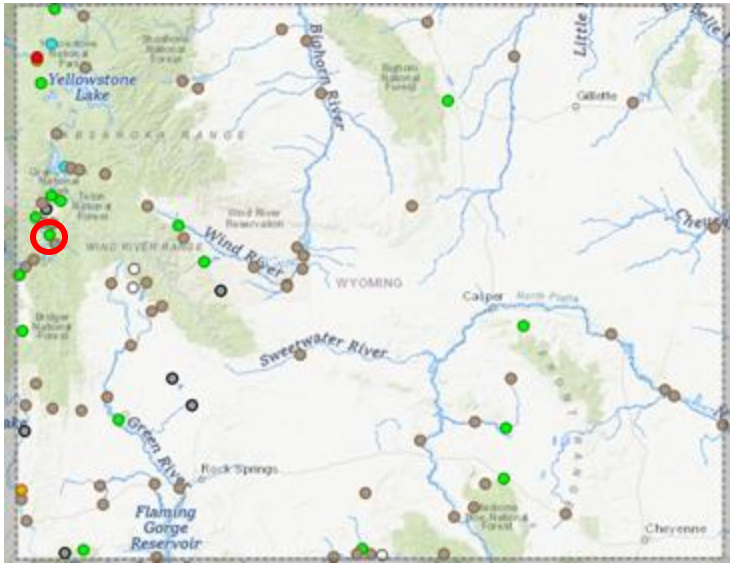
https://waterwatch.usgs.gov/

Deer Creek near Glenrock, WY

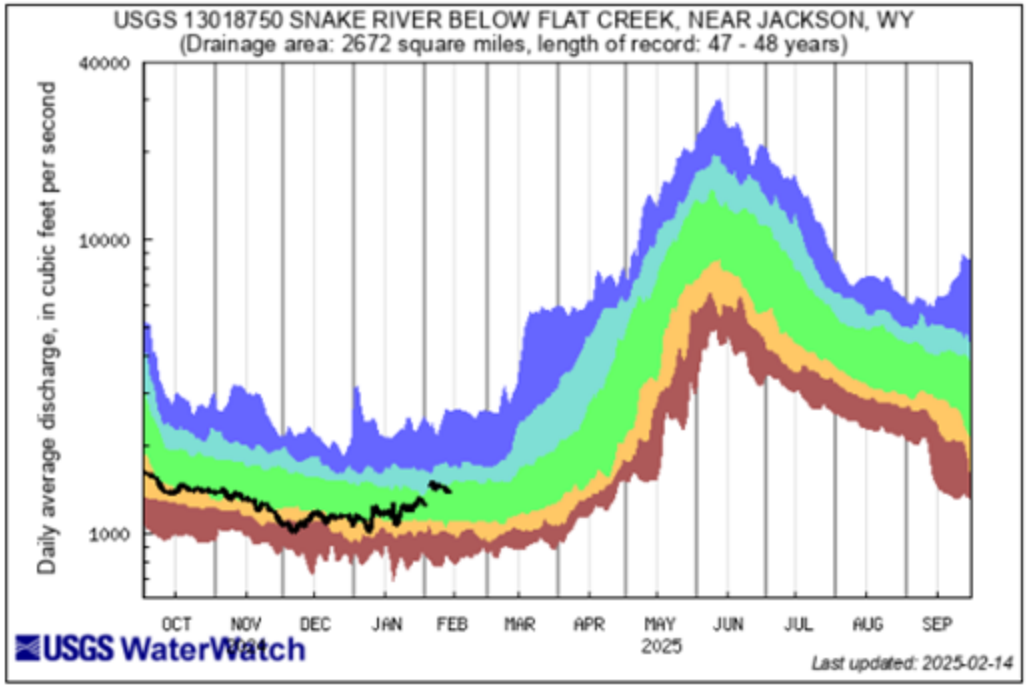


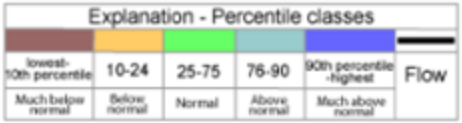


Select WY Streamflows



Snake River bl Flat Creek, Near Jackson, WY

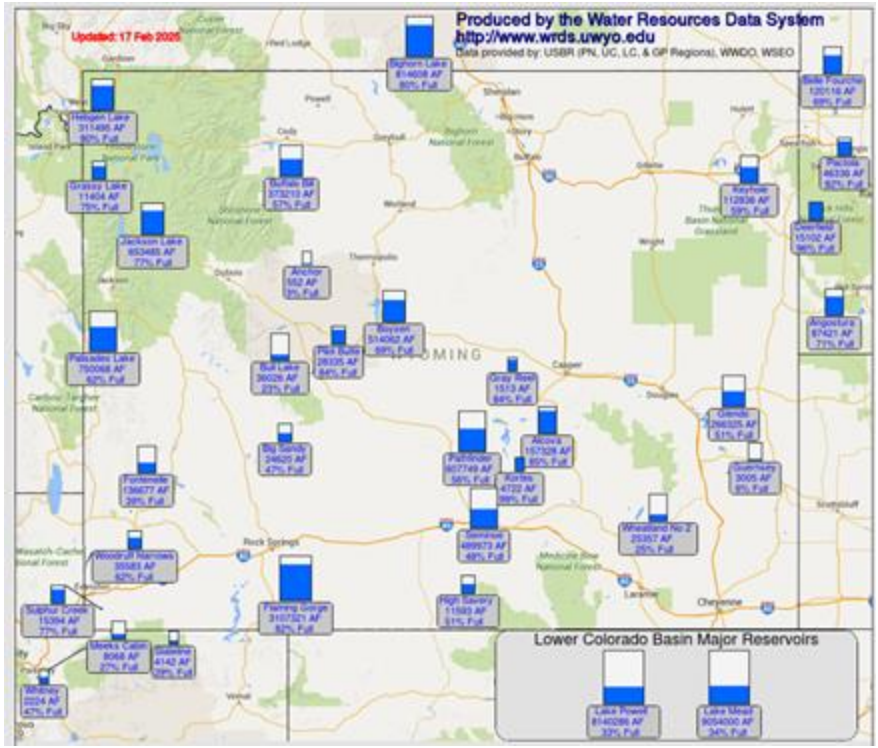




https://dashboard.waterdata.usgs.gov/

https://waterwatch.usgs.gov/

WY Reservoirs



Reservoir Storage

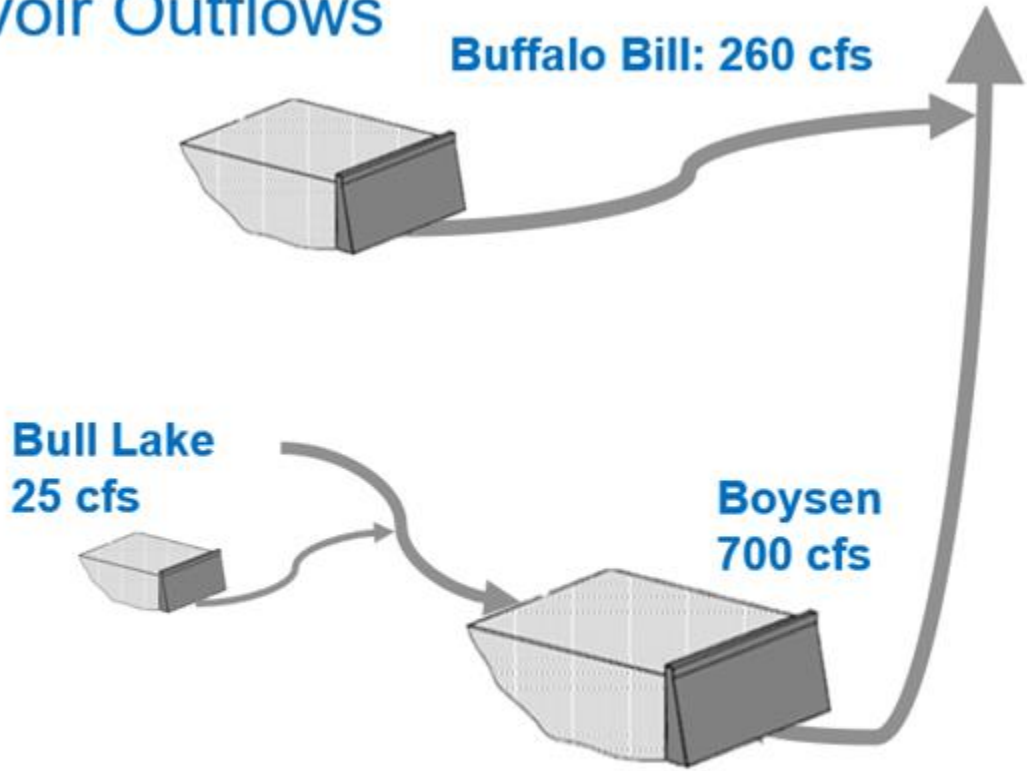
- Mostly minor changes in storage.
- Most major reservoirs are ~ 50-80% full.
- Fontenelle is the exception.

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

— BUREAU OF —
RECLAMATION

Current Reservoir Outflows





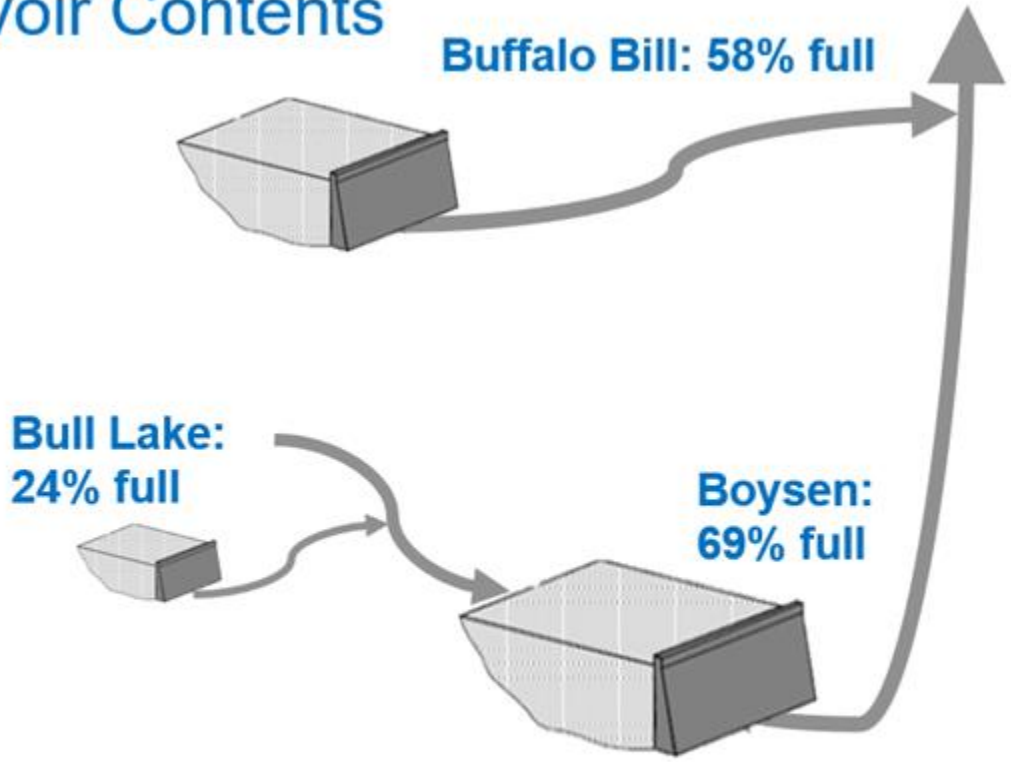
Wyoming Area Office Water Order Changes – https://www.usbr.gov/gp/woc/indexwy.html

— BUREAU OF —
RECLAMATION

Current Reservoir Contents



Buffalo Bill

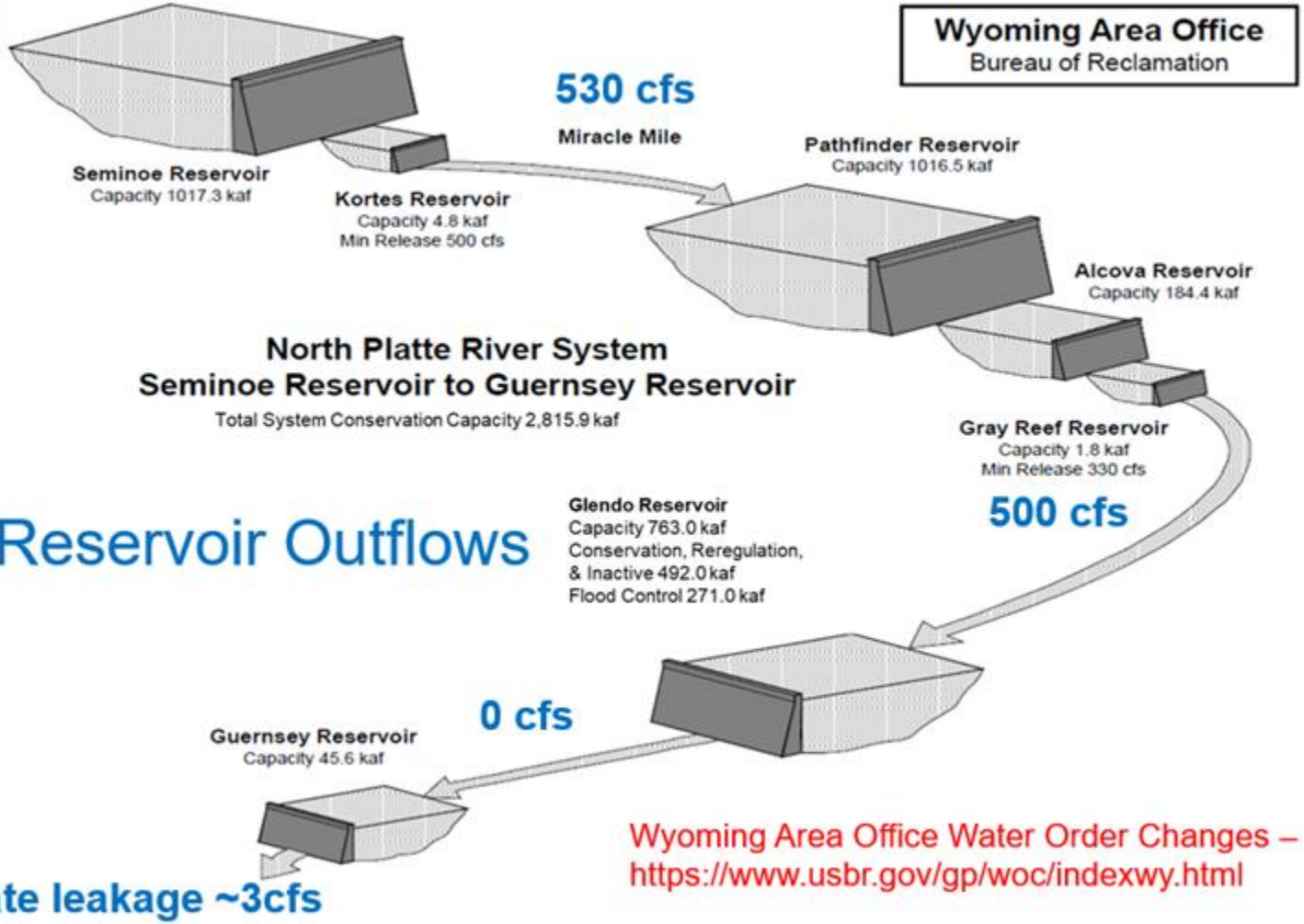


Average to above average spring runoff will be needed to fill the reservoirs.

— BUREAU OF —
RECLAMATION

Wyoming Area Office
Bureau of Reclamation

Current Reservoir Outflows

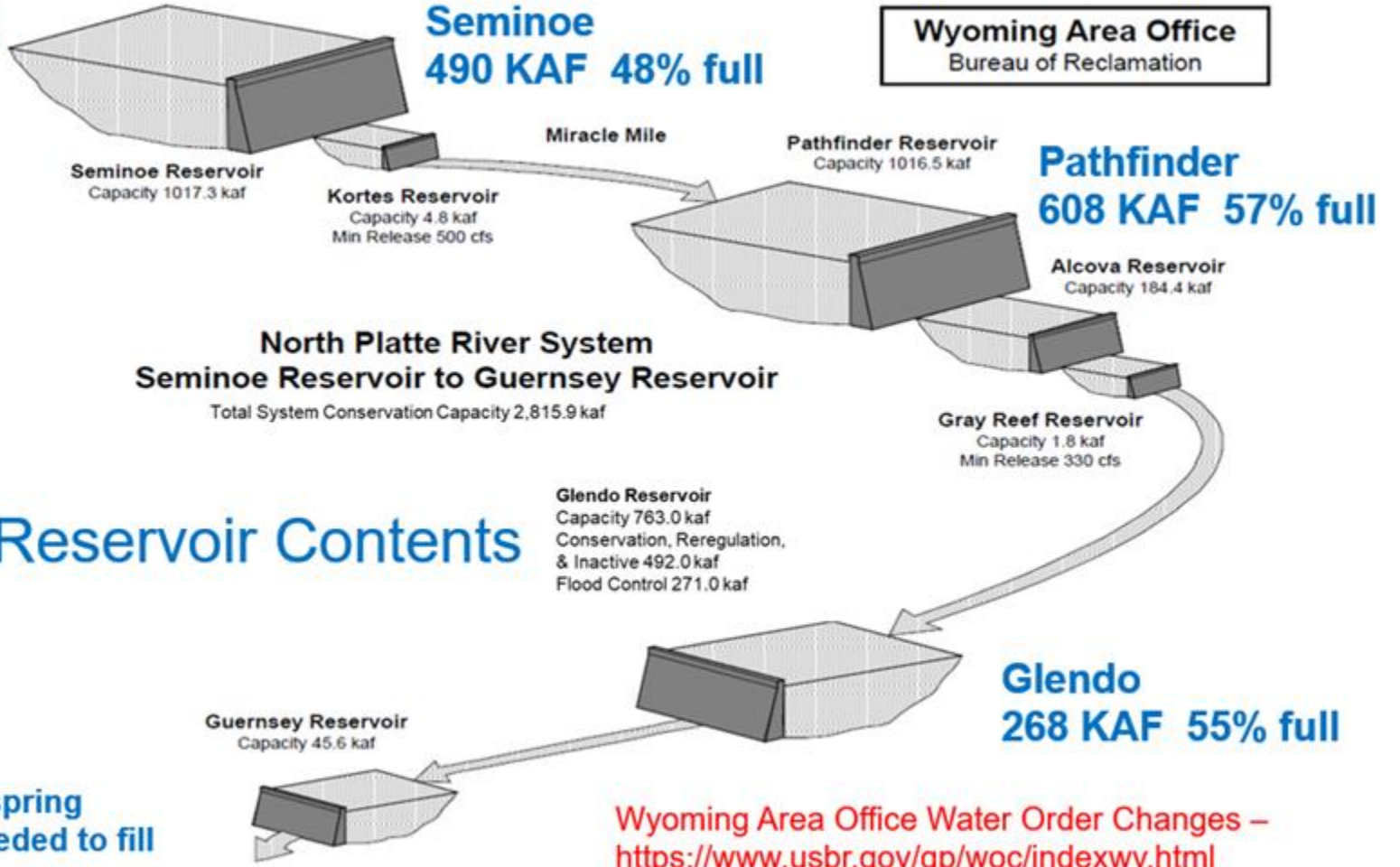


Wyoming Area Office Water Order Changes –
https://www.usbr.gov/gp/woc/indexwy.html

— BUREAU OF —
RECLAMATION

Wyoming Area Office
Bureau of Reclamation

Current Reservoir Contents

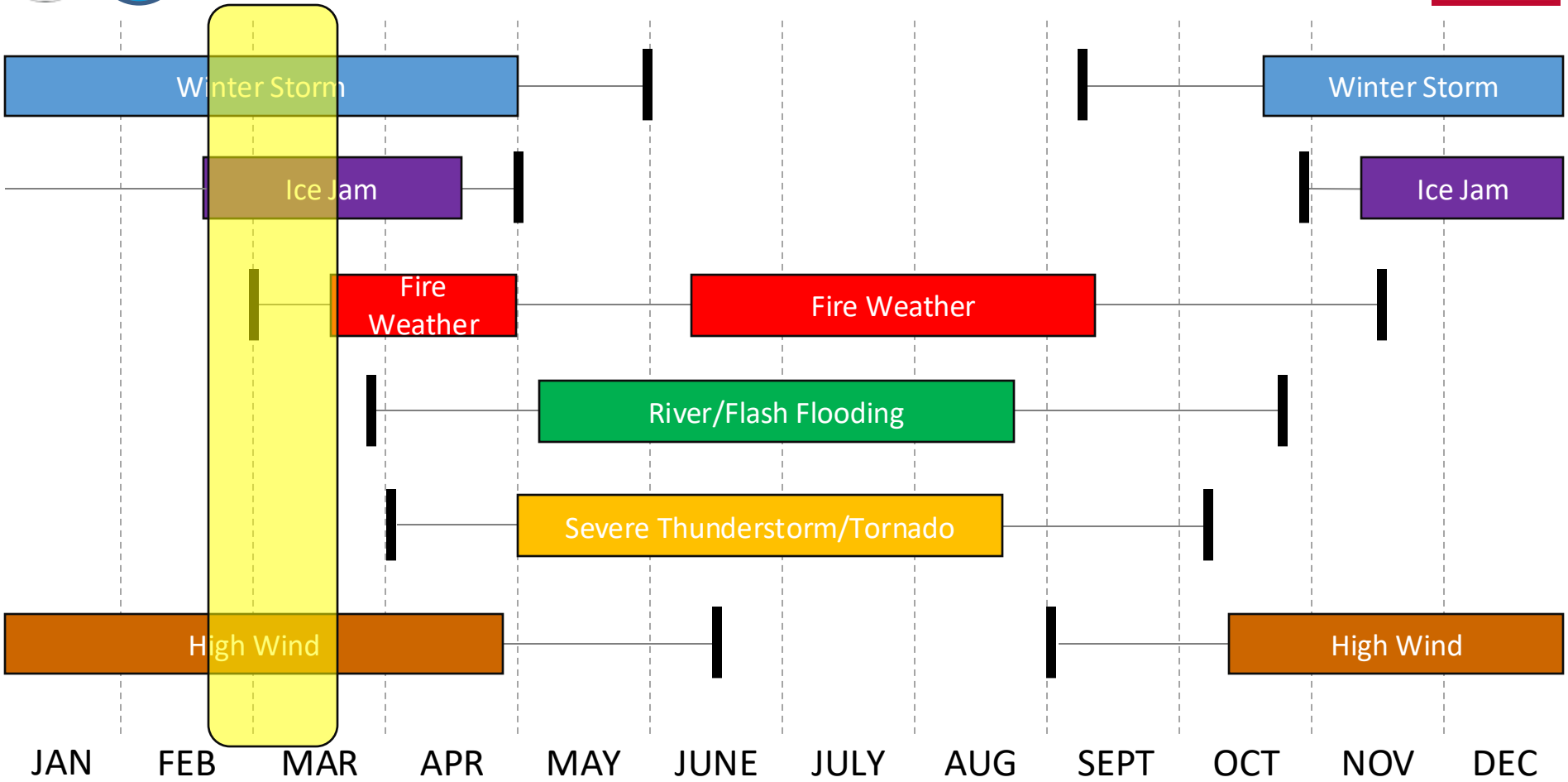


Above average spring runoff will be needed to fill the reservoirs.

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

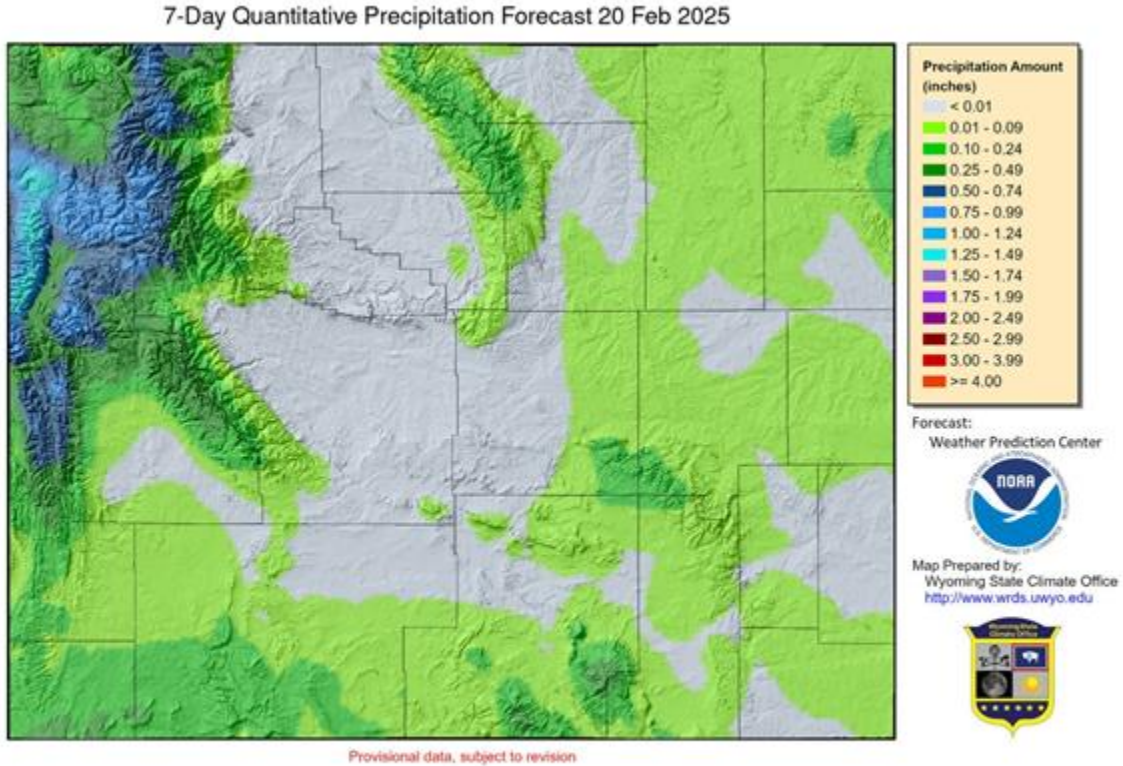
Weather Info & Forecasts

NWS Wyoming Typical Hazard Calendar



7-Day Total Precipitation Forecast

(Feb 20 - Feb 26)

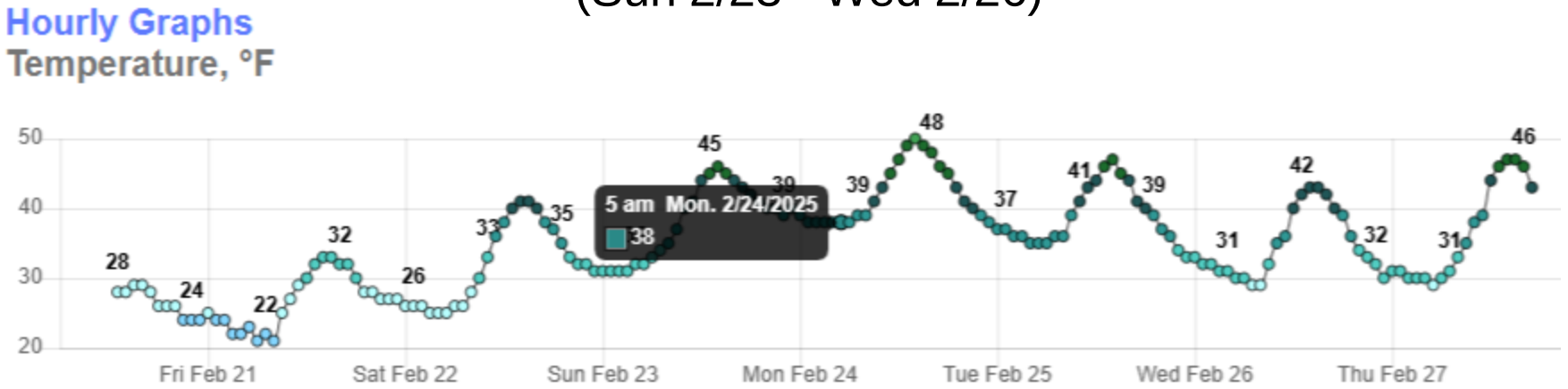


- Snow lingers across the southwest this evening
- Mountain snow in west Sunday through Tuesday
- Mostly dry across rest of state over the next week
- Non-precip related note: Watch for low-elevation melting early next week - more info on next few slides

https://bit.ly/7_dayQPForecast

First Pulse of Spring Warmth - Low-Elevation Snowmelt Ponding/Flooding Possible

(Sun 2/23 - Wed 2/26)



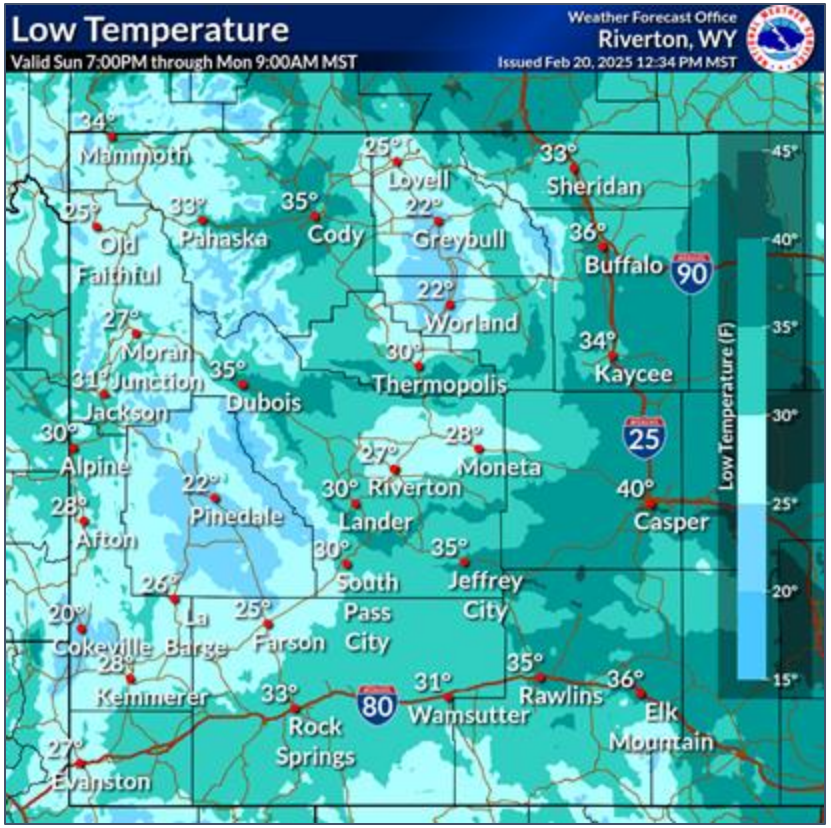
- The above graphic shows the **Hourly Temperature Forecast** for Sinks Canyon State Park near Lander
  - Used as an example point - this is generally applicable across all WY valleys & basins
- Notice the above freezing temperatures overnight into Monday and Tuesday mornings
- Breezy warm winds expected too
- Not anticipating widespread flooding impacts at this time, but rivers are likely to surge for a few days as low-elevation snow melts

First Pulse of Spring Warmth - Low-Elevation Snowmelt Ponding/Flooding Possible

(Sun 2/23 - Wed 2/26)

- Forecast overnight low temperatures Sunday night into Monday morning

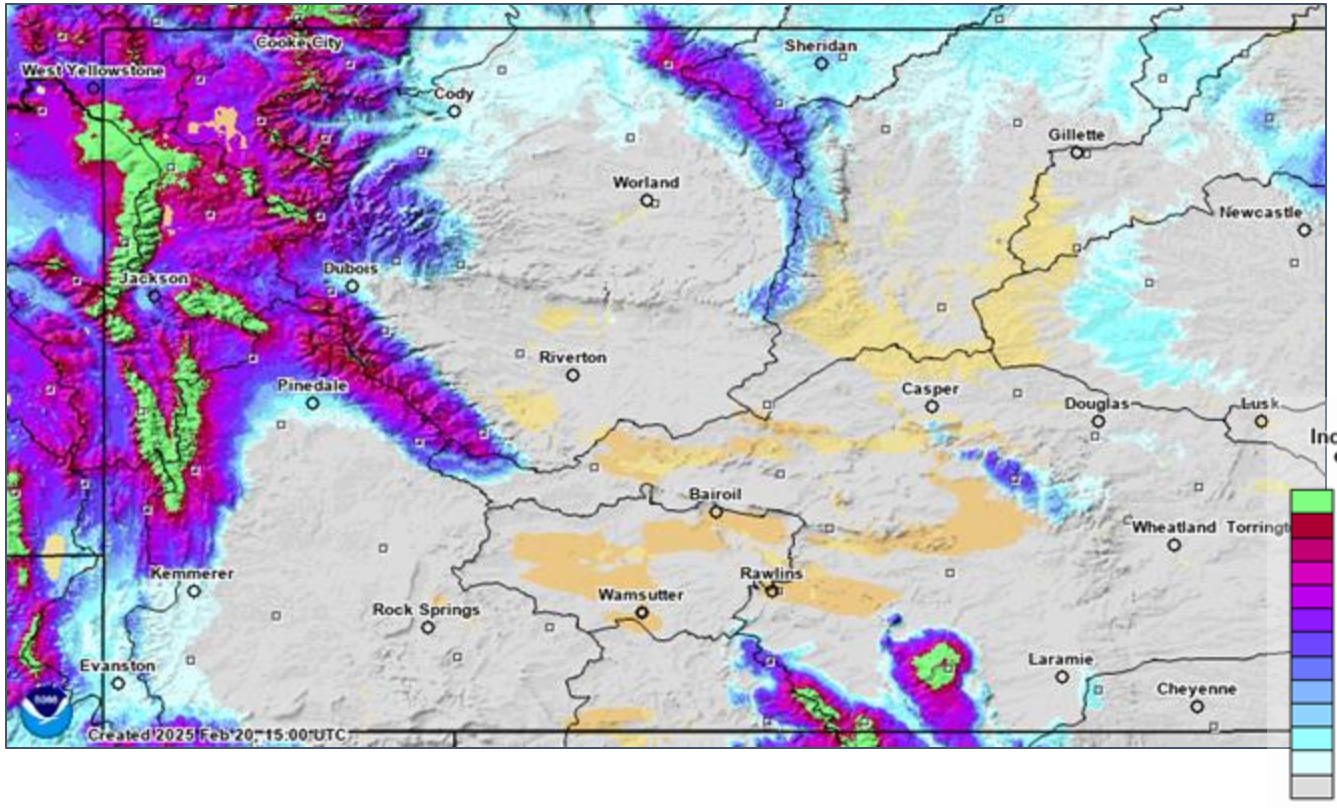
- Any areas that are around 30 or above are the areas of some concern
  - Temps near or slightly above freezing will increase the rate of melting the next day



First Pulse of Spring Warmth - Low-Elevation Snowmelt Ponding/Flooding Possible

(Sun 2/23 - Wed 2/26)

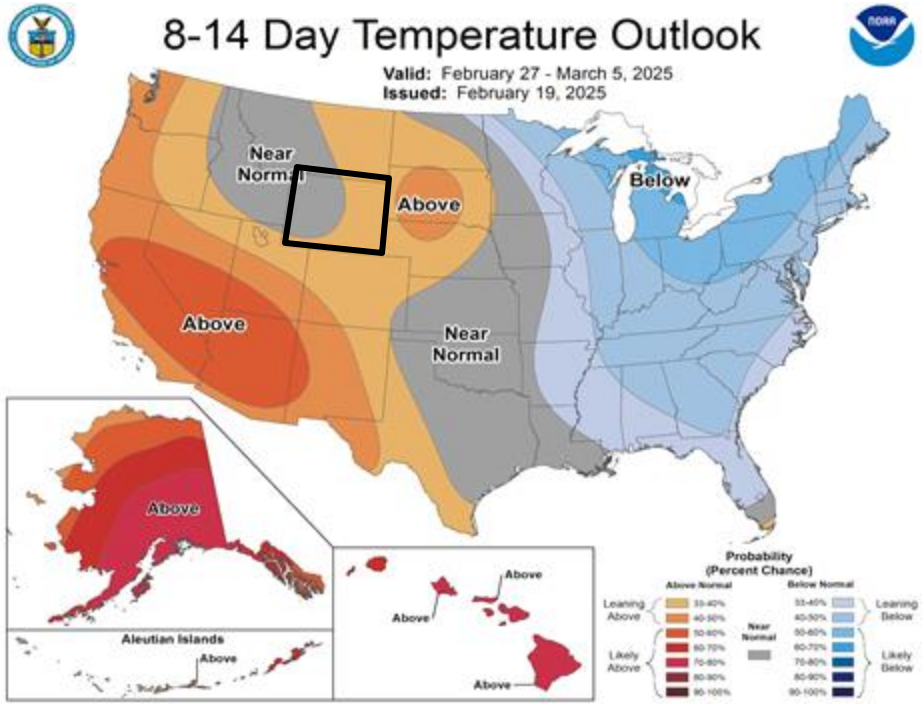
- Current liquid water in the snowpack across the state
- For low-elevations, highest across the northern basins, and in the southwest

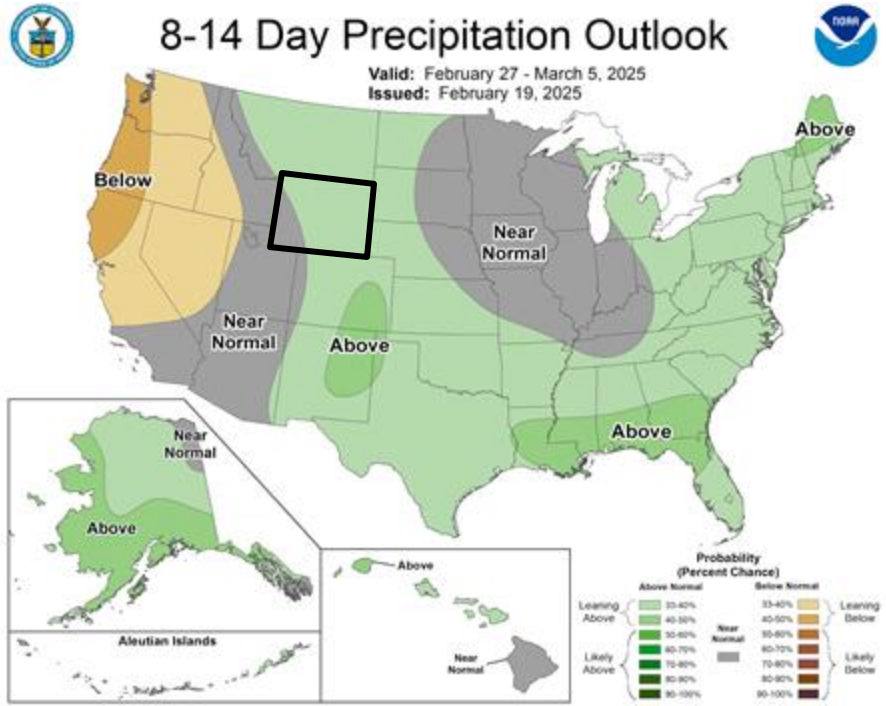


8-14 Day Outlooks

(Feb 27 - Mar 5)

https://bit.ly/CPC8_14Day





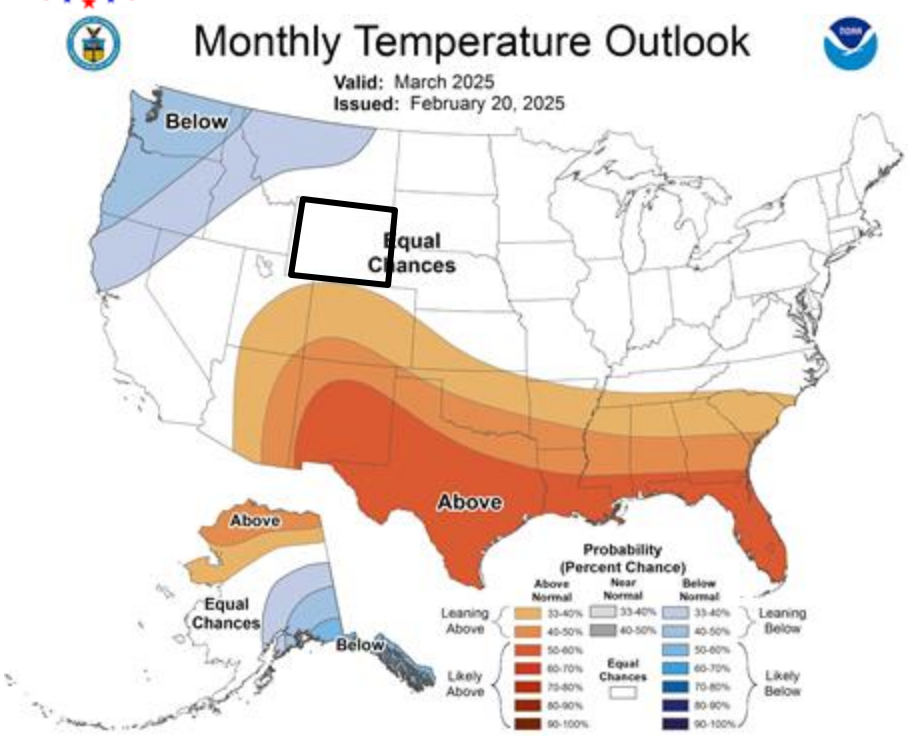
- Slight lean toward above normal temps for east
- Interactive Version: cpc.ncep.noaa.gov/products/predictions/814day/interactive/index.php

- Slight lean toward wetter for most of the state, save for southwest

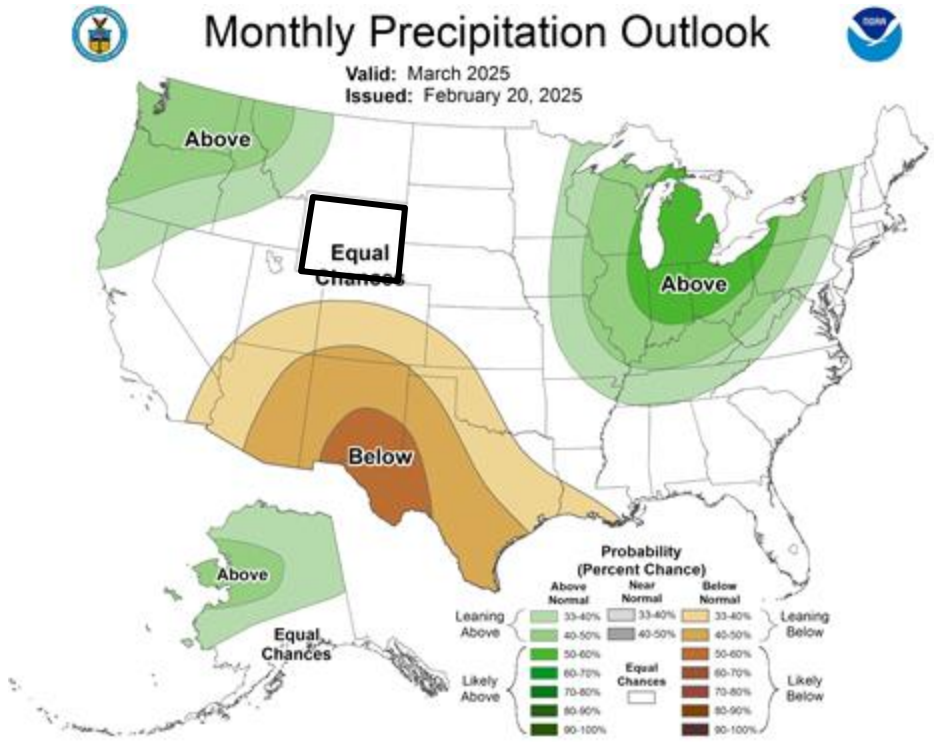
1-Month Outlooks

(March)

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



- Equal chances of above, below, or normal temperatures
- Climatology (30-yr averages) are the best bet

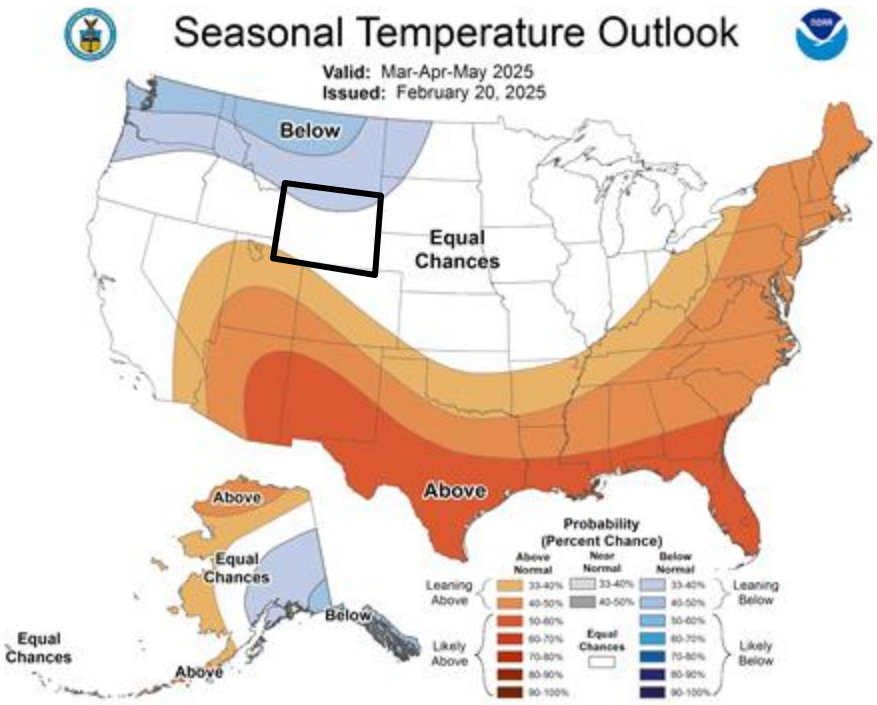


- Equal chances of above, below, or normal temperatures
- Climatology (30-yr averages) are the best bet

Early Spring Outlook

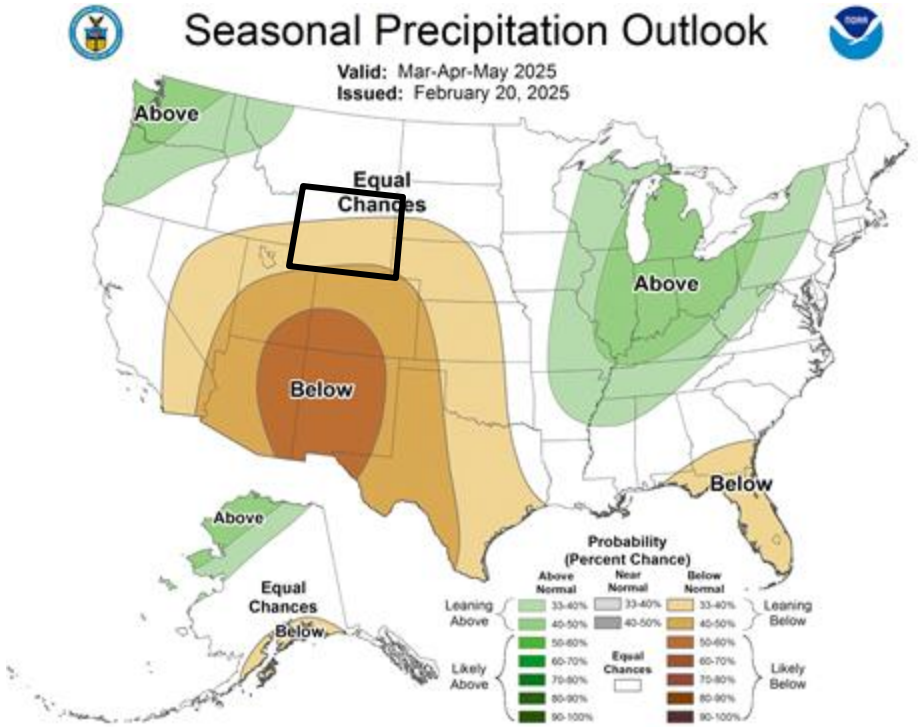
https://bit.ly/CPC_Seasonal

(Mar-Apr-May)



- Slight lean toward cooler for far north

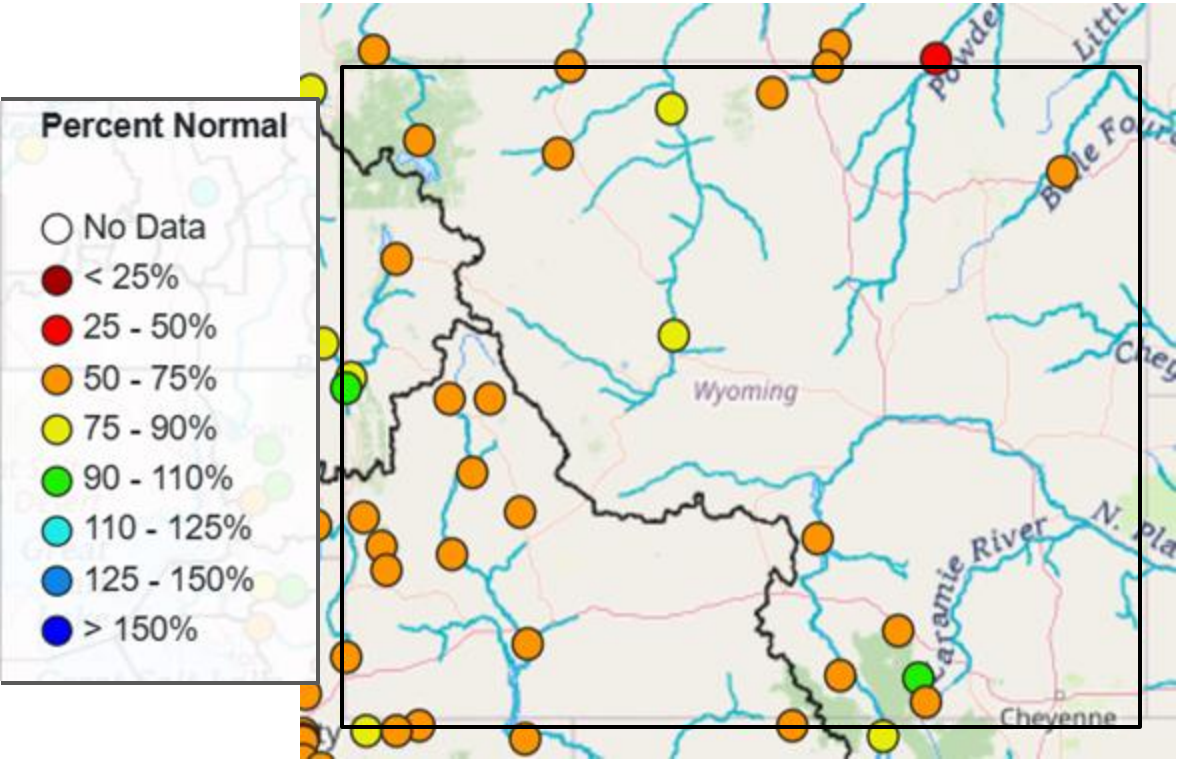
(Mar-Apr-May)



- Slight lean toward drier for souther ⅔ of state

Wyoming Water Supply Outlook

Valid April-September



April thru September runoff volumes appears to be near-to-below normal.

This graphic depicts the NWS water supply outlook locations, colored by the percent of April-thru-September volumetric normal. Many Wyoming stations are projected to see lower-than-normal volumes this season (yellows and oranges).

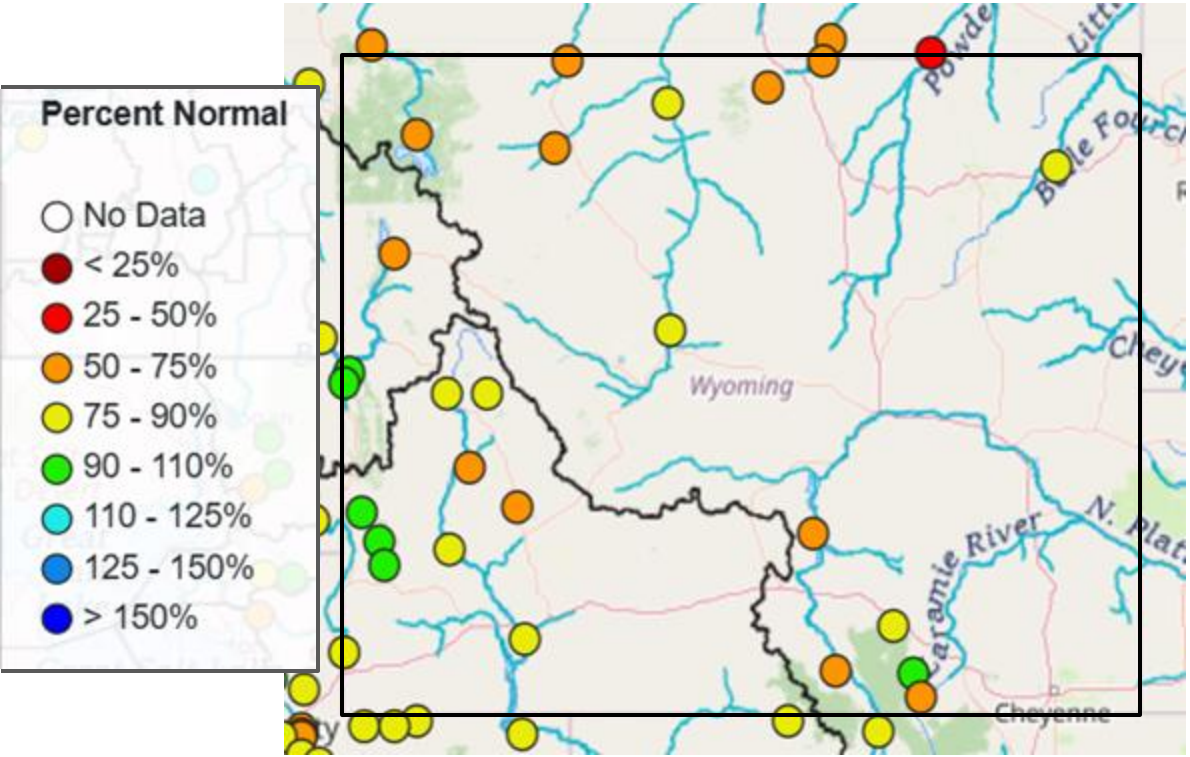
Forecast valid 1 February 2025.

**Please note that the Colorado River basin colors reflect April-thru-July percent-of-normals.*

https://www.cbrfc.noaa.gov/wsup/graph/west/map/esp_map.html

Wyoming Water Supply Outlook

Valid April-September



April thru September runoff volumes appears to be near-to-below normal.

This graphic depicts the NWS water supply outlook locations, colored by the percent of April-thru-September volumetric normal. Many Wyoming stations are projected to see lower-than-normal volumes this season (greens, yellows and oranges).

Forecast valid 19 February 2025.

**Please note that the Colorado River basin colors reflect April-thru-July percent-of-normals.*

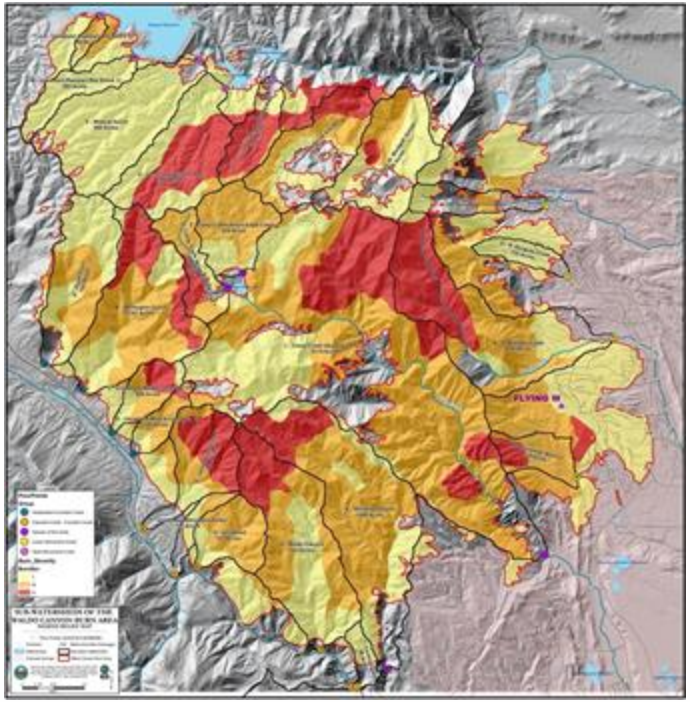
https://www.cbrfc.noaa.gov/wsup/graph/west/map/esp_map.html

Highlight of the Month:

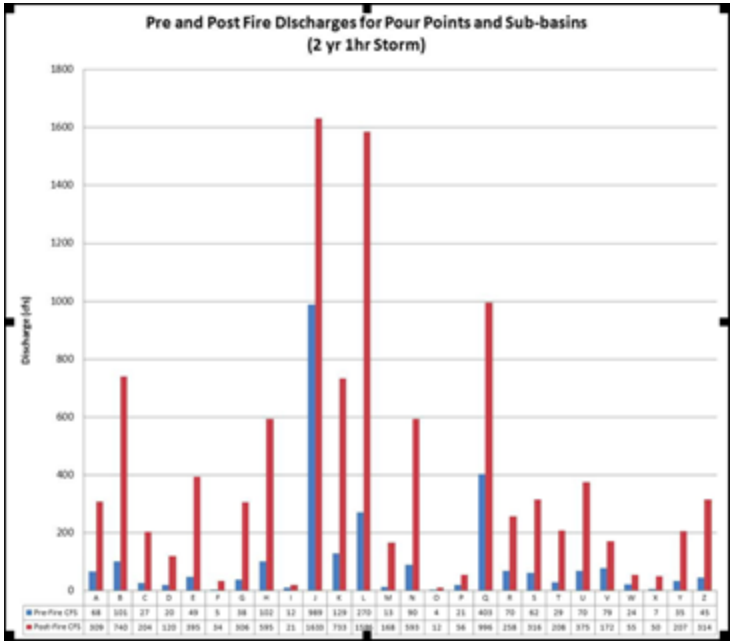
Coalitions & Collaboratives: Post wildfire efforts

COCO

COALITIONS &
COLLABORATIVES.INC



Mission & Vision



To advance healthy and resilient communities through collaborative conservation and restoration.

A future where ecosystems are resilient and communities thrive together.

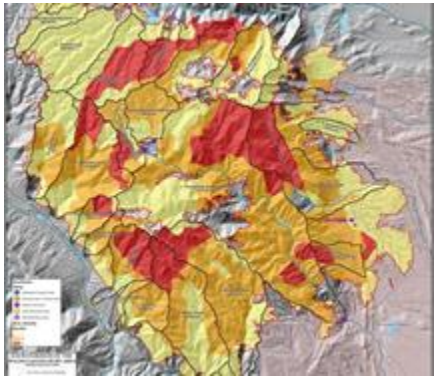






AFTER THE FLAMES











AFTER THE FLAMES

Workforce Development & Navigation

Tools, Resources & Training

Community Focused



WHAT WAS THE FAILURE?
WHERE DID YOU GO WRONG AND WHY?
WHAT WOULD YOU DO DIFFERENTLY NEXT TIME?
WHAT BROADER LESSON CAN BE LEARNED?

POLICY PRIMER AND OVERVIEW

FEMA Programs

- Individual Assistance
- Public Assistance
- Fire Management Assistance Grants (FMAG)

DOI and USFS Programs

- Burned Area Emergency Response (BAER)
- Burned Area Rehabilitation (BAR)

USDA Programs

- The NRCS Emergency Watershed Protection (EWP) Program
- The FSA Emergency Forest Restoration Program (EFRP)

FEMA PROGRAMS

FEMA programs are deployed after a **Disaster Declaration**

The Stafford Act governs all FEMA programs and gives guidelines for what FEMA can do during response and recovery.

Public Assistance (PA) aims to assist local and state governments in rebuilding critical infrastructure and addressing emergency needs.

Individual Assistance (IA) aims to assist individuals in rebuilding damage to their homes or land.

Fire Management Assistance Grants (FMAG) contain the **Hazard Mitigation Grant Program** which can be used to enhance damaged infrastructure. Funding for this program is based on a percentage of funding for PA and IA.



USFS PROGRAMS

Burned Area Emergency Response (BAER)

- Conducts a soil burn and values at-risk assessment to determine if emergency stabilization treatments would be effective.
- BAER reports provide valuable information on the burned landscape for private and state.

Burned Area Rehabilitation (BAR)

- Provides longer-term funding for facility maintenance and restoration.
- Funding is provided through the BIL and is less restrictive than BAER funding.



NRCS PROGRAMS

Emergency Watershed Protection (EWP) Program

Conduct emergency measures to protect life and property

Actions include removing/reducing hazards caused by natural disasters, streambank stabilization, channel sediment and debris removal, infrastructure repair, and slope stabilization.



AFTER THE FIRE: OUR SOLUTIONS

COMMUNITY NAVIGATOR

- THE POST-FIRE COMMUNITY NAVIGATOR PROGRAM
  - DEVELOP AND DELIVER THE TRAINING
  - PROVIDE RESOURCES AND TOOLS FOR COMMUNITIES IMPACTED BY FIRE
  - CREATE COMPREHENSIVE PEER-LEARNING WEBINARS AND PROGRAMS TO SHARE SUCCESSES AND AVOID REPEATING MISTAKES
  - MENTOR COLLABORATIVES THAT WORK ON POST-FIRE RECOVERY
- SUPPORT EFFORTS FOR BROADER CROSS-BOUNDARY APPROACHES
- DEVELOP PRE-FIRE PLANNING FOR POST-FIRE IMPACTS



A cadre of trained post-fire navigators; and funding support for navigators to provide direct post-fire assistance to affected communities





AFTER THE FLAMES RESOURCE PAGE

AFTER THE FLAMES WEBINARS/SEMINARS

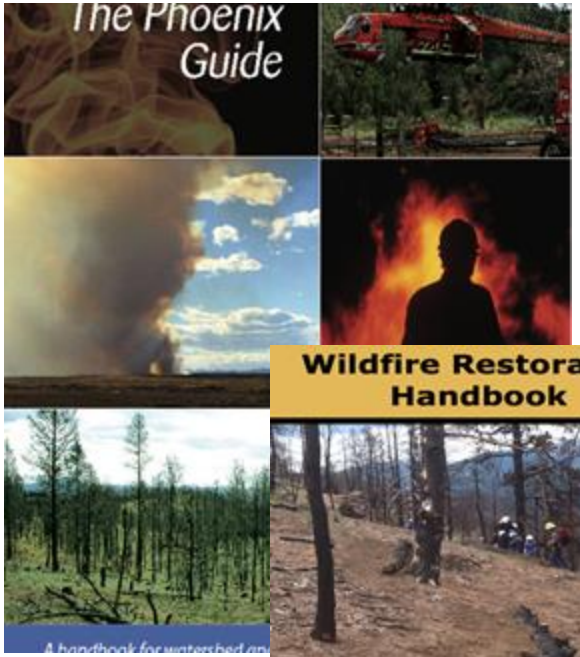
MENTORING/RECOVERY SUPPORT TO COMMUNITIES

Leadership - WFLC, WGA

WORKSHOPS
WEBINARS
BI-ANNUAL
CONFERENCE



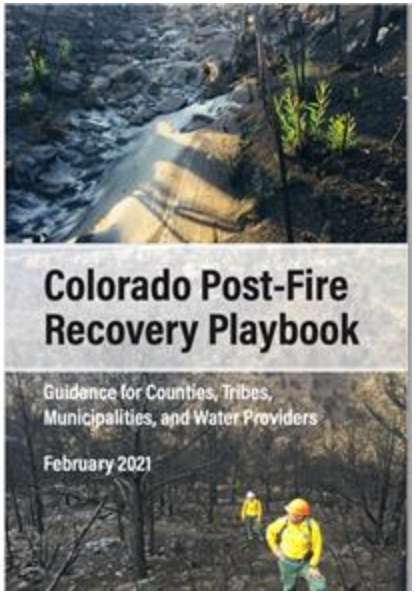
TOOLS TRAININGS RESOURCES











After the Flames Field Event 2025

ATF Field Event Application – April 30–May 2, Flagstaff, AZ

Join us in Flagstaff, AZ, from April 30–May 2 for the **After the Flames Field Event**, a hands-on learning experience focused on post-fire recovery. This event will feature expert speakers, classroom discussions, and field visits covering flood modeling, emergency notification systems, natural channel design, and engineering solutions. Space is limited—stay tuned for registration details!

Space is limited to 25 participants, and selection is based on application responses. Applying does not guarantee participation. Applications will be reviewed on a rolling basis, with priority given to those with an immediate need and a clear plan to apply the training in their community

Post-Fire Resilience and Recovery

A community of practice for those working & planning for community resilience and recovery post-fire

Conversation Wall | Welcome | Events | **Resources** | Members

CAPACITY BUILDING TECHNICAL ASSISTANCE







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COCO

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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!