WY Conditions & Outlooks:

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

August 15, 2024

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

Presentation Outline

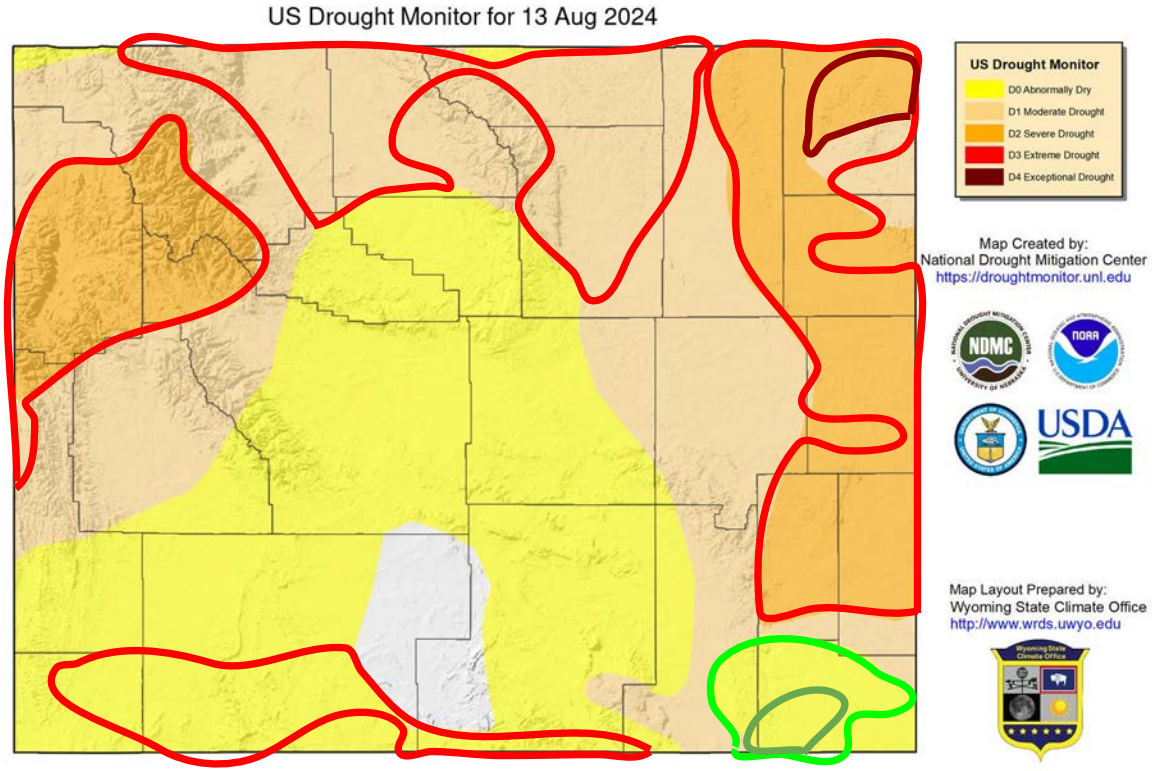
- **Current Conditions:** Overview
  - Drought, Temperature, Precipitation, and Soil Moisture
  - Streamflows
  - Water Calls & Allocations
- **Outlooks:**
  - Temperature & Precipitation
  - Wildland Fire Potential & Outlook
- **Highlight of the Month:**
  - NWS's *New* Drought Information Statement Product
- **Questions**

Current Conditions

US Drought Monitor for August 13, 2024

(Released Thursday, August 15th, 2024)

Valid 8 a.m. EDT



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 15 Aug 2024 https://www.wrds.uwyo.edu

https://droughtmonitor.unl.edu

Drought Level	Percentile
None	>30
D0 (Abnormally Dry)	21 to 30
D1 (Moderate Drought)	11 to 20
D2 (Severe Drought)	6 to 10
D3 (Extreme Drought)	3 to 5
D4 (Exceptional Drought)	0 to 2

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

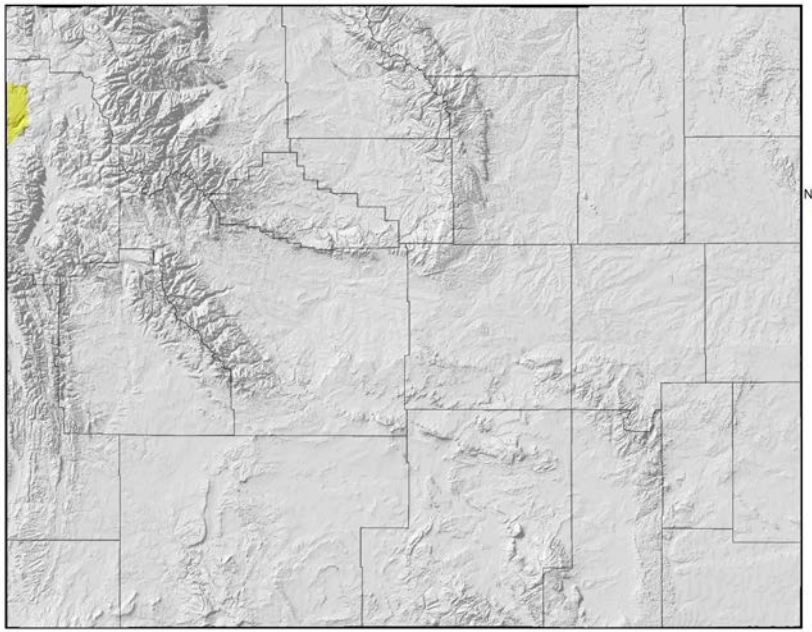
One-category degradations in the north, south, east, and west with a **two-category** degradation in the far northeast. The southwest saw **one-** and **two-** category improvements thanks to recent precipitation since the last webinar.

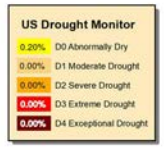
droughtmonitor.unl.edu

WRDS Water Resources Data System

One Year Ago

US Drought Monitor for 15 Aug 2023





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

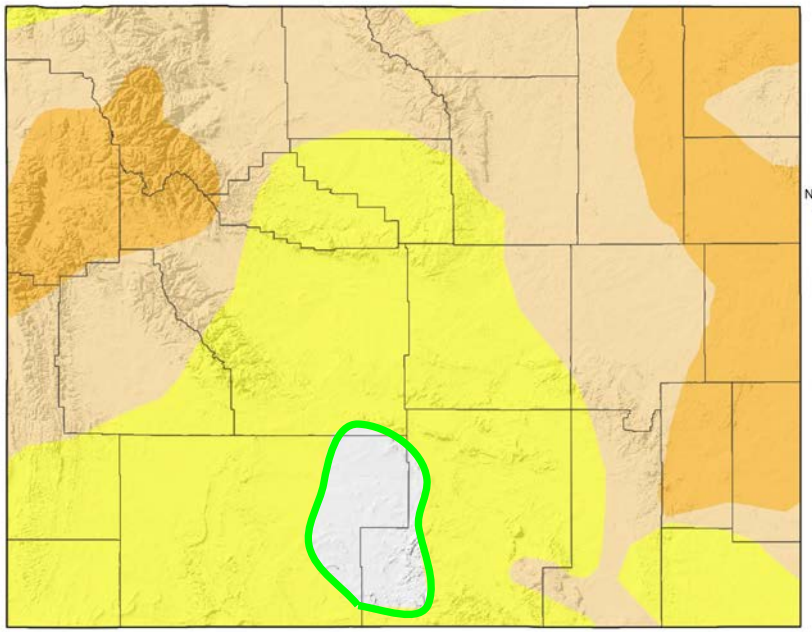
Map Layout Prepared by:
Wyoming State Climate Office
http://www.wrds.uwyo.edu

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Map Layout Created 17 Aug 2023 http:/www.wrds.uwyo.edu

Today

US Drought Monitor for 13 Aug 2024





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

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

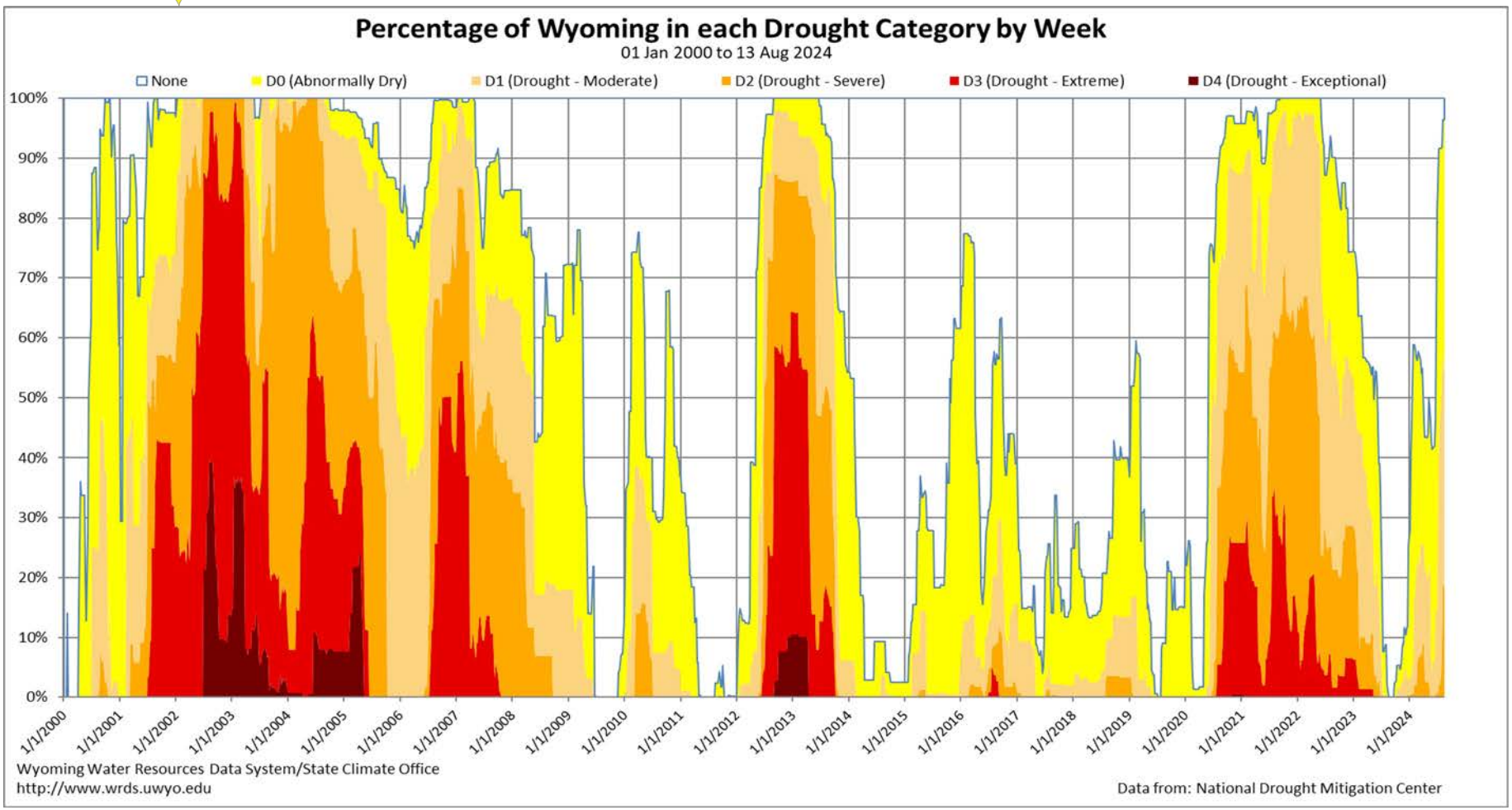
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Map Layout Created 15 Aug 2024 https://www.wrds.uwyo.edu

droughtmonitor.unl.edu

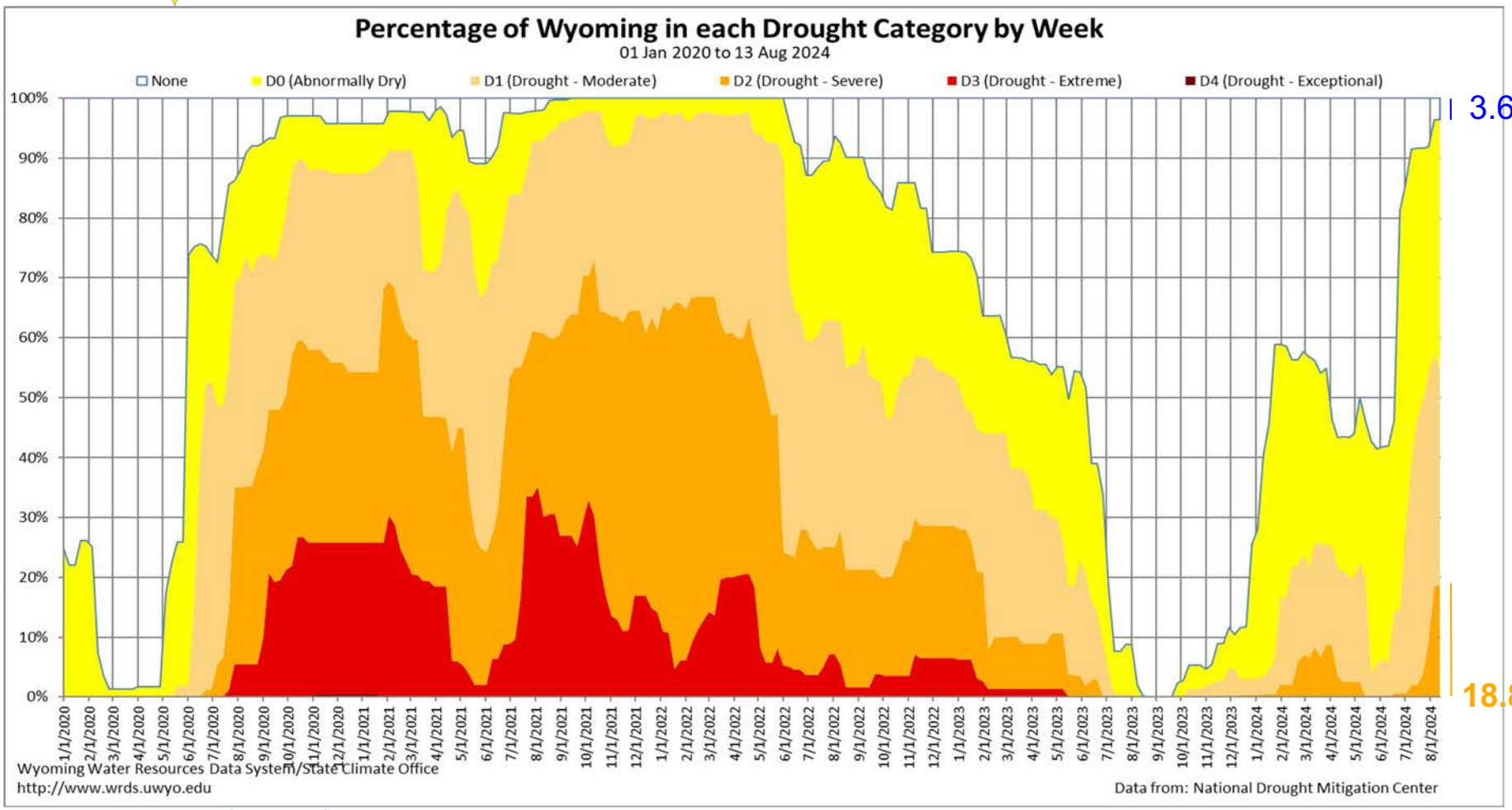
https://droughtmonitor.unl.edu

Wyoming Area Affected: 96.38% D0-D4 ; 54.6% D1-D4



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

WRDS
Water Resources Data System



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

Wyoming Conditions Monitoring Team (WCMT)

The Wyoming Condition Monitoring Team (WCMT) is a collaborative effort of state, tribal, and federal partners that formed in June 2020 in response to an emerging drought. The WCMT corresponds weekly to draft and submit recommendations to the U.S. Drought Monitor on behalf of Wyoming.

Ensure that conditions (too wet, near normal, too dry) throughout the state of Wyoming, and associated impacts to all sectors, are accurately captured & communicated to the appropriate authorities/outlets, year-round. Create an efficient and sustainable condition-reporting network that gathers/encourages input from those who work in the field.

Wyoming State Climate Office
Water Resources Data System
National Weather Service
Wyoming State Forestry Division
Wyoming Game and Fish
Wyoming Department of Agriculture
Wyoming Office of Homeland Security
Wyoming State Engineer's Office

US Geological Survey
Office of the Tribal Water Engineer
University of Wyoming Extension
US Department of Agriculture
- Natural Resources Conservation Service
- Northern Plains Climate Hub
- Farm Services Agency

Wyoming Water Resources Data System

https://drought.wyo.gov

Drought Monitor Process

National drought map created weekly by Authors from the National Drought Mitigation Center (NDMC), National Oceanic and Atmospheric Administration (NOAA), and US Department of Agriculture (USDA) with input from the states.

Data-driven based upon a consensus of observed percentiles (not averages). A convergence of data, not just one particular index.

Drought is quantified using many factors

- Precipitation
- Streamflow
- Soil Moisture/Groundwater
- Vegetative Health
- Snowpack
- Others

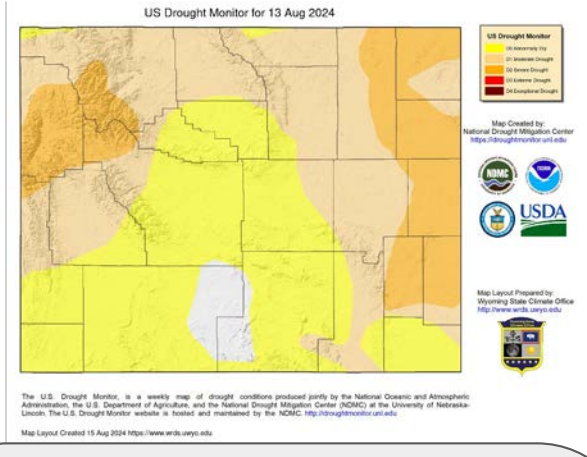
Different parameters used at different times of the year, for example:

- Streamflow not of much use in December
- Snowpack not useful in August

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D3 (Extreme Drought)	3 to 5
D4 (Exceptional Drought)	0 to 2

Drought Monitor Process

- Authored each week by member of NDMC, NOAA, or USDA
- States provide input
  - Each Monday state compilers take turns assessing products like those shown on earlier slides.
  - An internal recommendation is put together and sent to the WCMT.
  - Input from the WCMT is “fed back” to the state compiler, discussion may ensue if there are changes.
  - State compiler sends the recommendations to the US Drought Monitor Author for that week.
- Meanwhile, USDM Author is looking at similar and other products on a national scale.



Three possible outcomes:

- USDM Author accepts recommendations verbatim
- USDM Author rejects recommendations outright
- USDM Author accepts recommendations but ‘tweaks’ them for the final map

Learn more about the USDM at:

What is the USDM:
https://droughtmonitor.unl.edu/About/WhatistheUSDM.aspx

US Drought Monitor Tutorial:
https://drought.unl.edu/Education/Tutorials/usdm.aspx

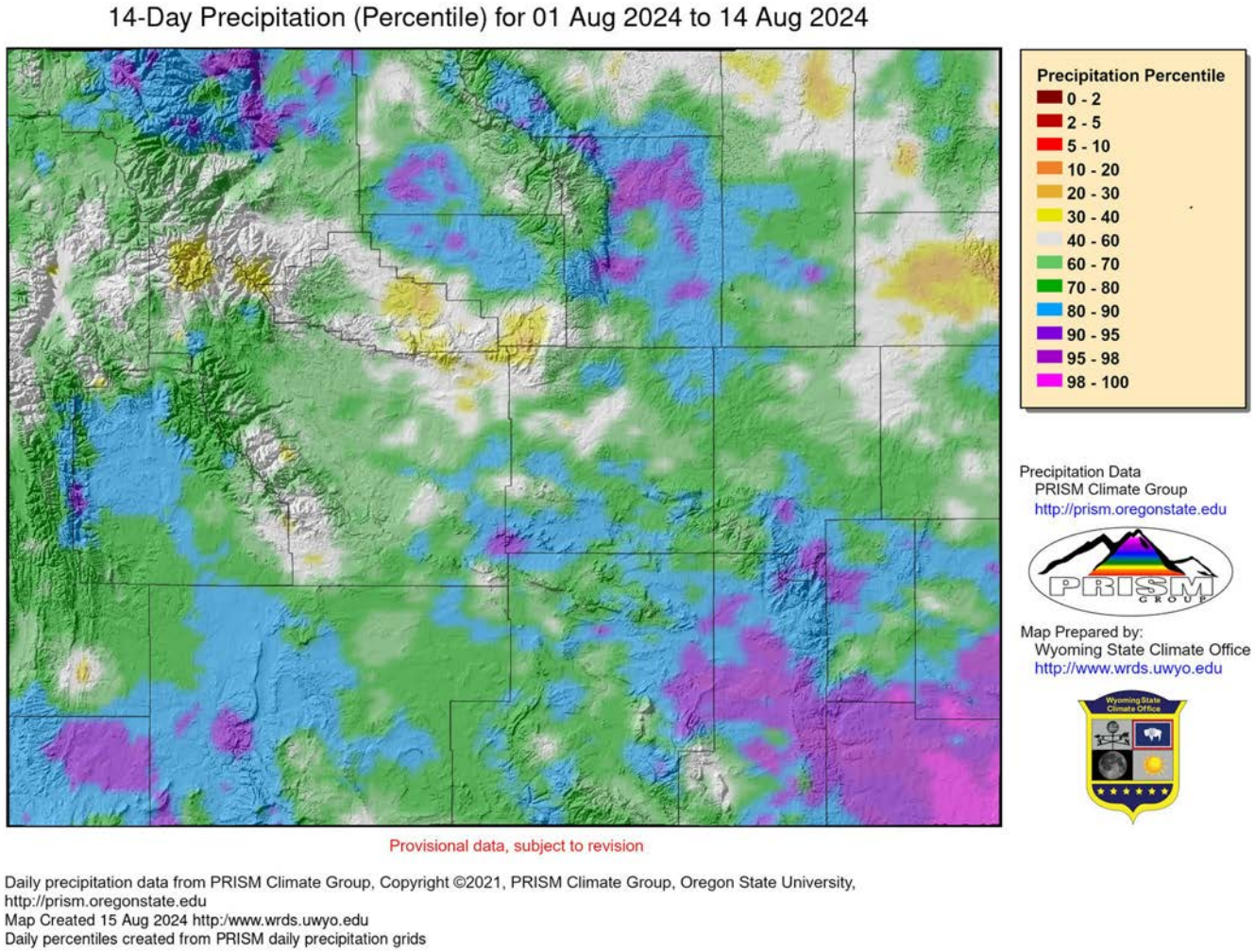
14-Day Precipitation Percentile (01 Aug 2024 to 14 Aug 2024)

Above Median:

- Much of Wyoming

Below Median (Areas of Concern):

- Minor areas of the northeast



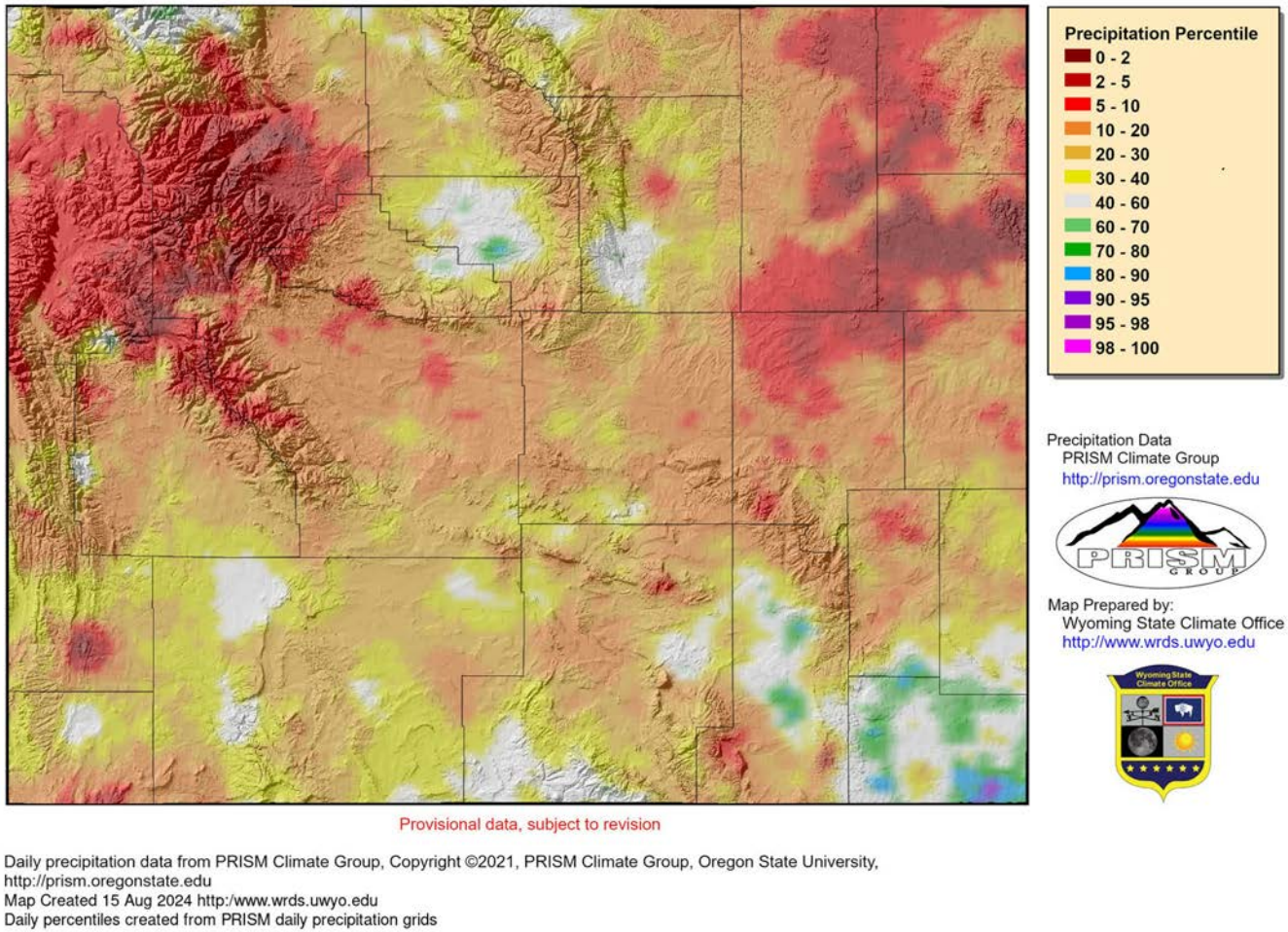
90-Day Precipitation Percentile (17 May 2024 to 14 Aug 2024)

At or Above Median:

- Laramie County
- Very minor scattered other pockets (Washakie and Albany Counties)

Below Median (Areas of Concern):

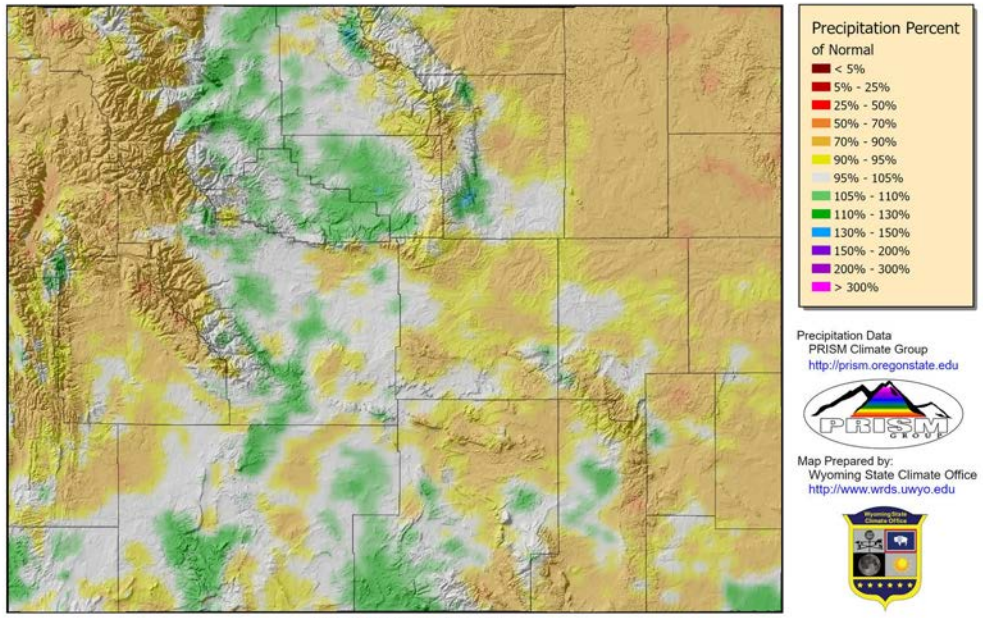
- Rest of the state, especially:
- Northwest and Northeast



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

Current Water Year

Water-Year Precipitation (Percent of 1991-2020 Average) for 01 Oct 2023 to 14 Aug 2024

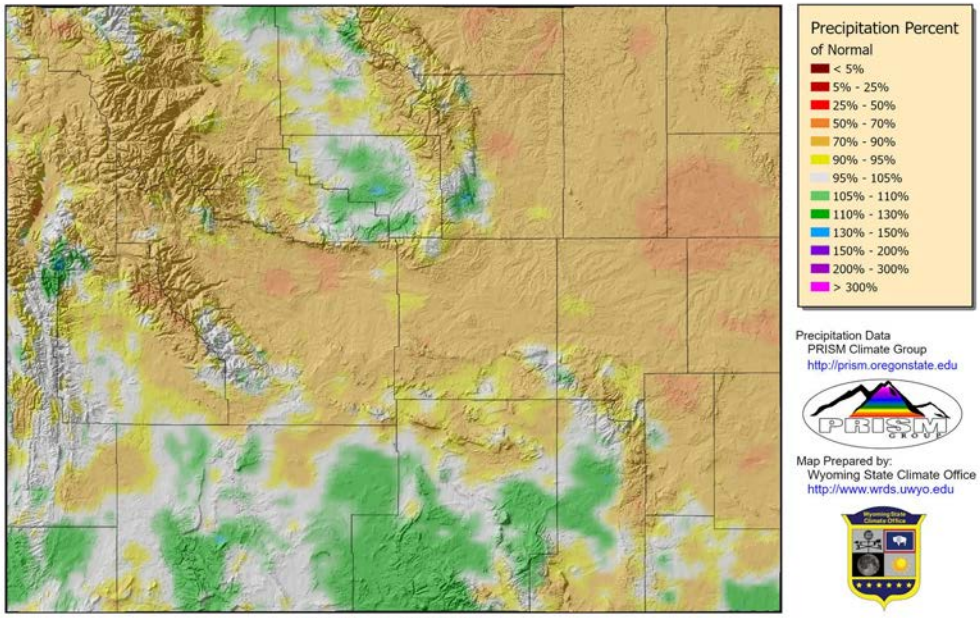


Provisional data, subject to revision

Monthly and Normal precipitation data from PRISM Climate Group, Copyright ©2024, PRISM Climate Group, Oregon State University, http://prism.oregonstate.edu
Map Created 15 Aug 2024 http:/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 2024 to 14 Aug 2024



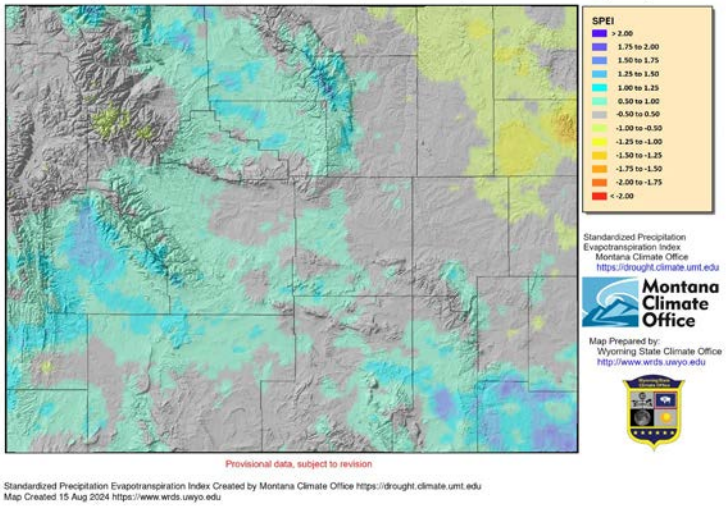
Provisional data, subject to revision

Monthly and Normal precipitation data from PRISM Climate Group, Copyright ©2024, PRISM Climate Group, Oregon State University, http://prism.oregonstate.edu
Map Created 15 Aug 2024 http:/www.wrds.uwyo.edu
Daily averages created from PRISM daily precipitation grids

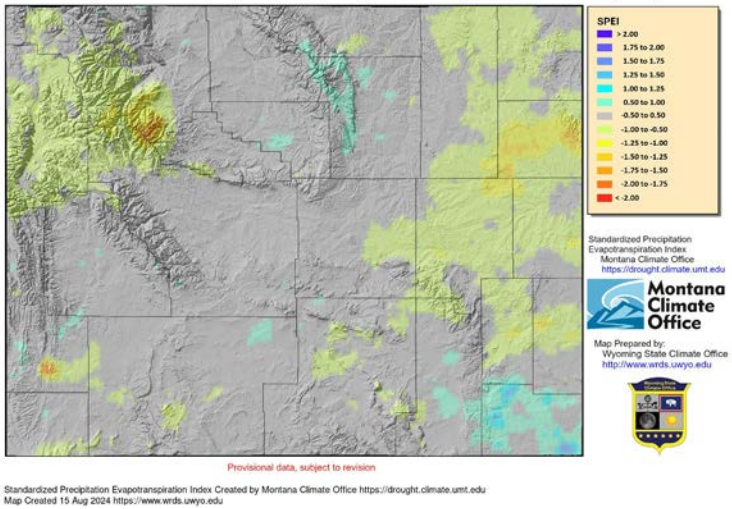
Note: a water year is October 1 through September 30 of the following year.

Standardized Precipitation Evapotranspiration Index (SPEI)

30-Day → Jul 15 - Aug 13



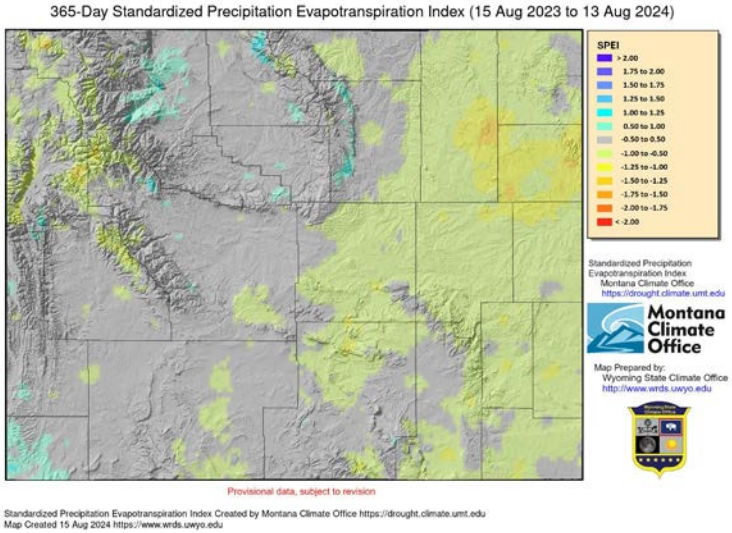
60-Day → Jun 15 - Aug 13



Short term: 30-Day showing wetter conditions, especially the Upper Green and Southeast. Drier conditions in the northeast. 60-Day showing the dryness in the northwest and northeast with Laramie County on the wet side.

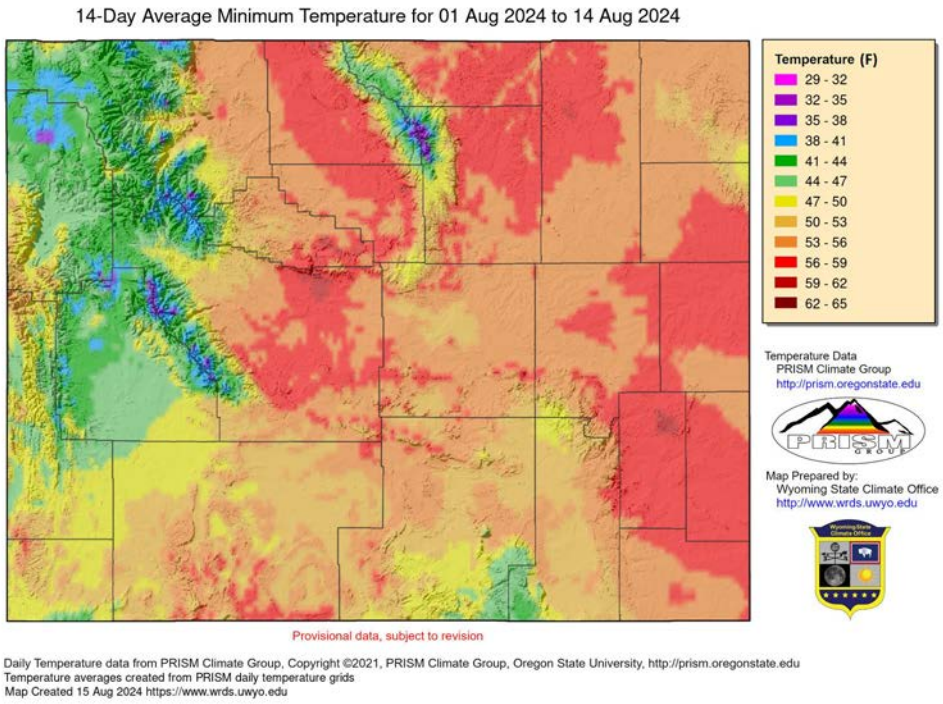
Long term: Fairly neutral in the western half of the state and long-term dryness in the east.

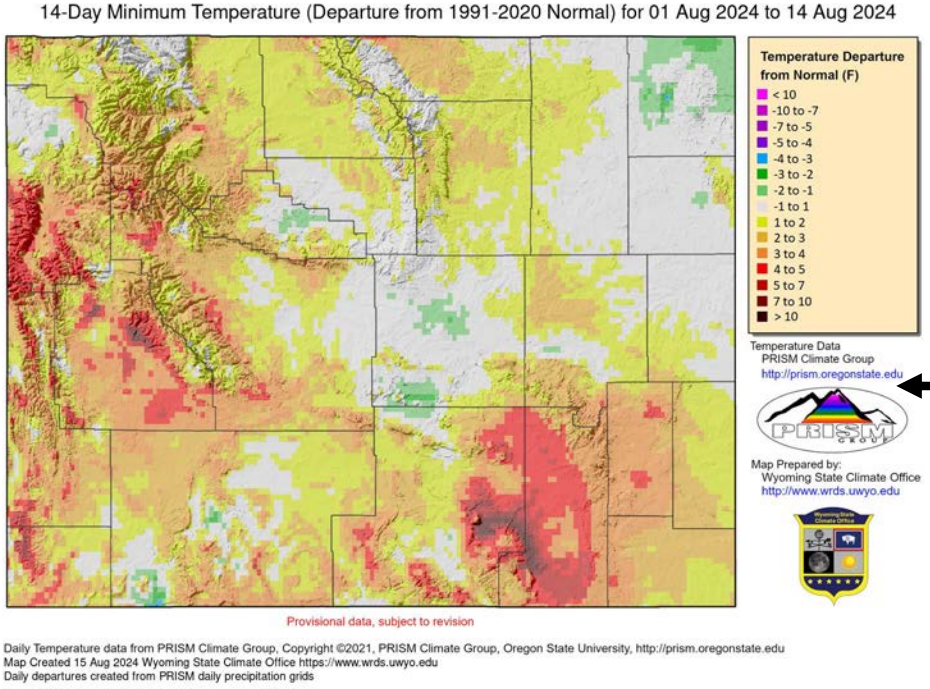
1-Year →



14-Day Average Minimum Temperature (01 Aug to 14 Aug)

- All but highest elevation areas seeing mins >= 32F
- Warmest in East, Powder, Bighorn, and Lower Wind River Basins



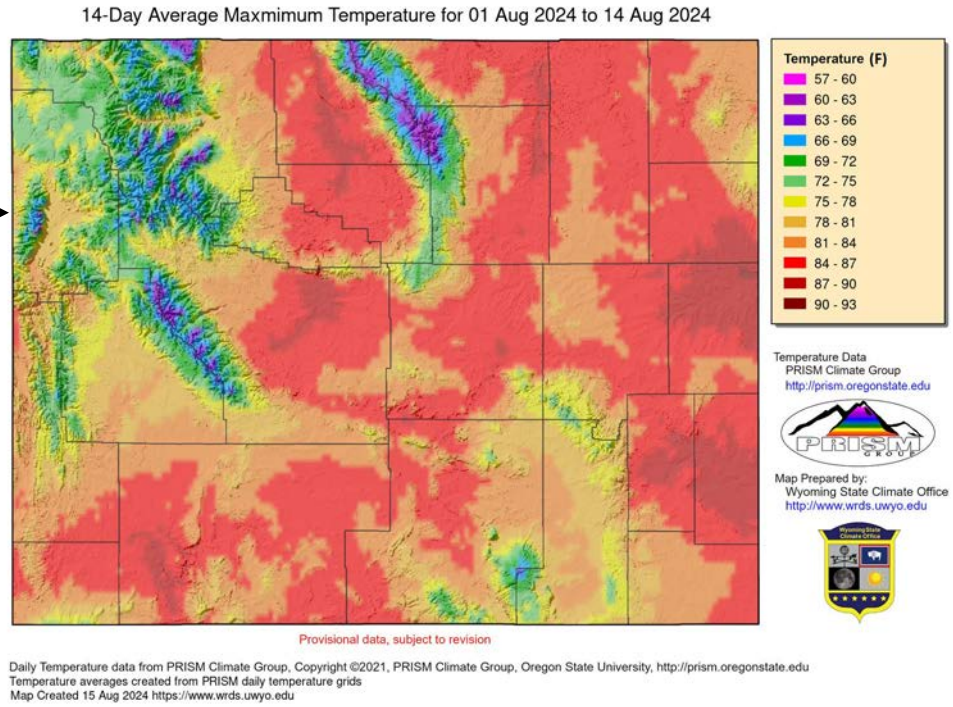


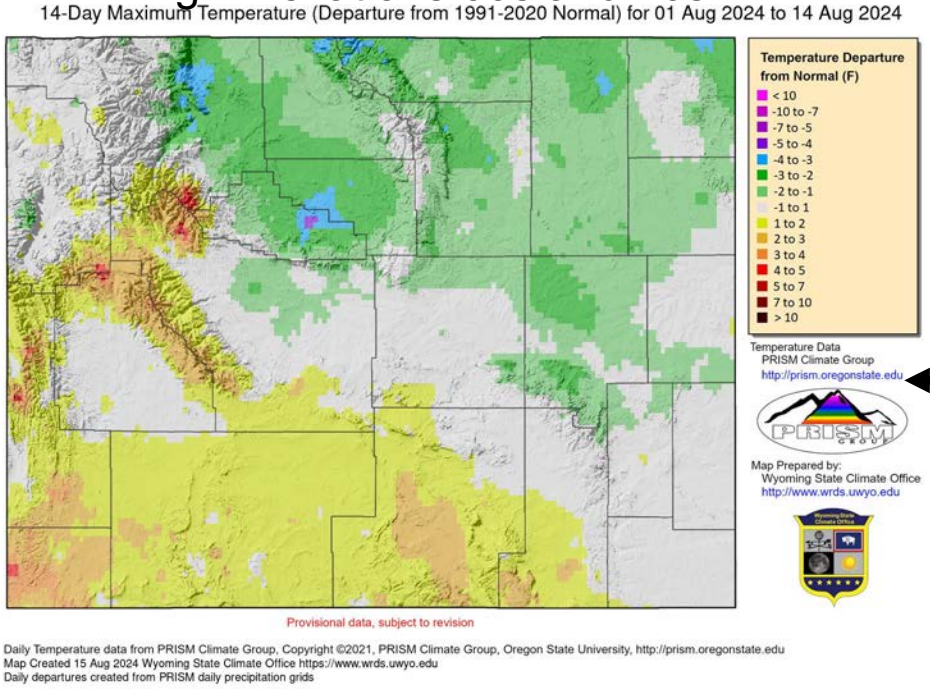
14-Day *Departure from* Normal Average Minimum Temperature

- Western Mountains, Albany and eastern Carbon Counties 4F+ above normal
- Natrona and Weston Counties having largest areas 1F to 3F below normal.
- Remainder normal to 3F above normal

14-Day Average Maximum Temperature (01 Aug to 14 Aug)

- Low elevations mid-80s to 90s.
- Mid elevations upper 70s to low 80s
- High Elevations 60s and 70s



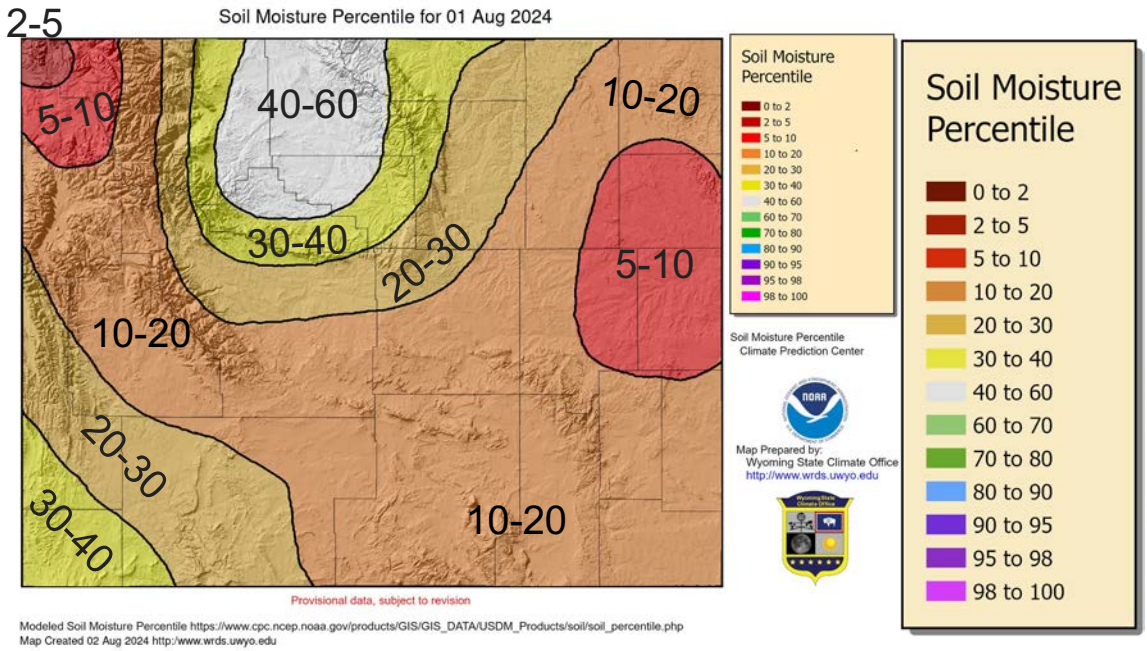


14- Day *Departure from* Normal Average Maximum Temperature

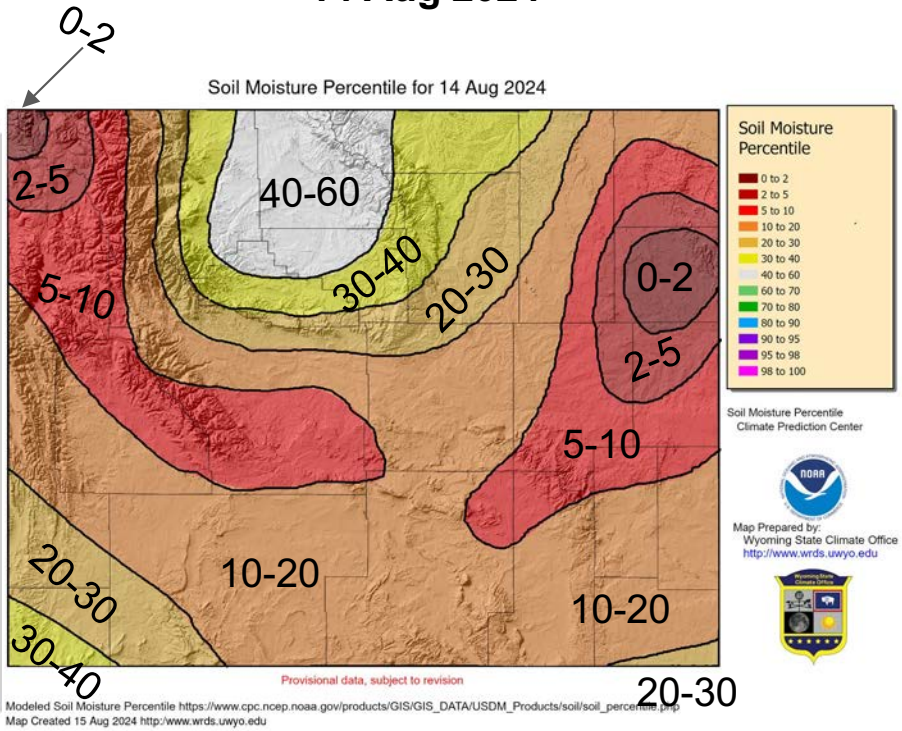
- Winds and Southcentral/Southwest 1F to 3F above normal
- Bighorn Basin and to east 1F to 4F below normal
- Remainder +/-1F of average

Soil Moisture Percentile

~Two Weeks Ago



14 Aug 2024

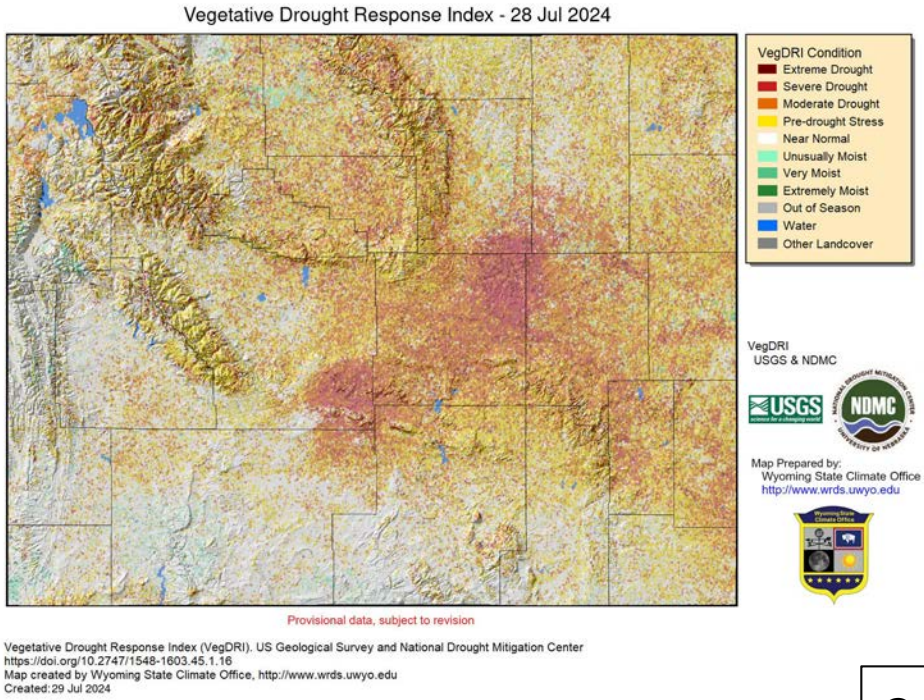


http://www.wrds.uwyo.edu/Soil/Current_SoilMoisture_Ptile.html

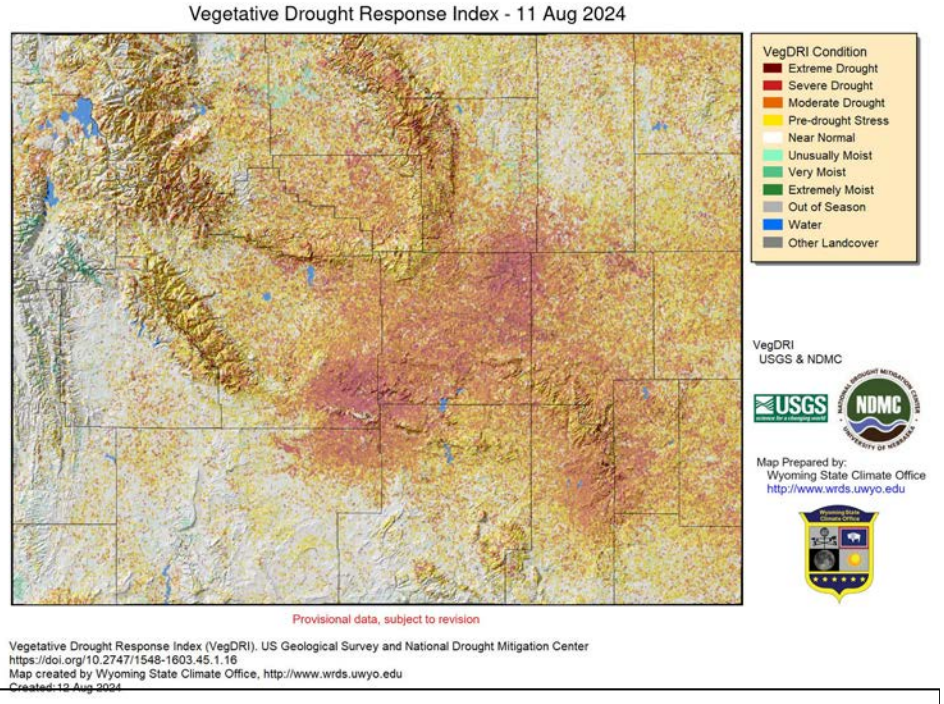
Declines or Status Quo statewide except for very minor improvements in the southeast and Powder River Basin

Vegetation Drought Response Index

~Two Weeks Ago



11 Aug 2024

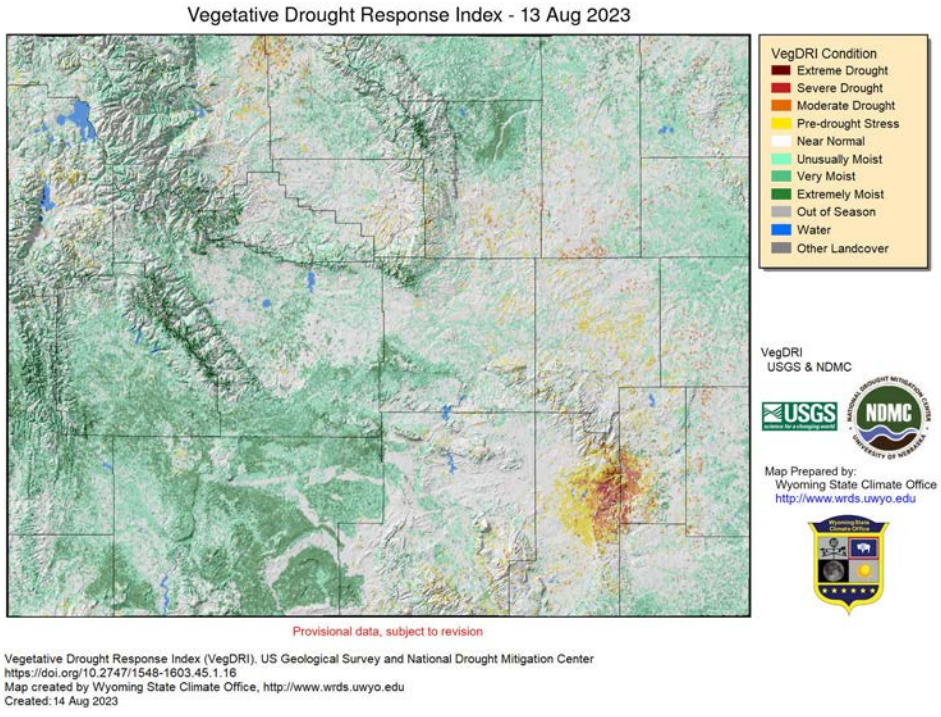


http://www.wrds.uwyo.edu/drought/VegDRI-Current.html

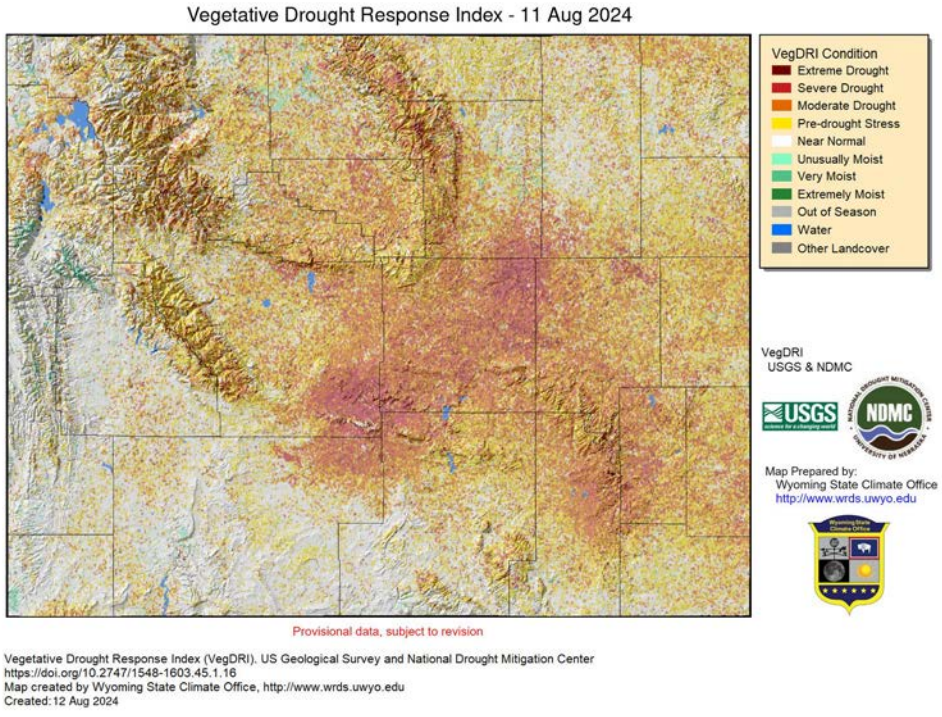
Generally conditions similar to two weeks ago, but a continued decline in the northern Albany and Platte County areas as well as Bighorn Mountains and Basin

Vegetation Drought Response Index

~One Year Ago



11 Aug 2024

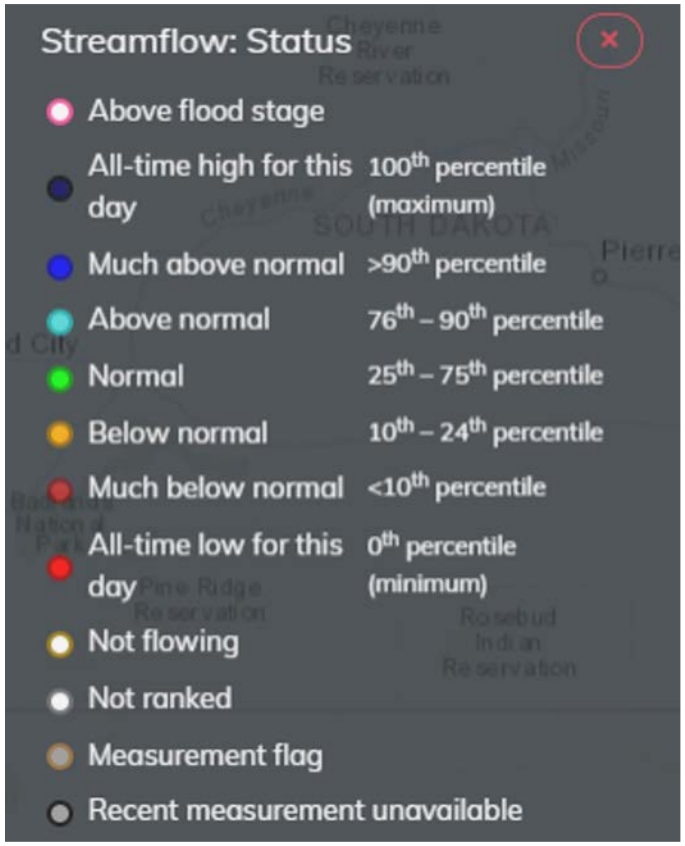


http://www.wrds.uwyo.edu/drought/VegDRI-Current.html

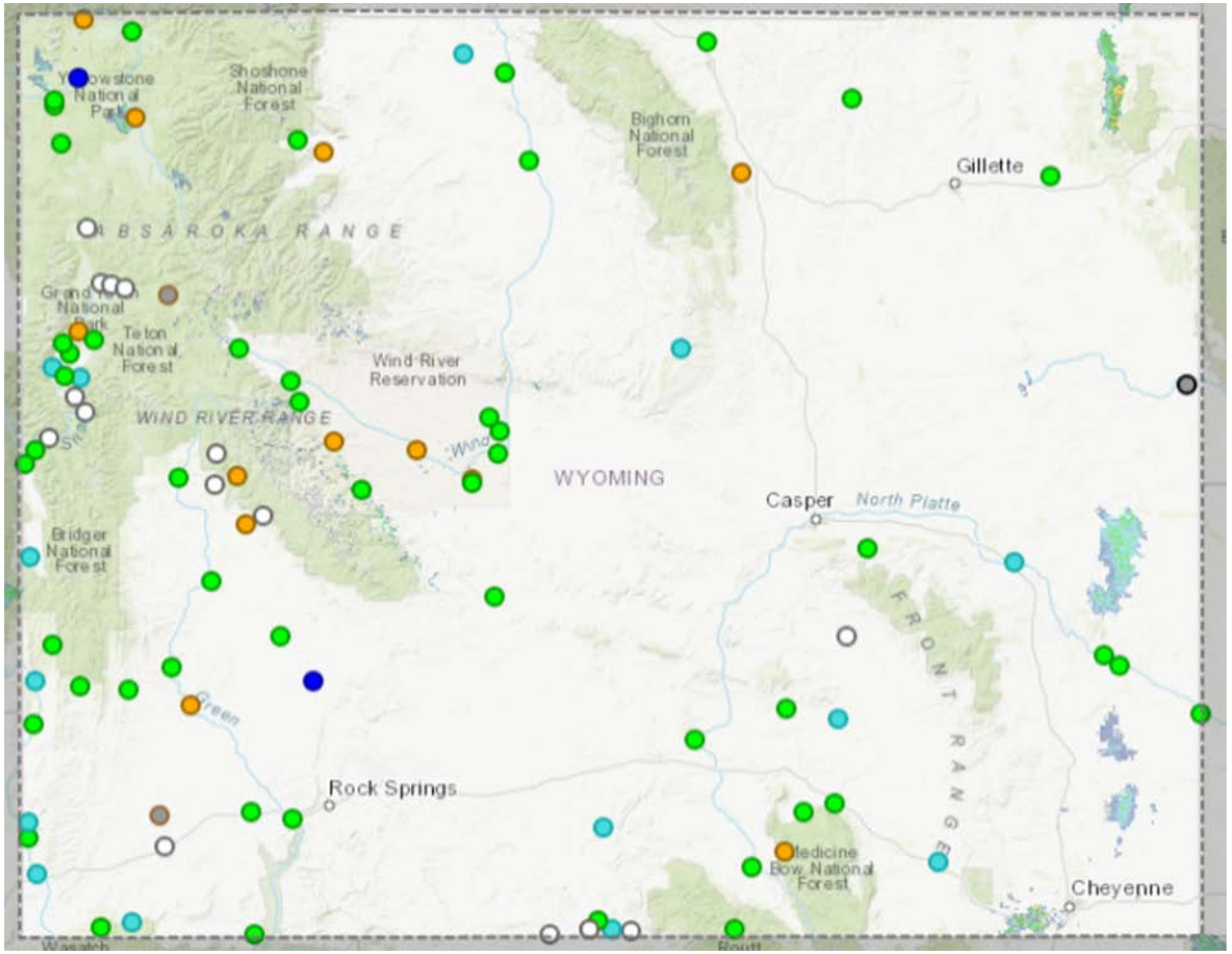
Generally, conditions worse than this time last year statewide.

Current Streamflow Conditions (August 15, 2024)

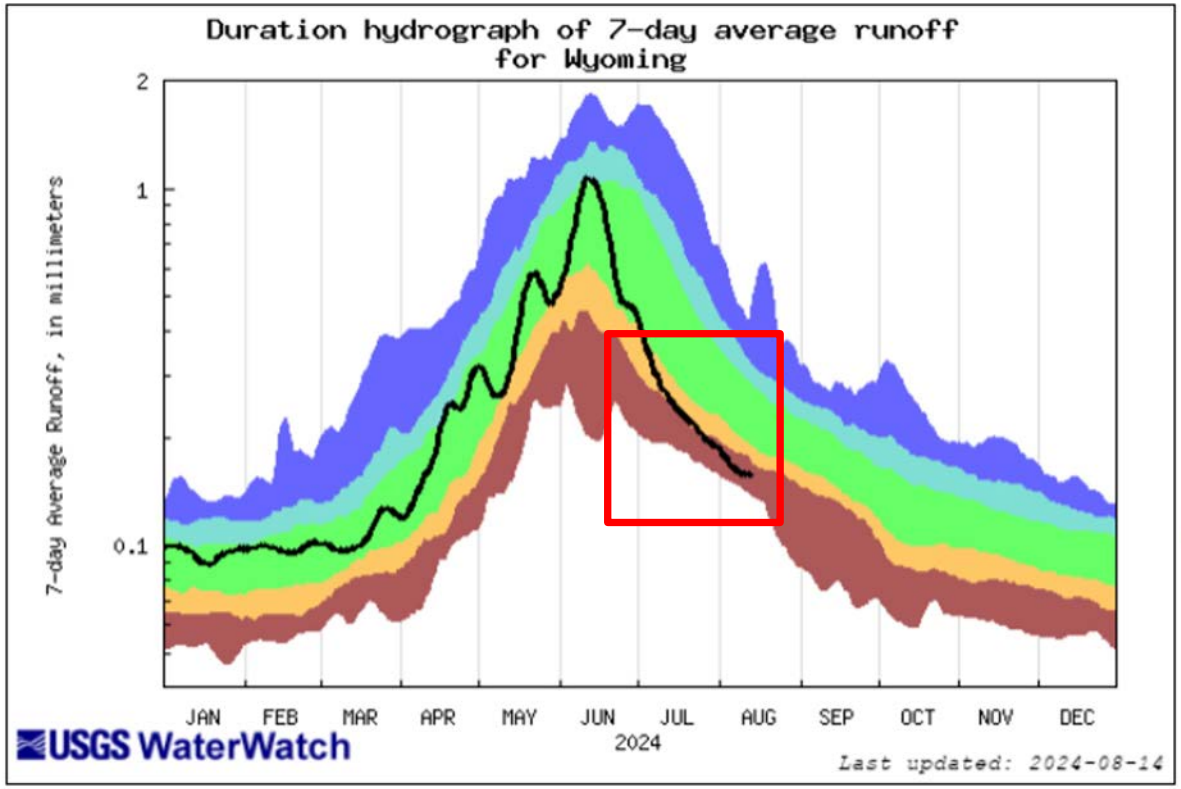
Streamflow Status



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

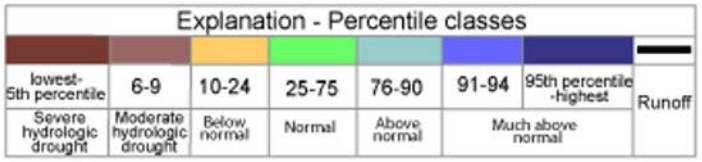


WY Duration Hydrograph of 7-day runoff



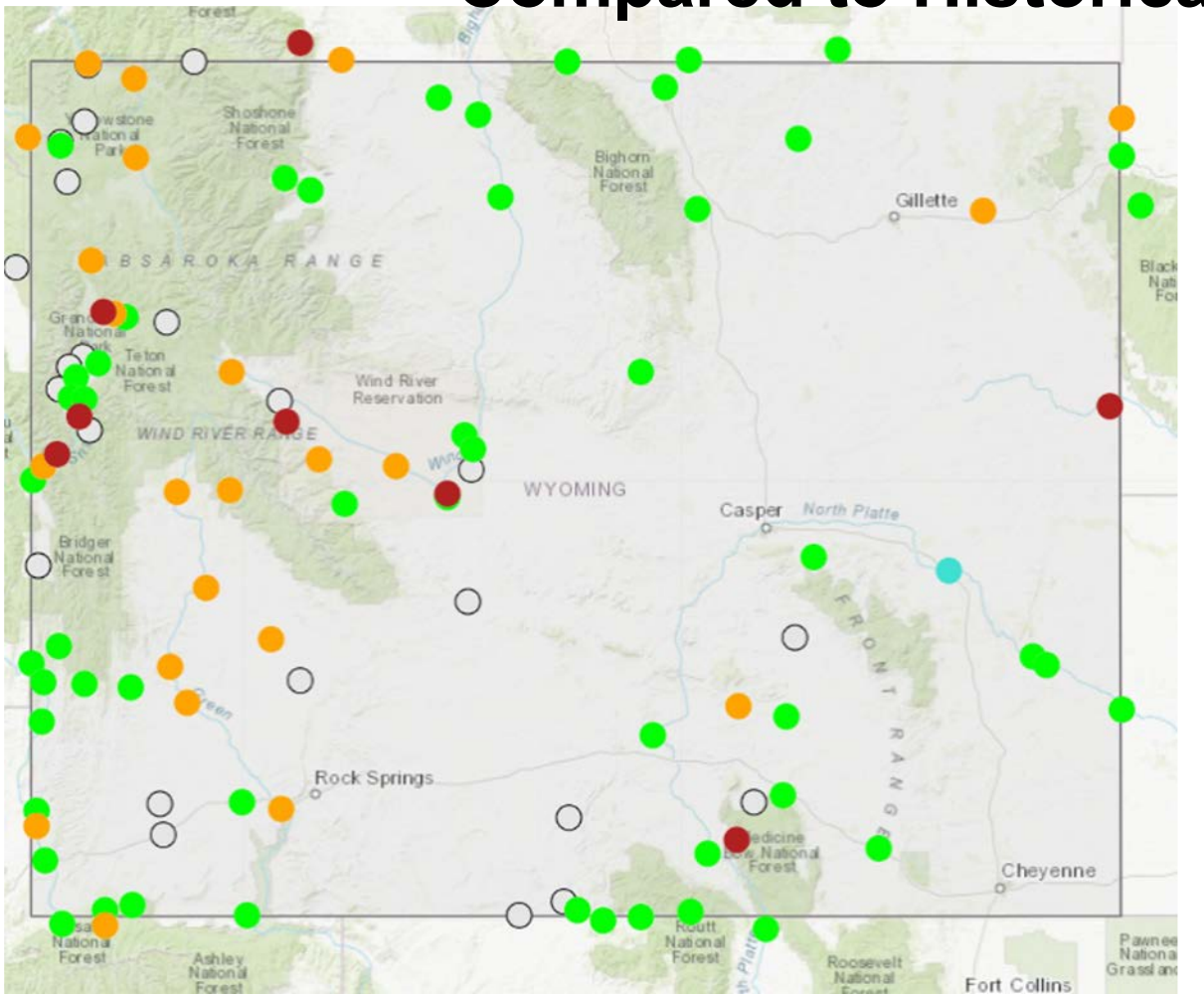
Summer Flows

- Time of flow recession.
- Post runoff flows below 25th percentile.
- Statistical considerations:
  - Period of Record
  - Above average



https://waterwatch.usgs.gov/

WY 28-Day Average Flow Compared to Historical



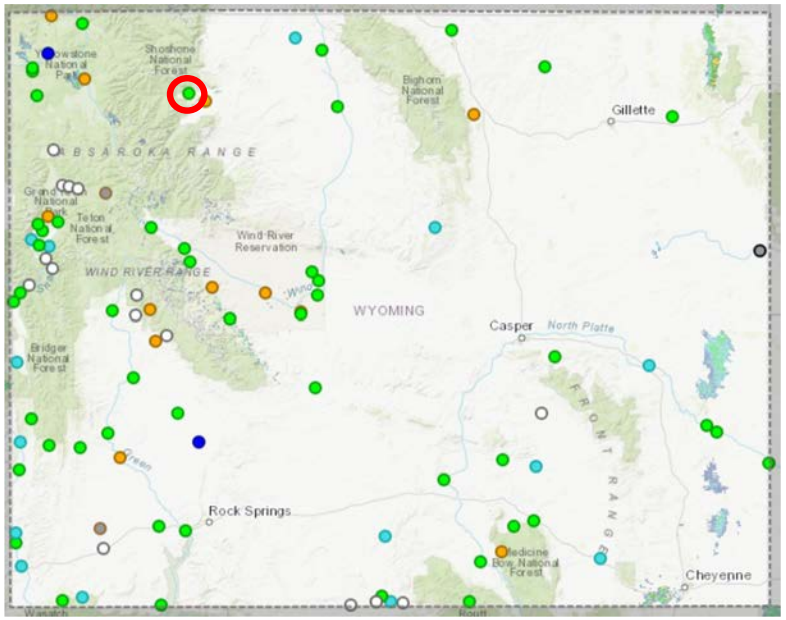
Average July 16- Aug 13 Flows

- Summer flow
- Most “Normal Sites” are below the median.
- Many sites below 25th percentile in the West/N.West.

Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

https://waterwatch.usgs.gov/

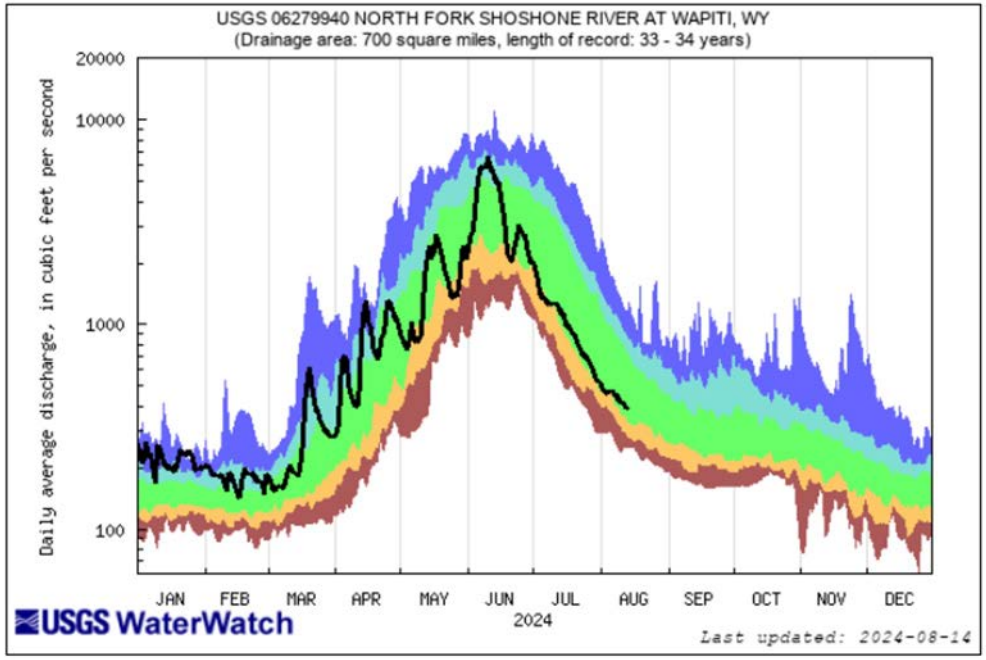
Select WY Streamflows



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

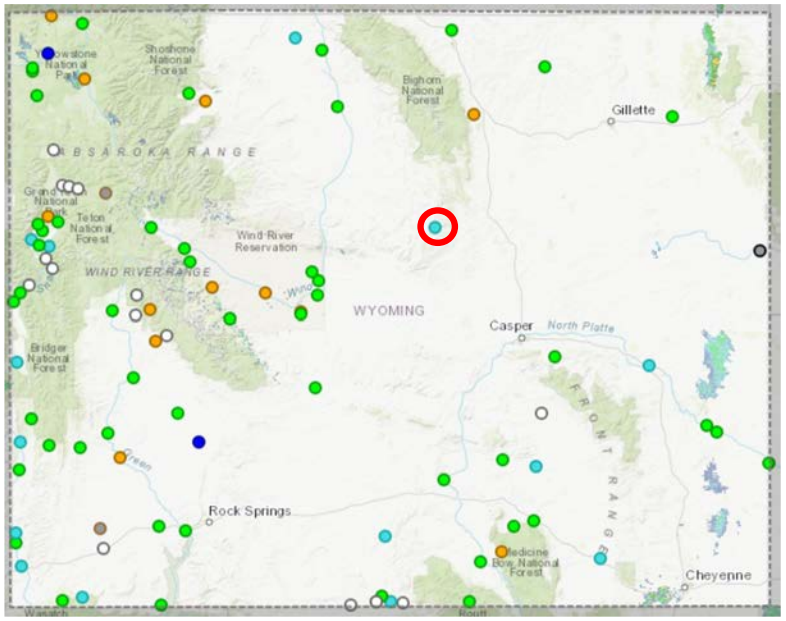
https://waterwatch.usgs.gov/

North Fork Shoshone, at Wapiti, WY
Aug 15, 2024



Explanation - Percentile classes							
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile -highest	Flow
Much below Normal		Below normal	Normal	Above normal	Much above normal		

Select WY Streamflows

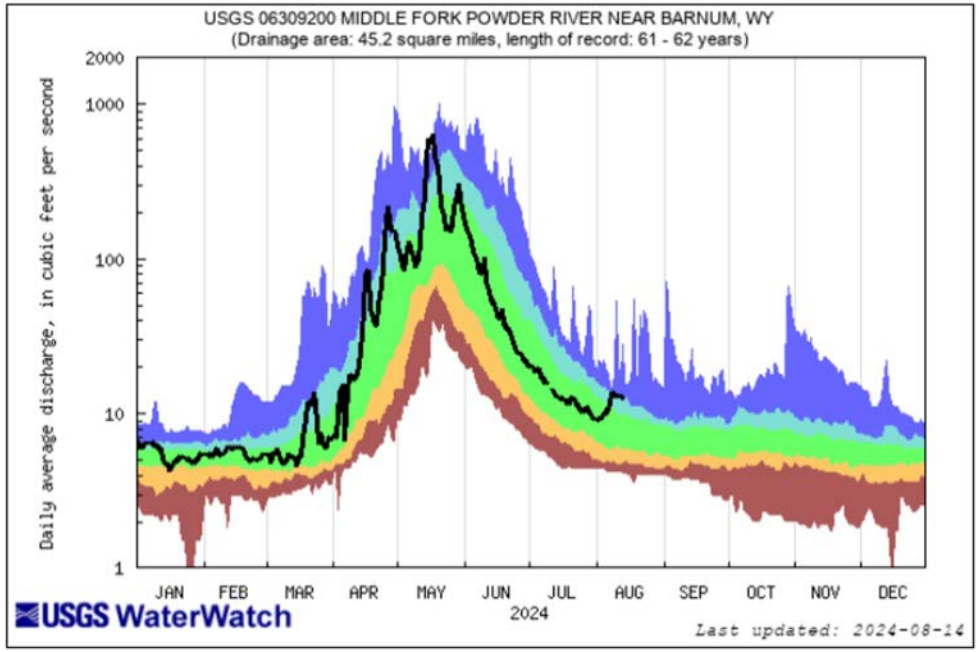


https://dashboard.waterdata.usgs.gov/

https://waterwatch.usgs.gov/

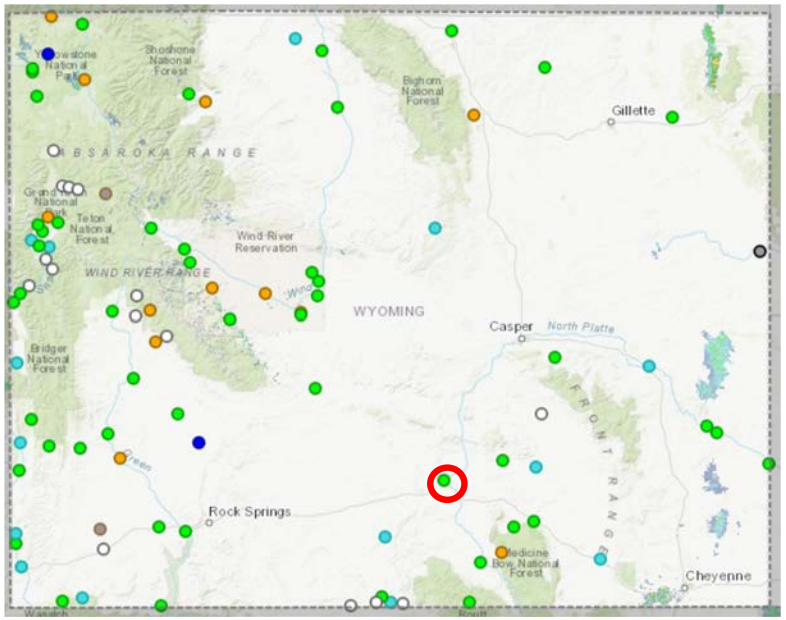
Middle Fork Powder River, Near Barum, WY

Aug 15, 2024



Explanation - Percentile classes							
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile -highest	Flow
Much below Normal		Below normal	Normal	Above normal	Much above normal		

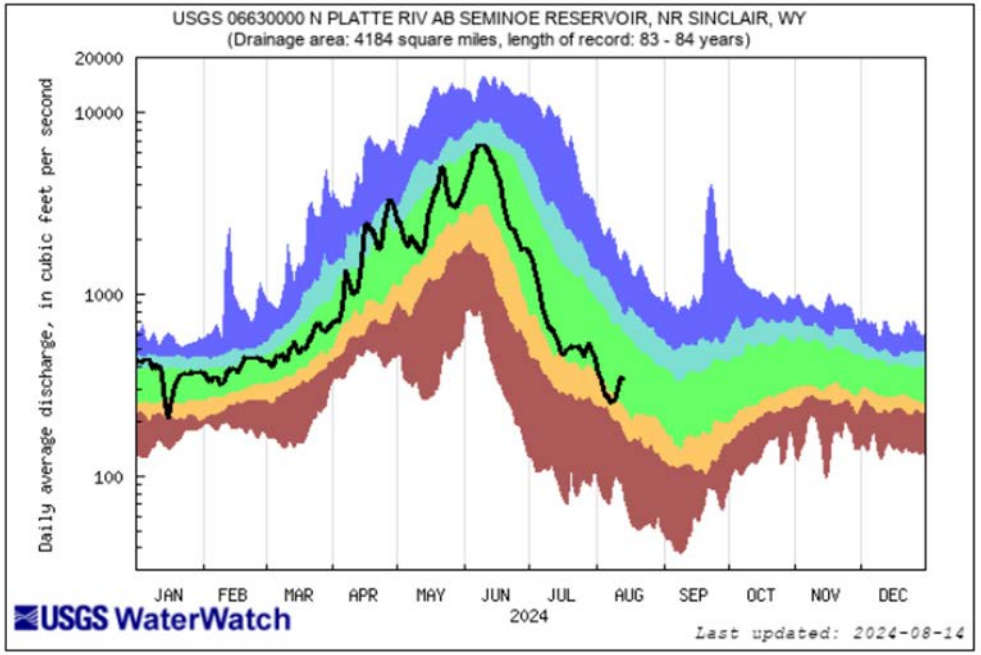
Select WY Streamflows



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

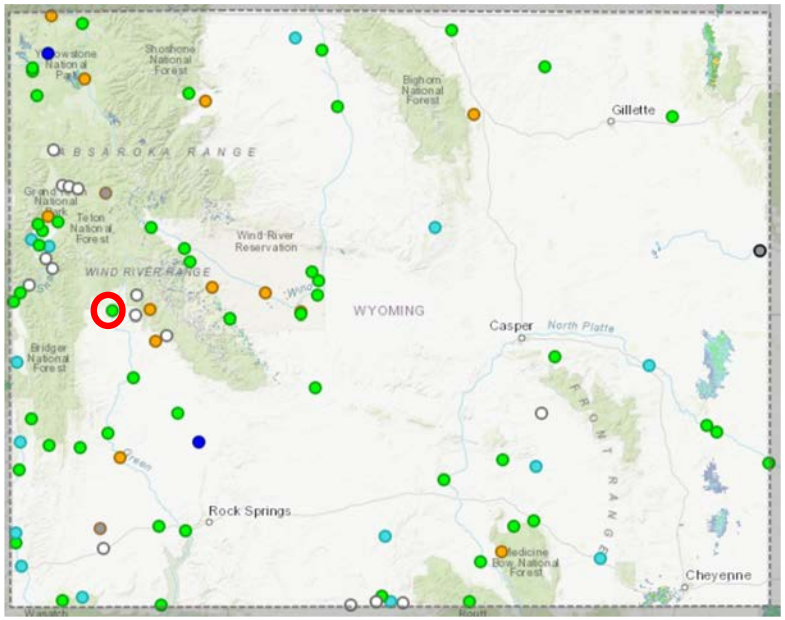
https://waterwatch.usgs.gov/

North Platte River above Seminoe Reservoir, Sinclair, WY
Aug 15, 2024



Explanation - Percentile classes							
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile -highest	Flow
Much below Normal		Below normal	Normal	Above normal	Much above normal		

Select WY Streamflows

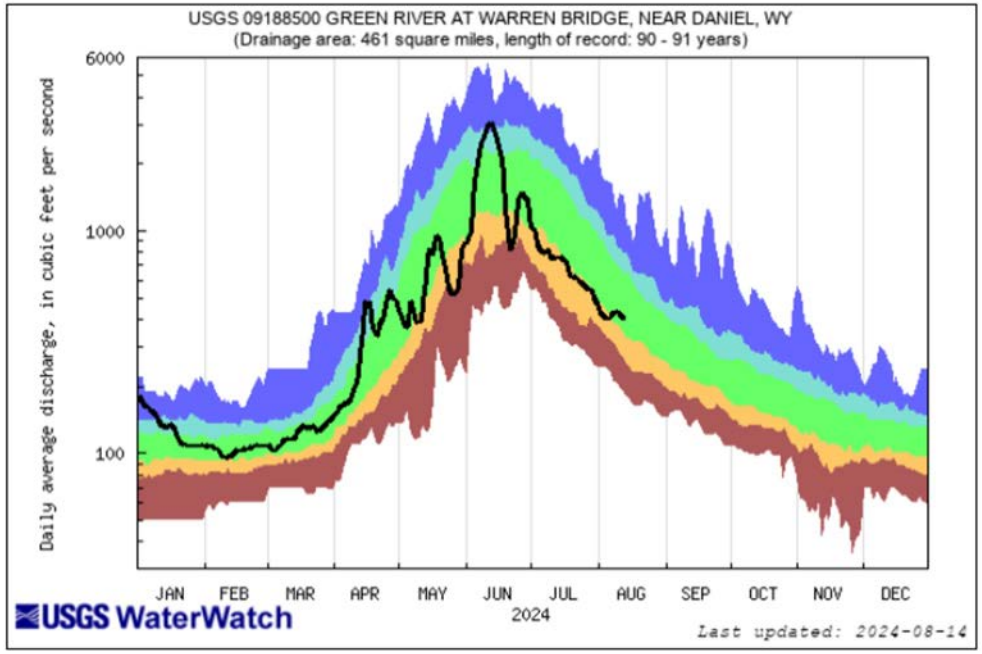


https://dashboard.waterdata.usgs.gov/

https://waterwatch.usgs.gov/

Green River at Warren Bridge, Daniel, WY

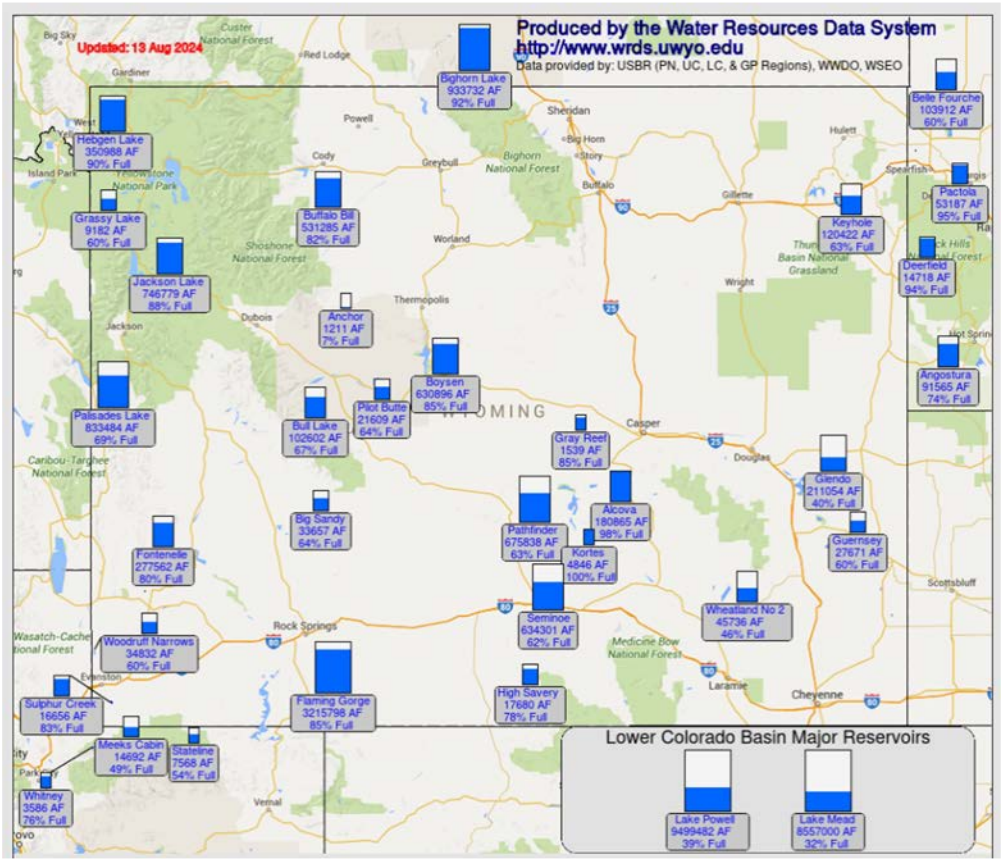
Aug 15, 2024



Explanation - Percentile classes							
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile -highest	Flow
Much below Normal		Below normal	Normal	Above normal	Much above normal		

WY Reservoirs

Aug 15, 2024



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

Reservoir Storage

- Decreases in storage across most reservoirs
- Most major reservoirs in NW are 70-90% full .
- Reservoir in NE/SE are 40 to 80% full.

WY SEO Divisions and Superintendents

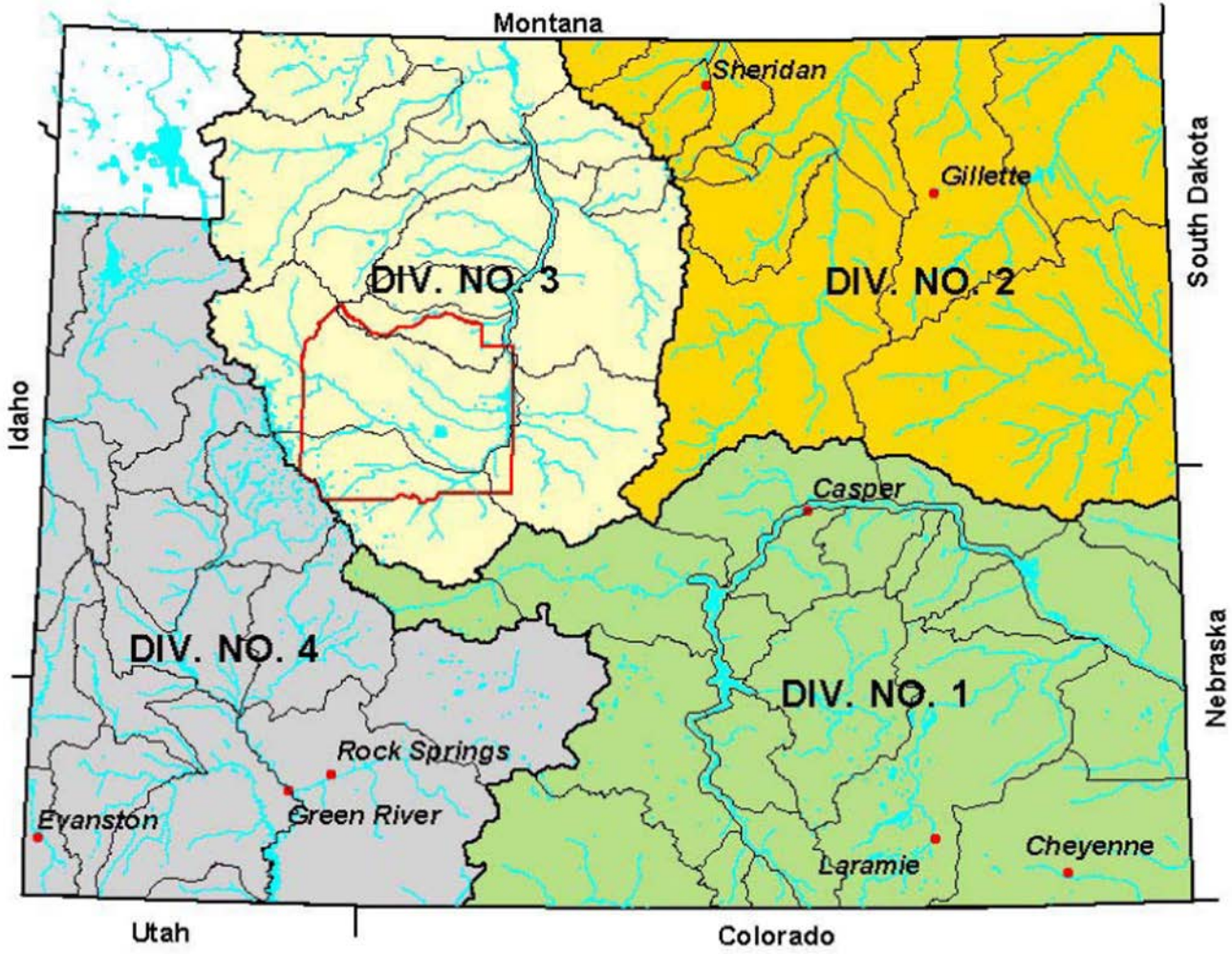
Contact information for calls and administration

Division 3

Joshua Fredrickson, 856-0747

Division 2

David Schroeder, 674-7012



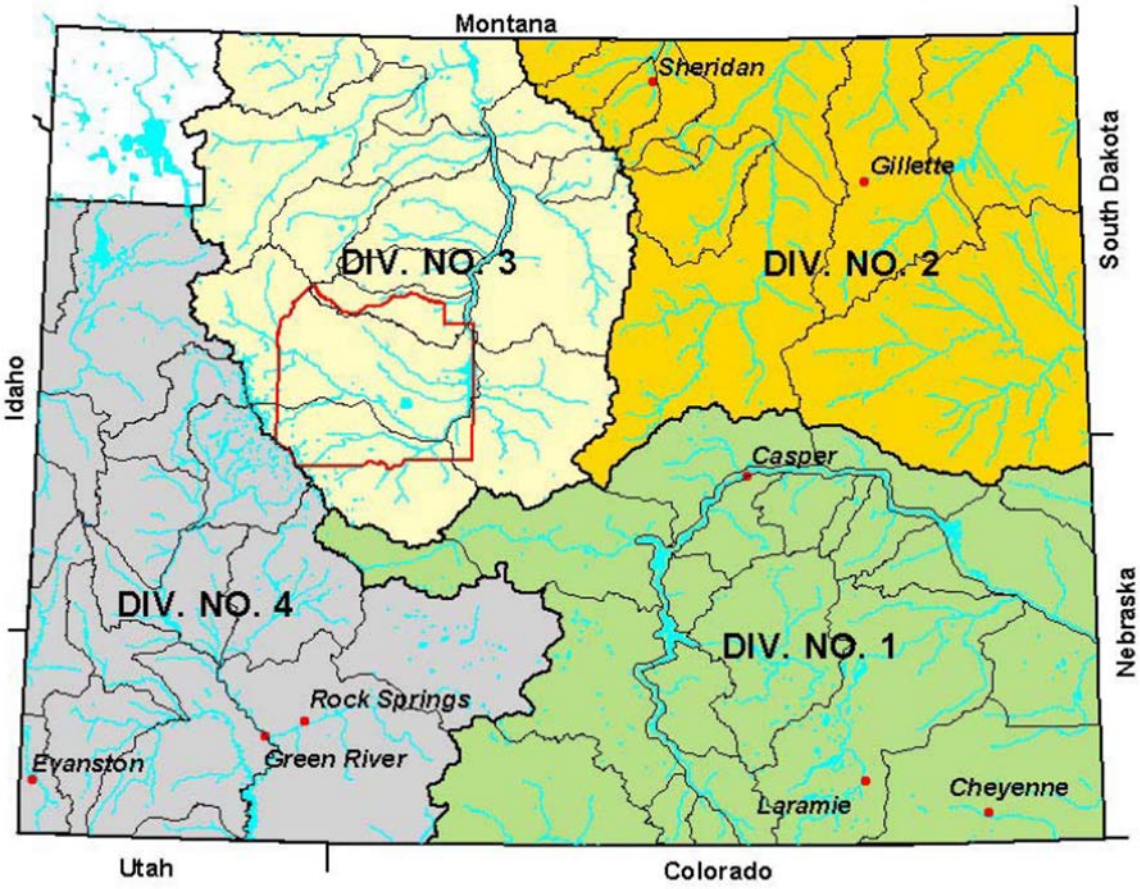
Division 4

Kevin Payne, 279-3441

Division 1

Cory Rinehart, 532-2248

WY SEO Divisions

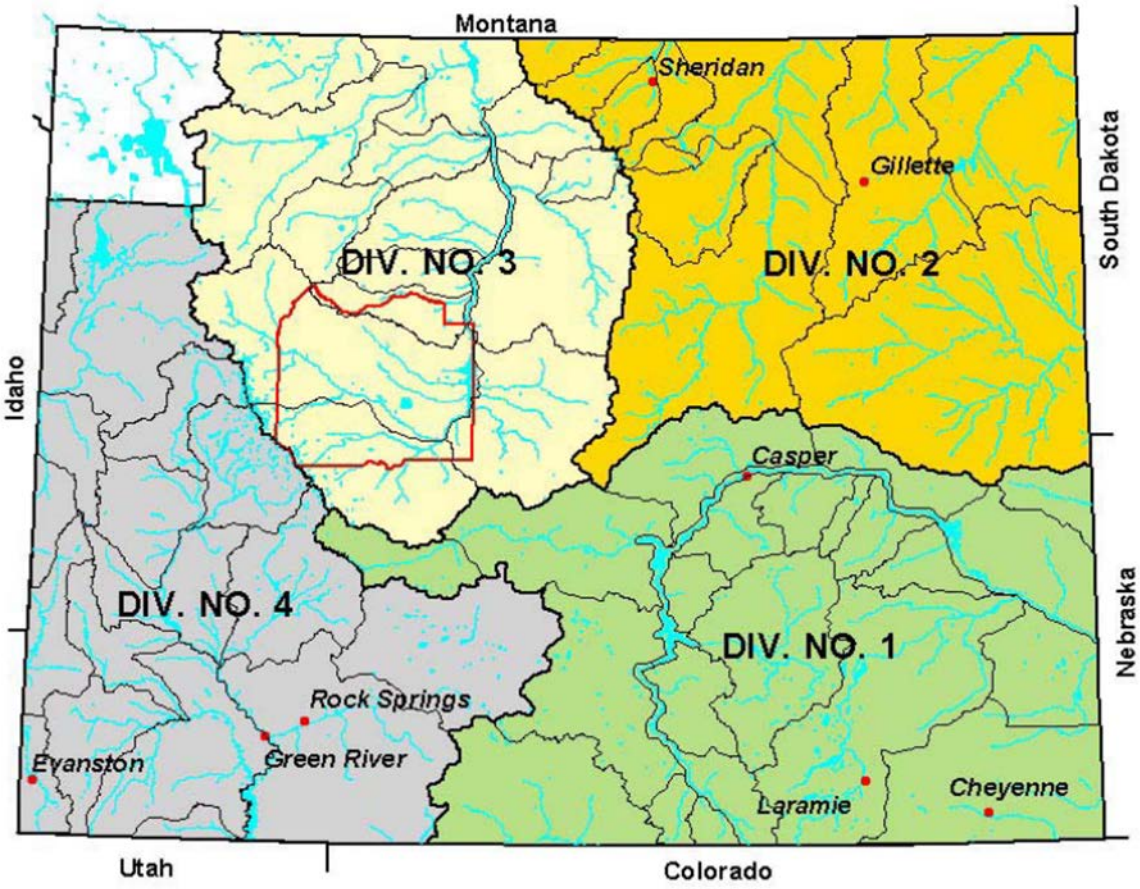


As of August 14,

Streams in **<u>Division 1</u>**:

- **Laramie River District 4A**: reg to 1898 and 1883 Court Decree
- **Soldier Creek Dist 4A**: reg to 1884
- **Horse Creek Dist 2**: reg to 1884
- **Collins Creek Dist 18**: reg to 1912
- **Sand Creek Dist 4A**: reg to 1897

WY SEO Divisions

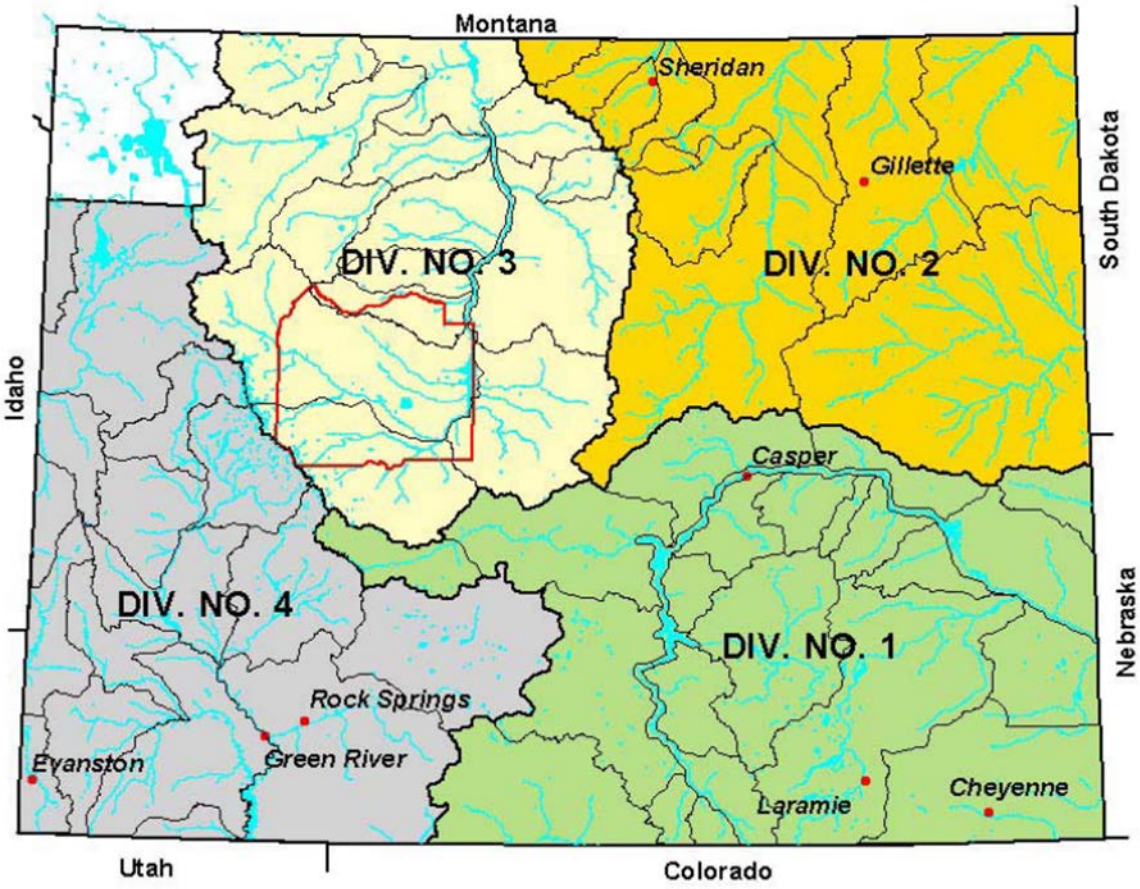


As of August 14,

Streams in **<u>Division 1</u>**:

- **O Bar O Reservoir District 4C**: regulated to 1969
- **Horseshoe Creek Dist 3**: reg to 1879 and 1880
- ***Laramie River Dist 4A: reg to 1883***
- ***Horseshoe Creek Dist 3: reg to 1879 and 1880***
- ***Laramie River Dist 3: reg to 1881***

WY SEO Divisions

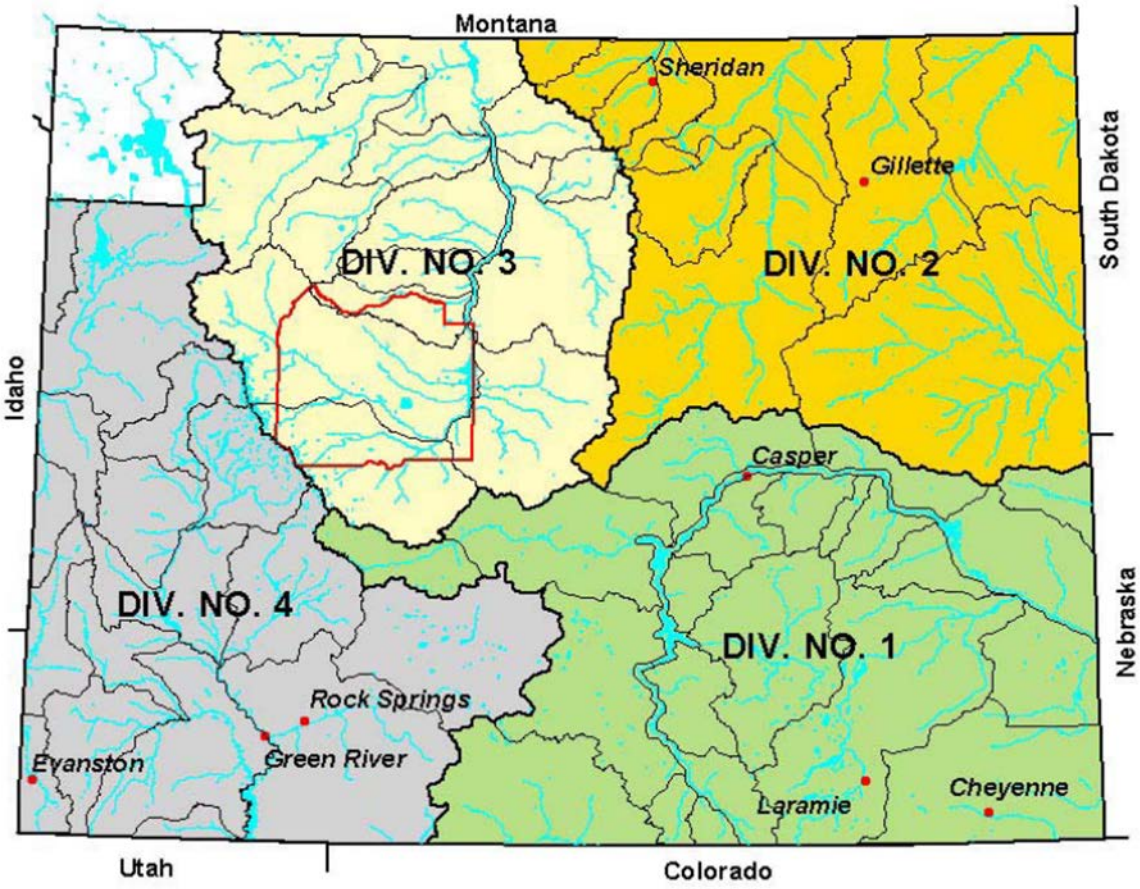


As of August 14,

Streams in **<u>Division 2</u>**:

- **Swaim Draw District 4**: regulated to 2001
- **Little Goose Creek Dist 4**: reg to 1883
- **Belle Fourche River Dist 7**: reg for compact compliance

WY SEO Divisions

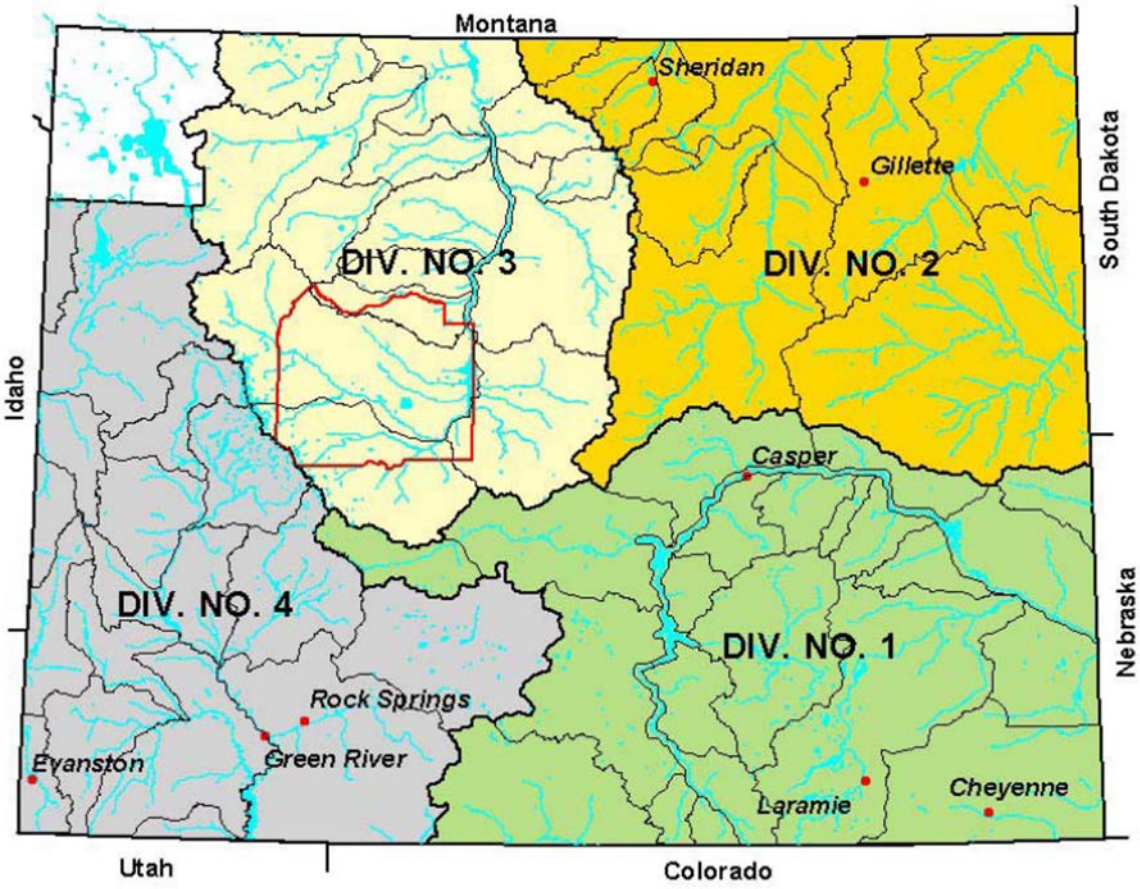


As of August 14,

Streams in **<u>Division 2</u>**:

- ***North Fork Powder River Dist 8 and Piney Creek Dist 11: distributed reservoir water***
- ***Piney Creek Dist 11: reg to 1885***
- ***Clear Creek Dist 2&3: reg to 1883***
- ***Big Goose Creek Dist 4: reg to 1882***

WY SEO Divisions

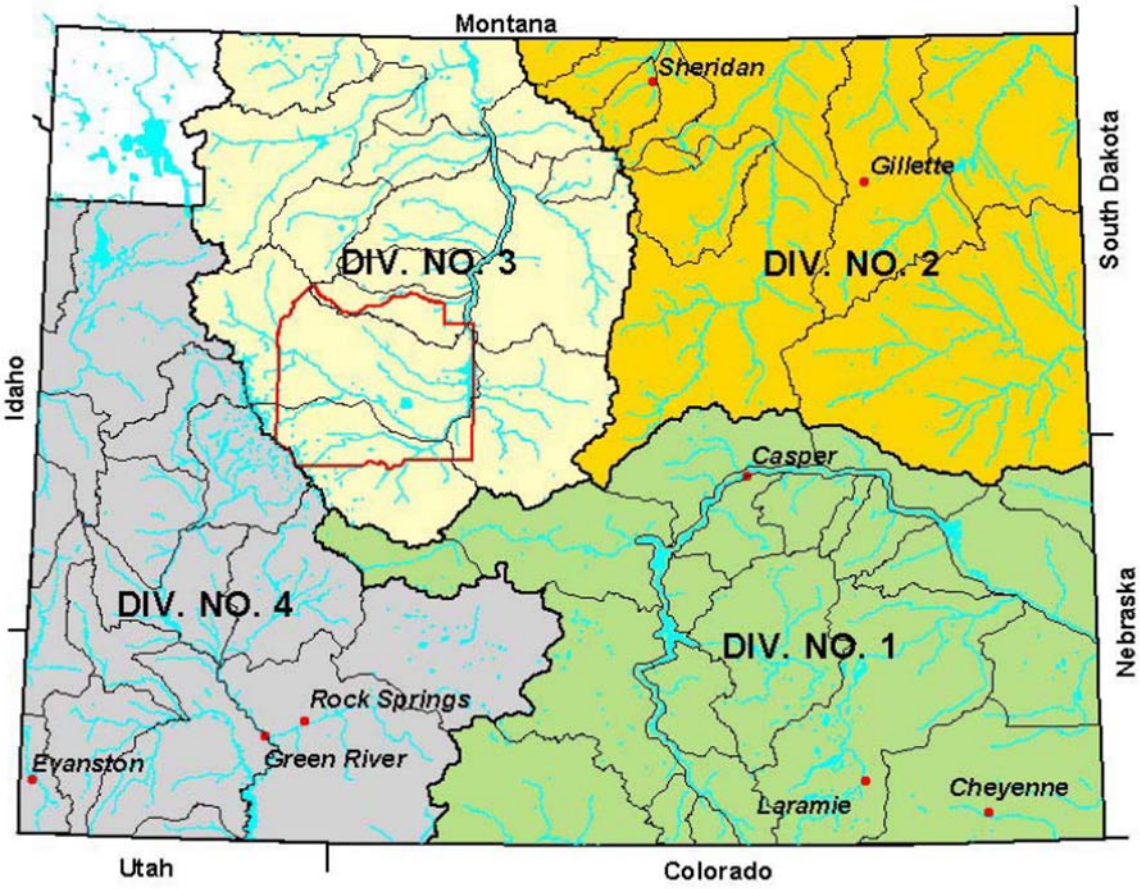


As of August 14,

Streams in **<u>Division 3</u>**:

- **Bennett-Little Rock District 10**: reg to 1900
- **South Fork Owl Creek District 5**: reg to 1868
- **Greybull River District 8**: reg to 1888
- **Owl Creek District 5**: regulated to 1901
- **Gooseberry Creek District 13**: reg to 1906

WY SEO Divisions

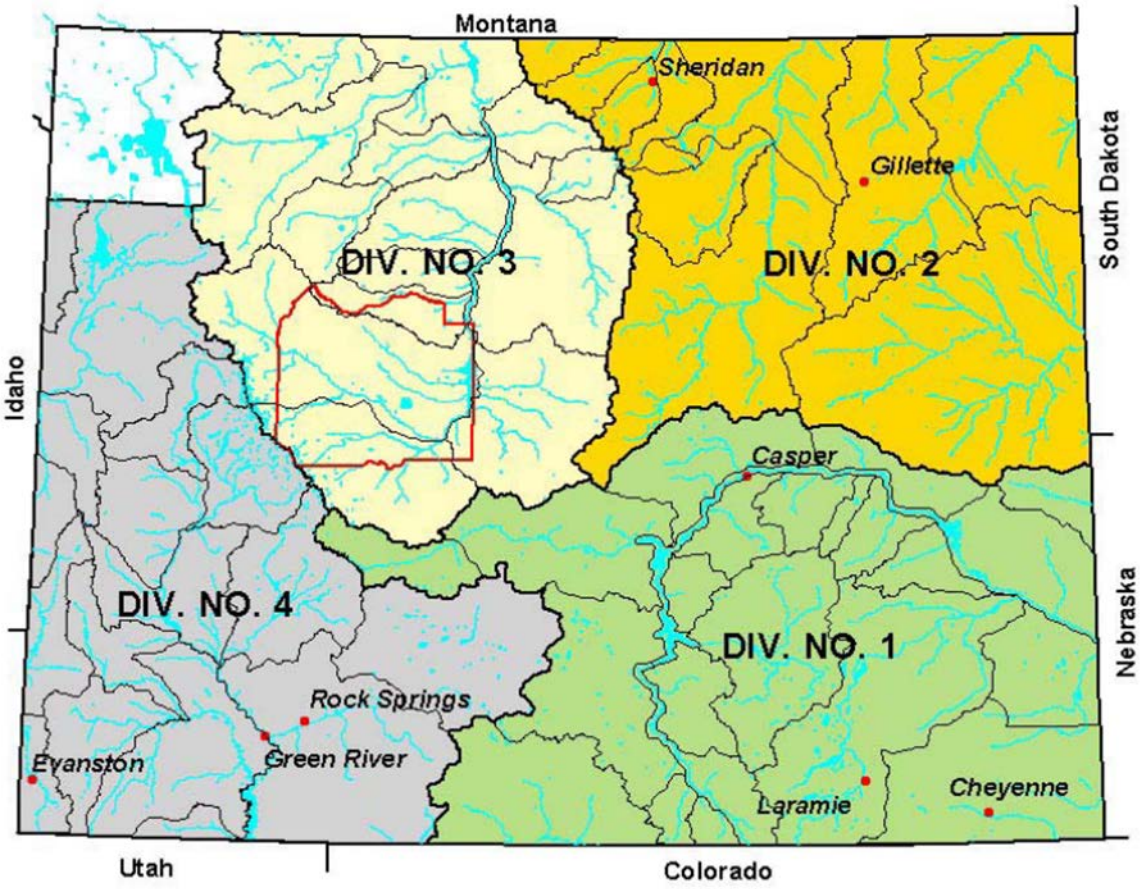


As of August 14,

Streams in **<u>Division 3</u>**:

- ***Medicine Lodge Dist 12: reg to 1906***
- ***Paint Creek Lodge Dist 12: reg to 1904***
- ***Middle Popo Agie River Dist 1: reg to 1877***

WY SEO Divisions

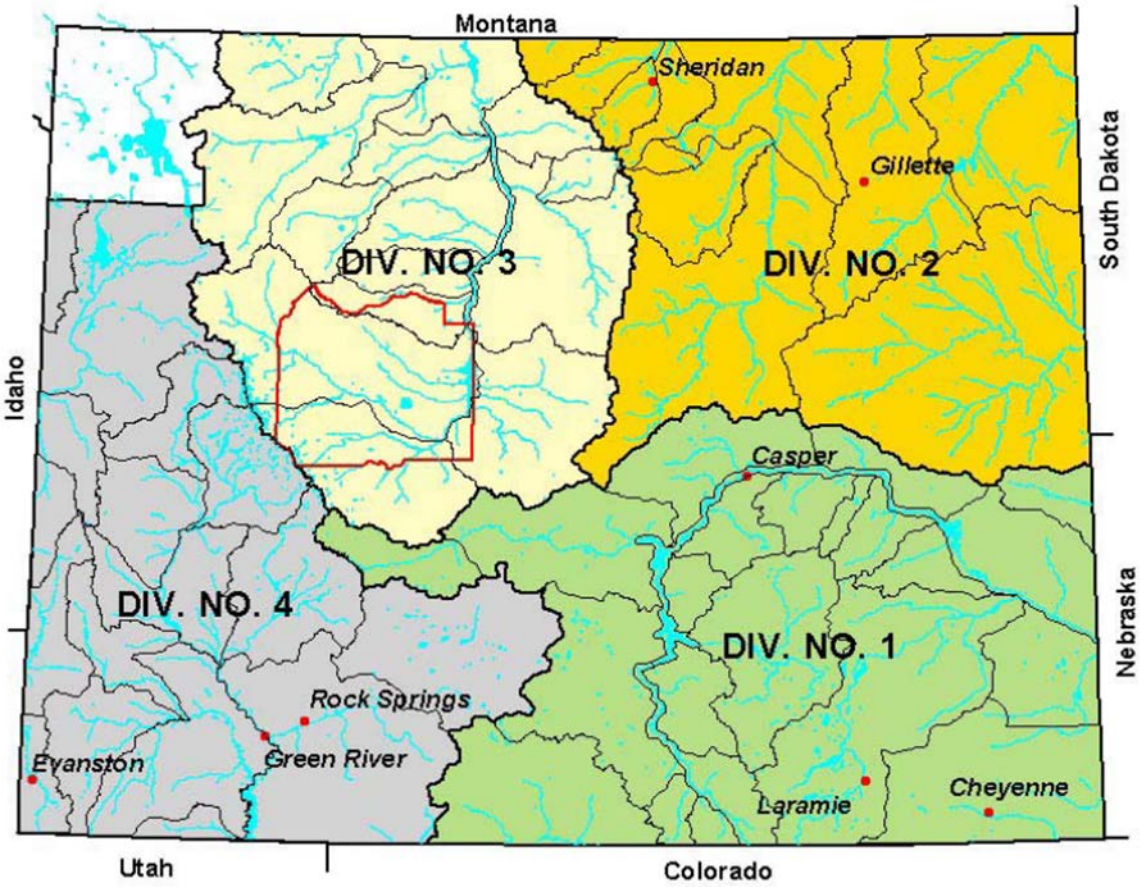


As of July August 14,

Streams in **<u>Division 4</u>**:

- **Corral Creek District 9**: reg to 1890
- **Black's Fork River District 15**: reg to 1887
- **South Piney Creek District 10**: reg to 1886
- **Bear River District 4**: reg to 1879 ***and 1886 and 1878***
- **Smith's Fork River District 3**: reg to 1910

WY SEO Divisions



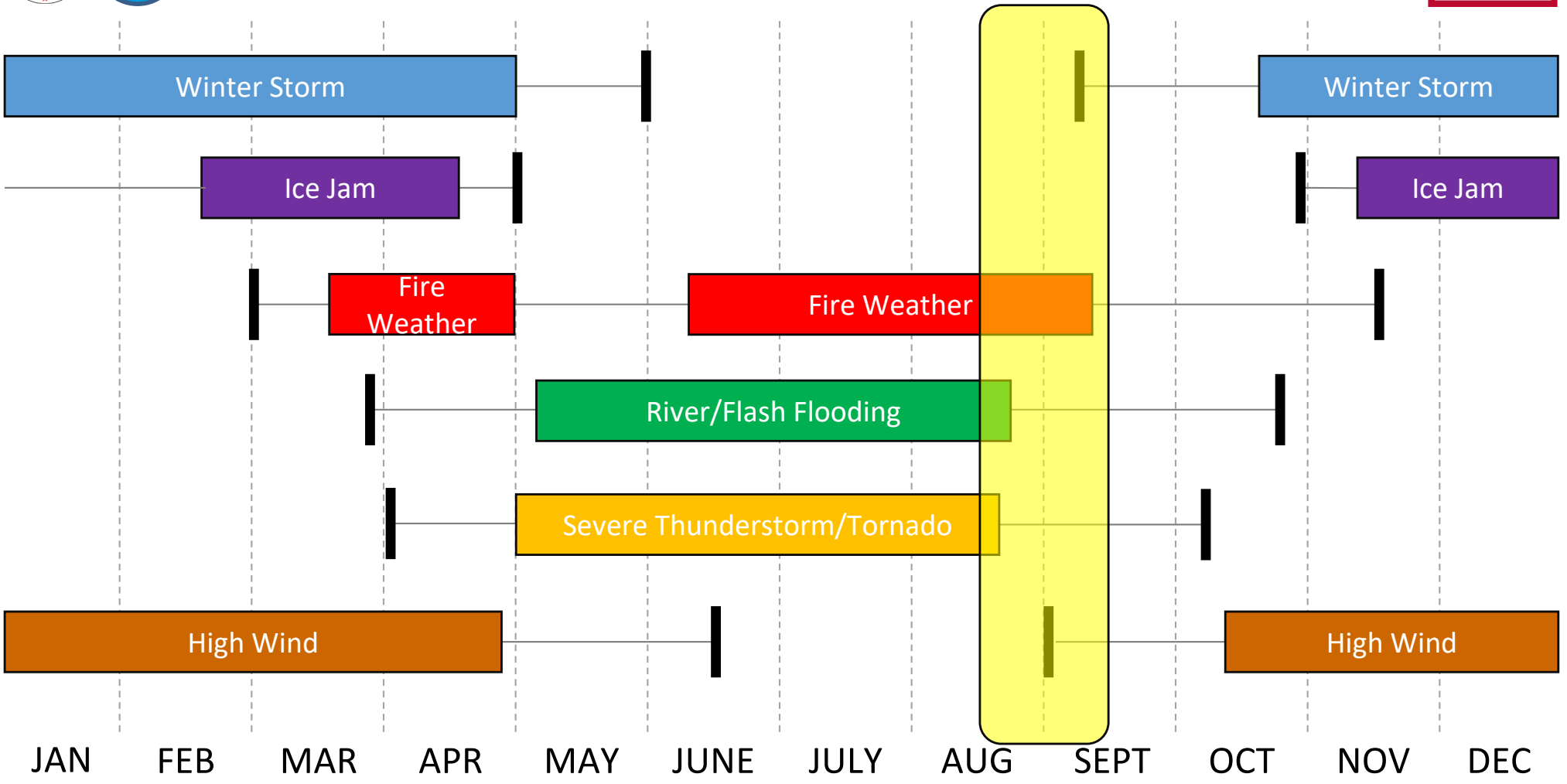
As of August 14,

Streams in **<u>Division 4</u>**:

- ***Burnt Fork Creek Dist 14: reg to 1901***
- ***Teton Creek Dist 13: reg per Roxanna Decree***
- ***West Beaver Creek Dist 14: reg to 1882***
- ***Central Bear River Dist 2: reg per Bear River Compact***

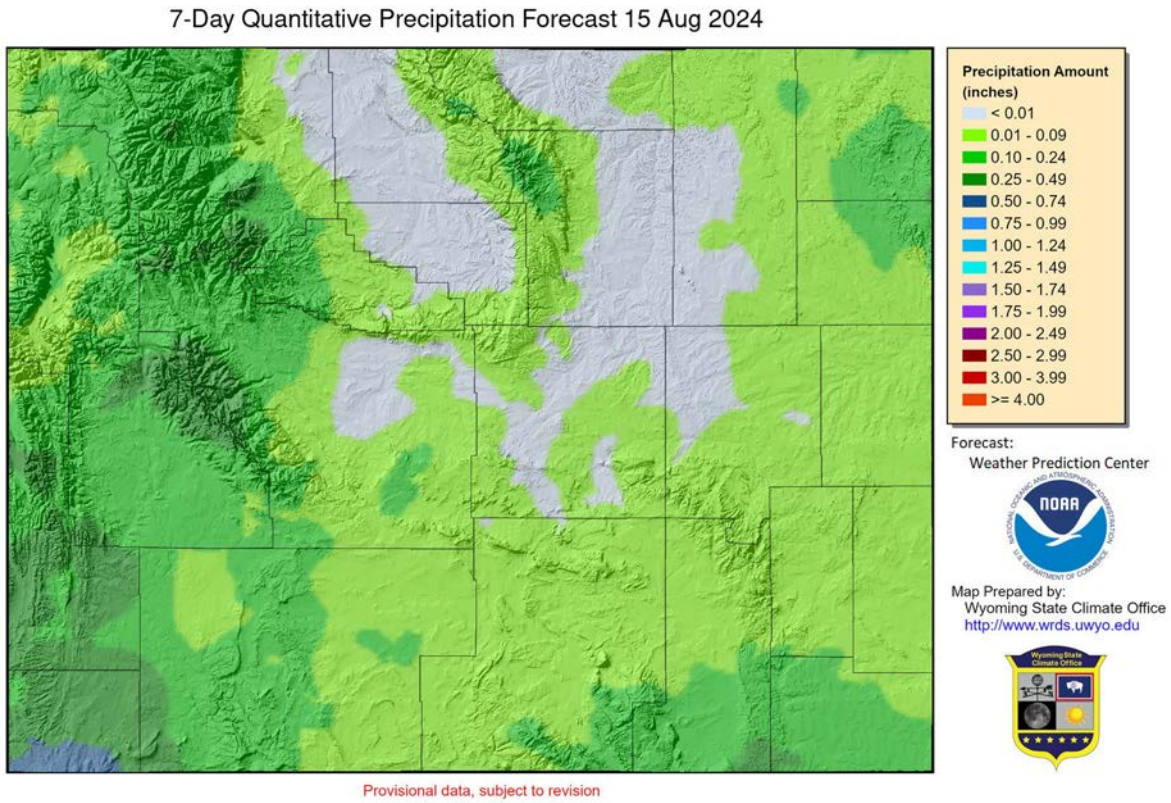
Weather Info & Forecasts

NWS Wyoming Typical Hazard Calendar



7-Day Total Precipitation Forecast

(August 15 - August 22)



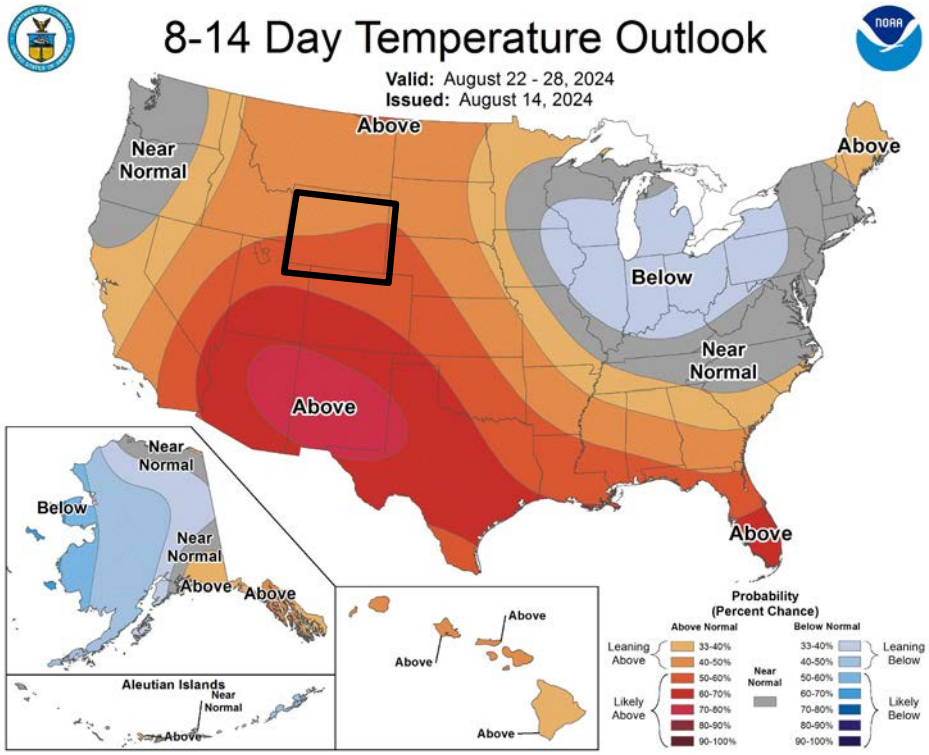
- No large wet systems
- Precipitation from localized afternoon Tstorms
- In 1 week, the actual map will be more spotty/streaky than what is shown
- High mountain ranges and SE corner of state with best probabilities for over 0.25”

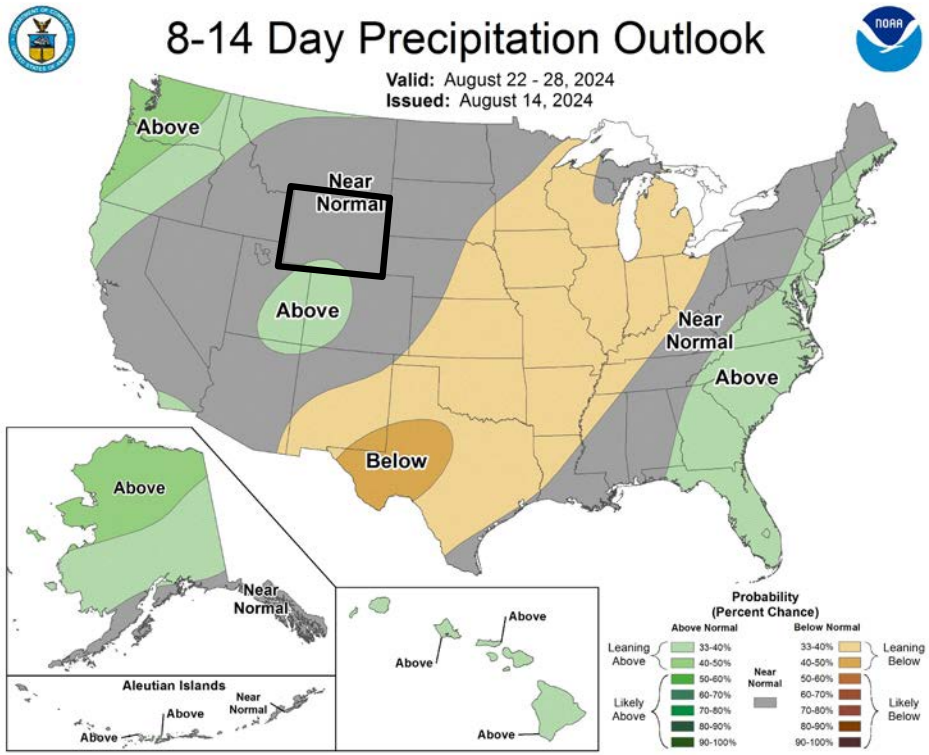
https://bit.ly/7_dayQPForecast

8-14 Day Outlooks

(July 22 to July 28)

https://bit.ly/CPC8_14Day



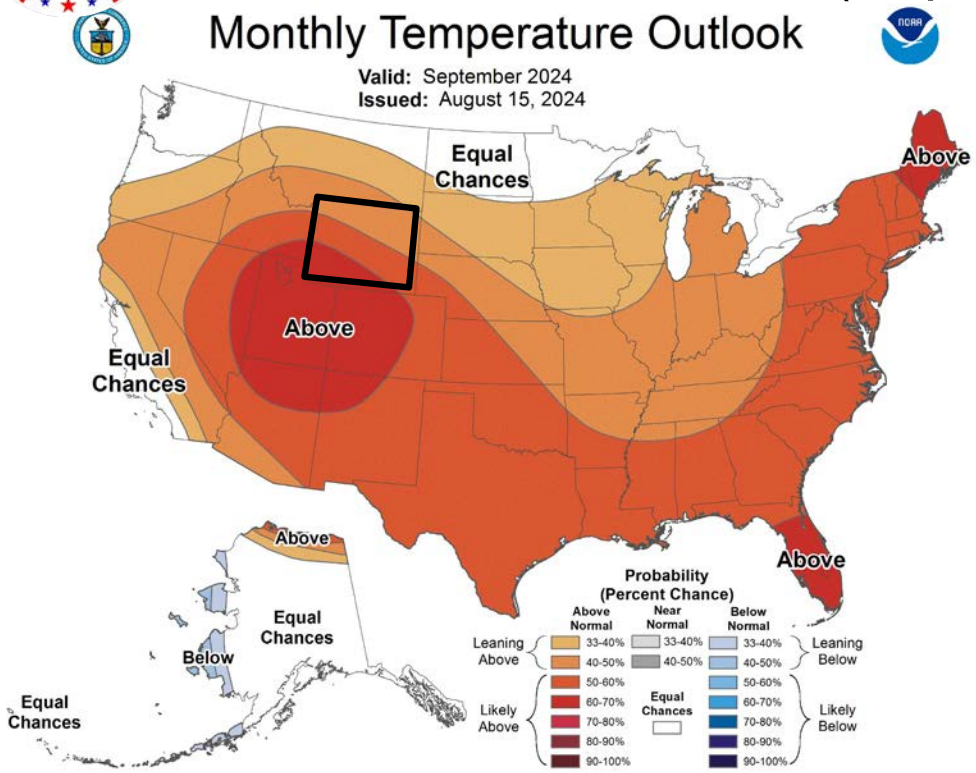


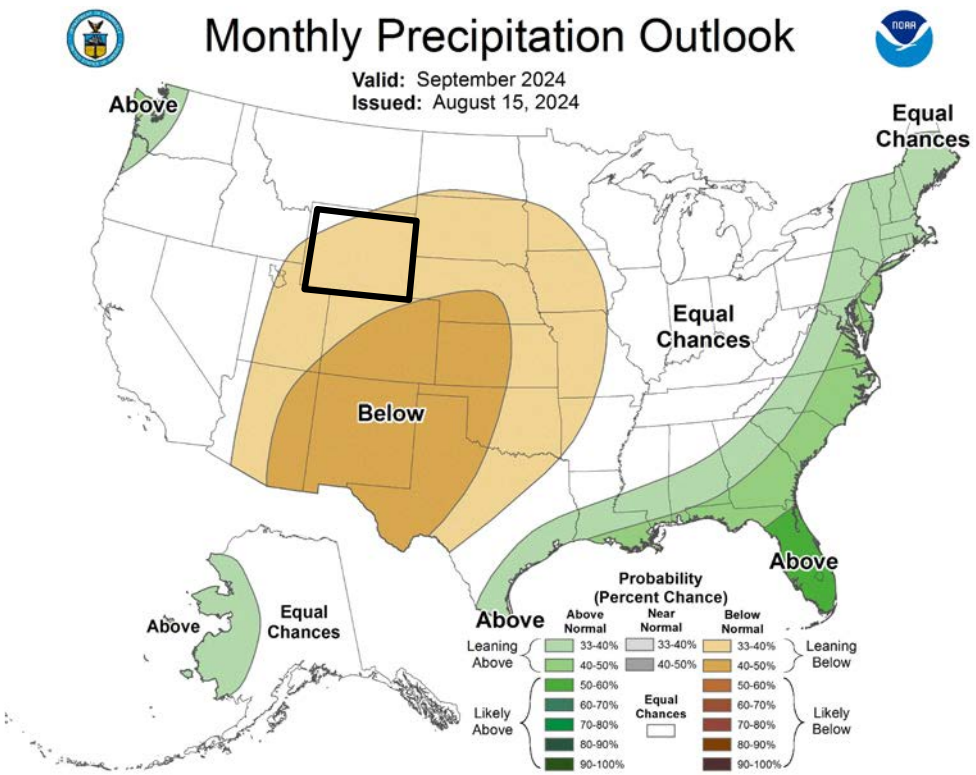
- Moderate (north) to strong (south) signal for above-normal temperatures
- Not much signal at all. Near normal is your best forecast

1-Month Outlooks

(September)

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



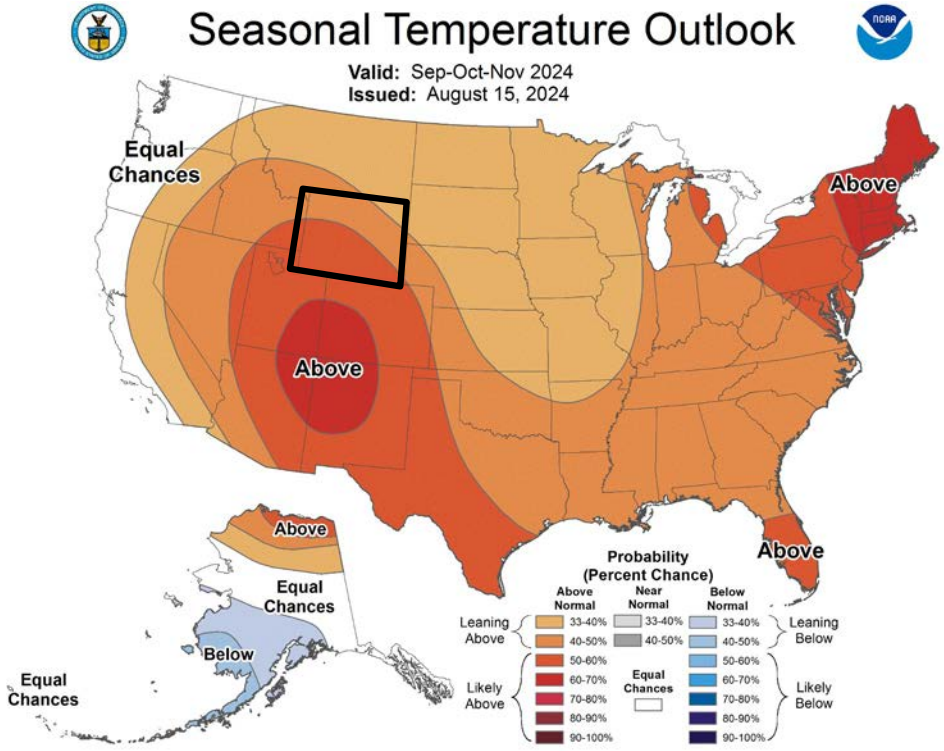


- Notably high confidence in above normal heat for September
- A weak below-normal signal across the state, strengthening to the southeast

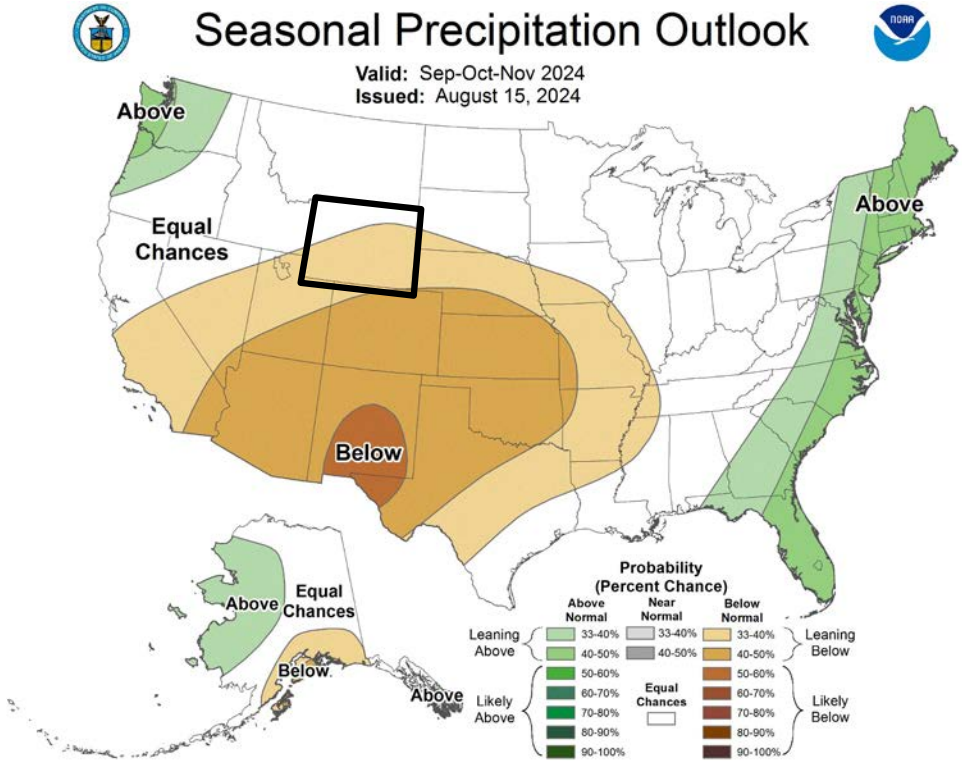
Summer-Fall Outlooks

(Sep-Oct-Nov)

https://bit.ly/CPC_Seasonal



- Relatively high confidence in continued above average temps through autumn



- A weak signal for below-normal precipitation through the fall, strengthening to the southeast

Wildland Fire Potential and Outlook

Fuel Moisture Content Basics

- **Fuel Moisture Content -** A key contributor to fire behavior along with weather and topography. Measures the amount of water in a fuel, expressed as a percentage of the dry weight.

- **Two Main Types of Wildland Fuel**

    - **Live Fuels-** Moisture content changes based on a number of factors, including plant phenology, time of year, and soil moisture. During dormancy, live fuels may resemble dead.

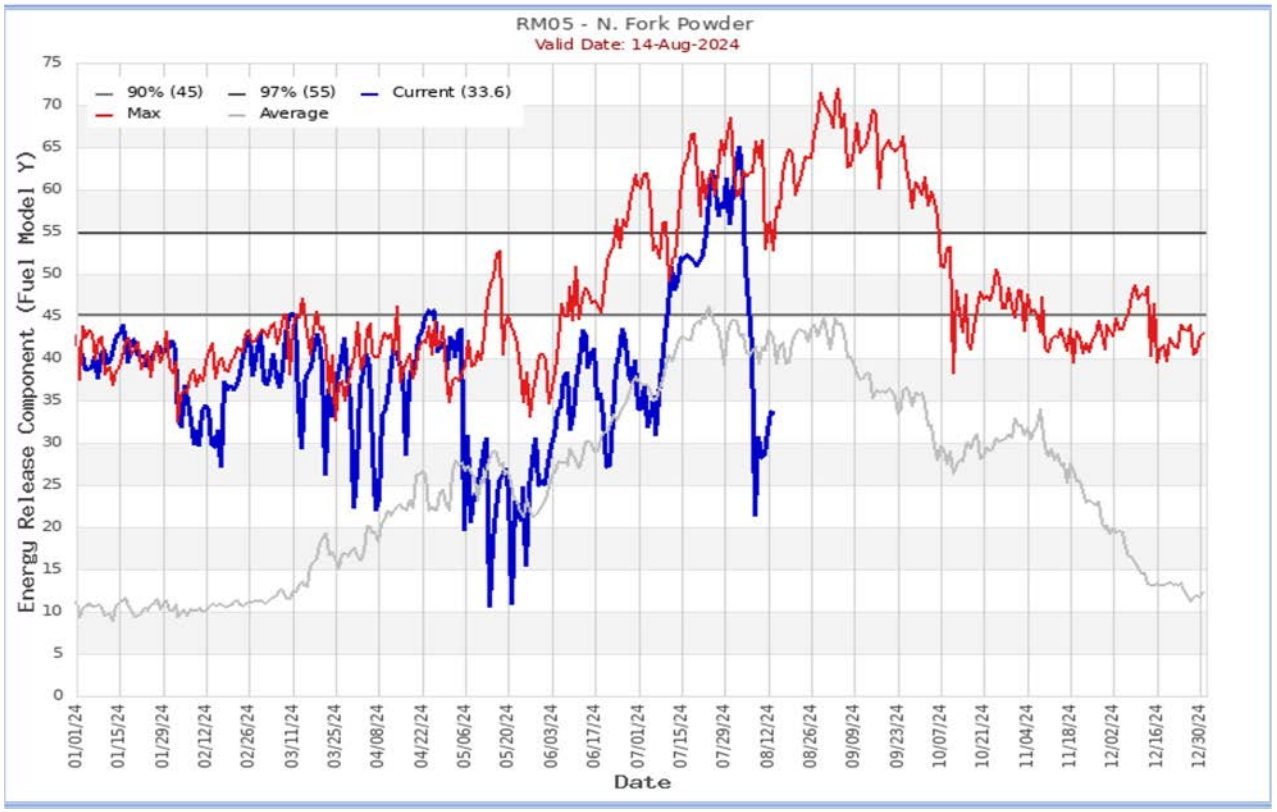
    - **Dead Fuels-** Absorb moisture from humidity in the air around them at variable rates depending on size. Classified by “time lag”, amount of time it takes for the fuel to gain or lose substantial moisture.

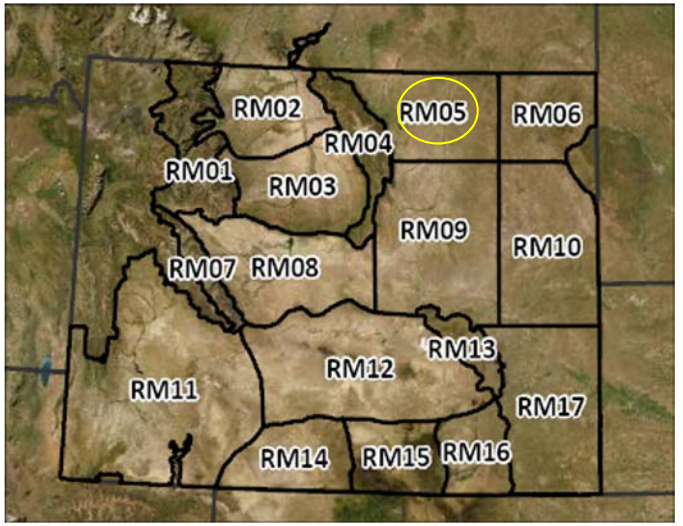
        - **1 Hour - < ¼” -** grasses, forbs etc…
        - **10 Hour - ¼” to 1”** - small twigs and branches
        - **100 Hour- 1” to 3” -** larger branches and small trees
        - **1000 Hour- > 3” -** downed logs, large branches

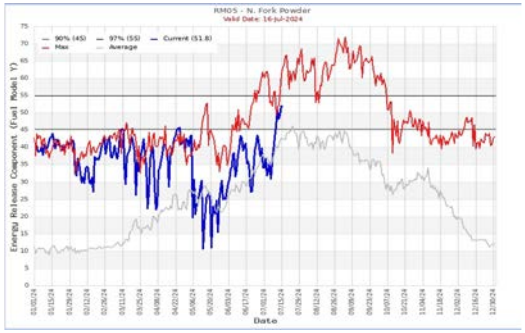
- **Fuel Loading-** Measured in tons per acre, highly variable depending on predominant vegetation.

Wildland Fire Potential and Outlook

Energy Release Component:
N Fork Powder – Valid August 15

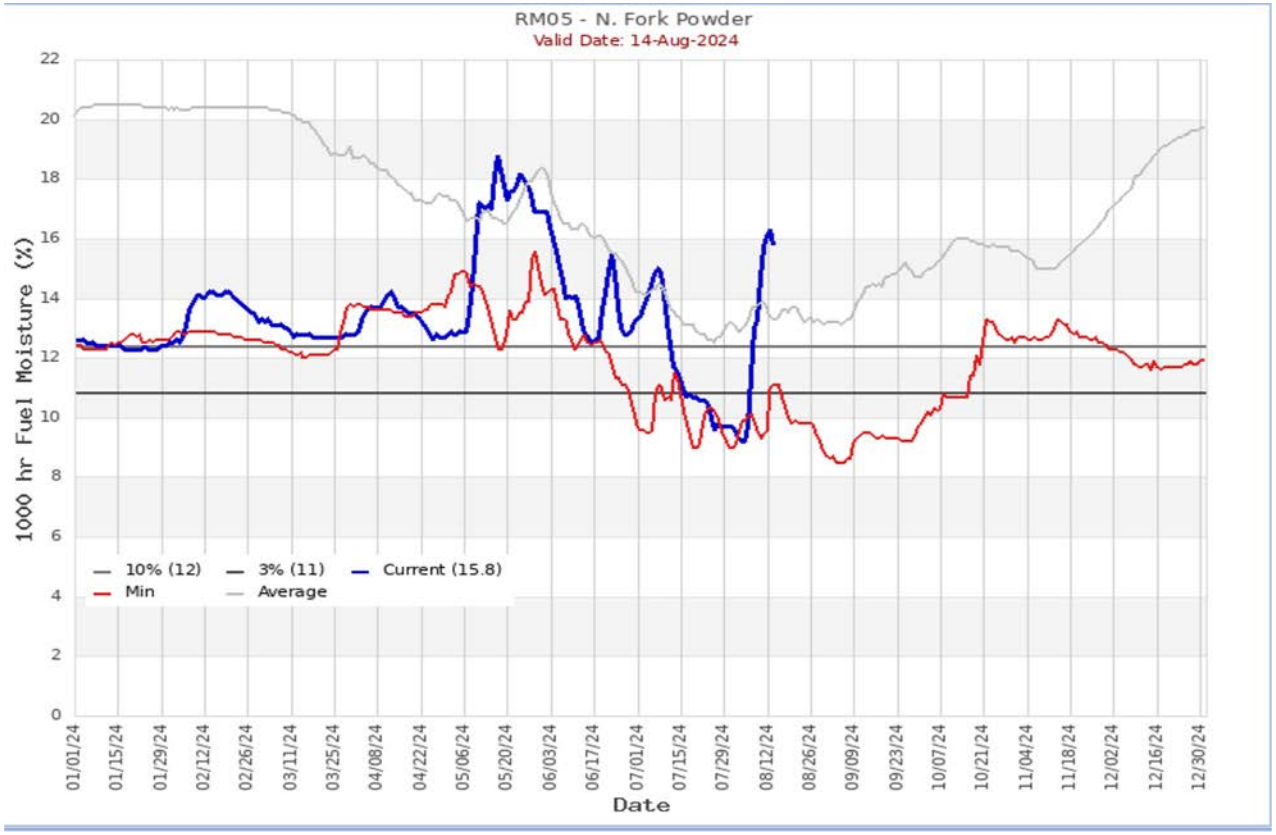


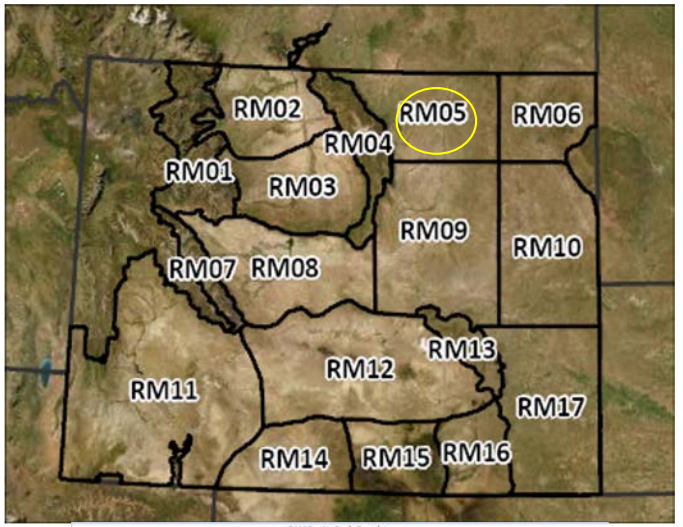




Wildland Fire Potential and Outlook

1,000-Hour Fuel Moistures:
N Fork Powder – Valid August 15

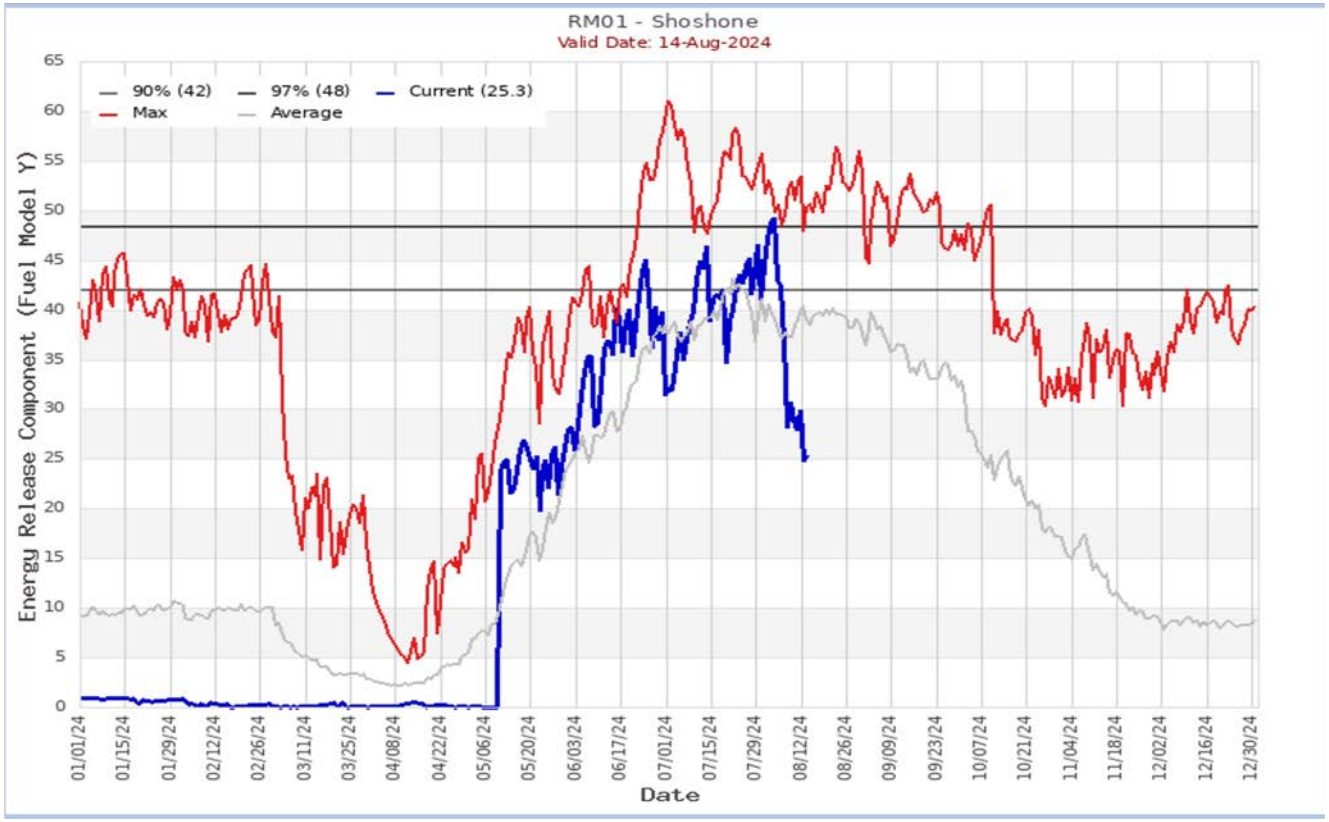


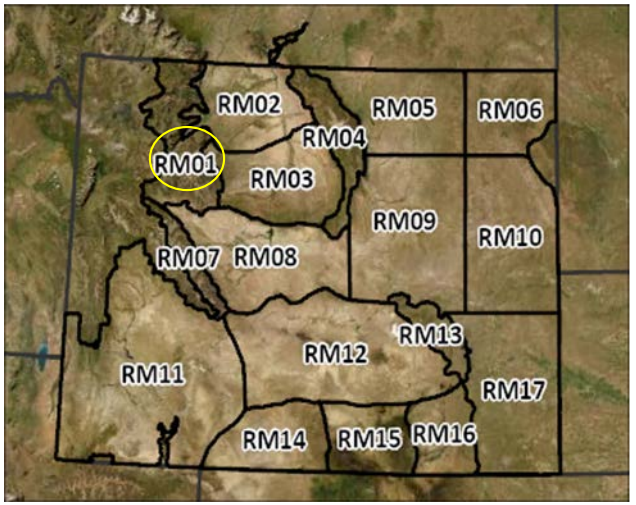




Wildland Fire Potential and Outlook

Energy Release Component:
Shoshone – Valid August 15

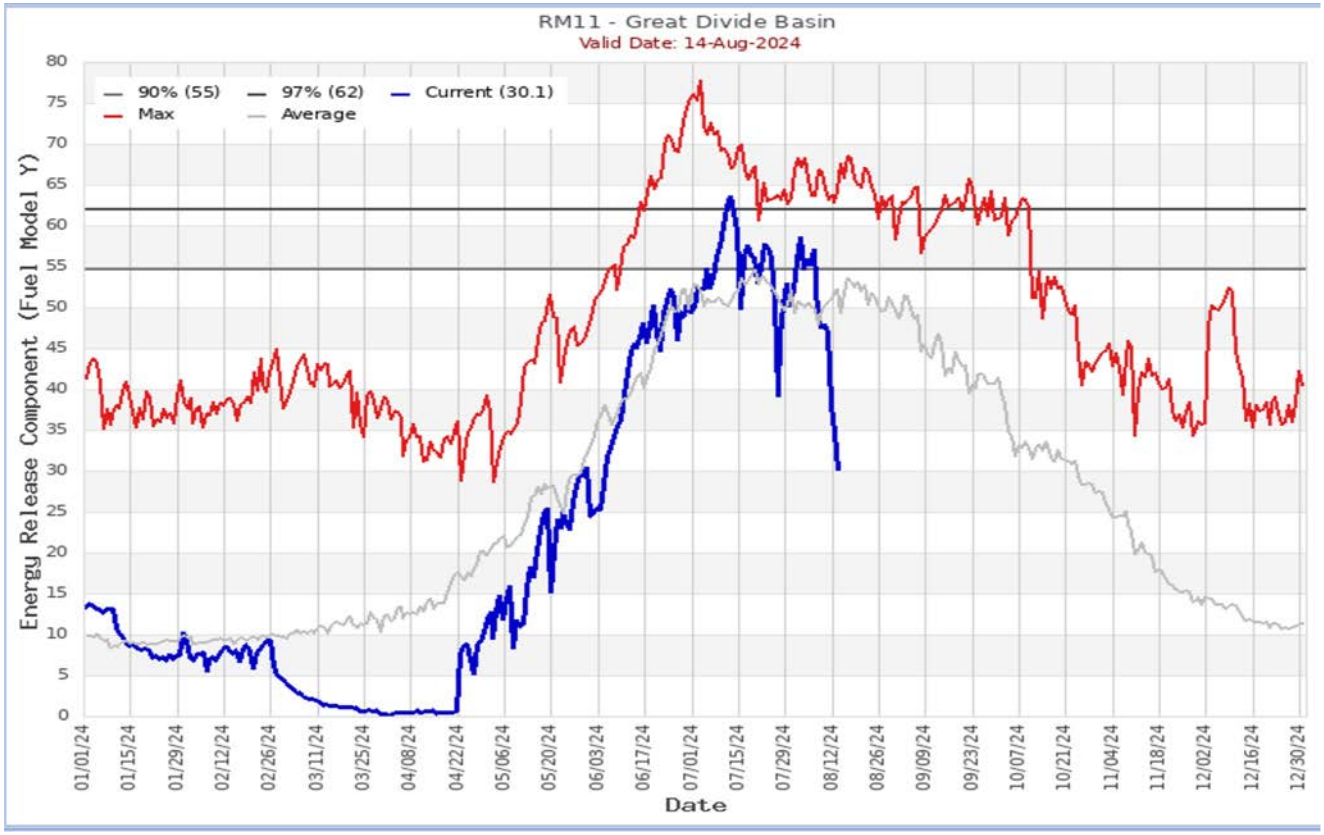


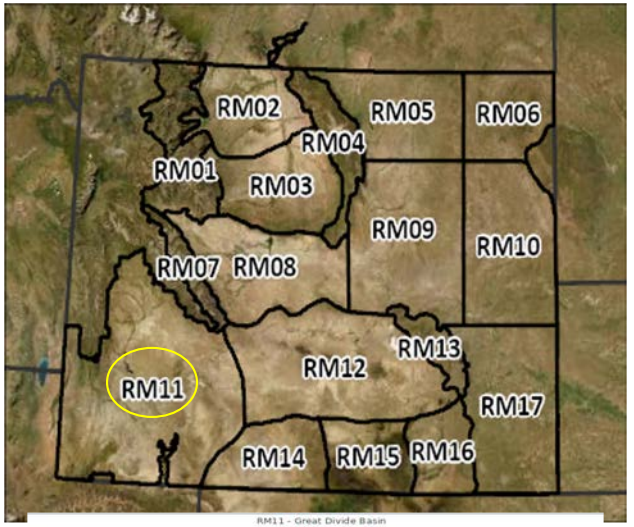




Wildland Fire Potential and Outlook

Energy Release Component:
Great Divide Basin – Valid August 15

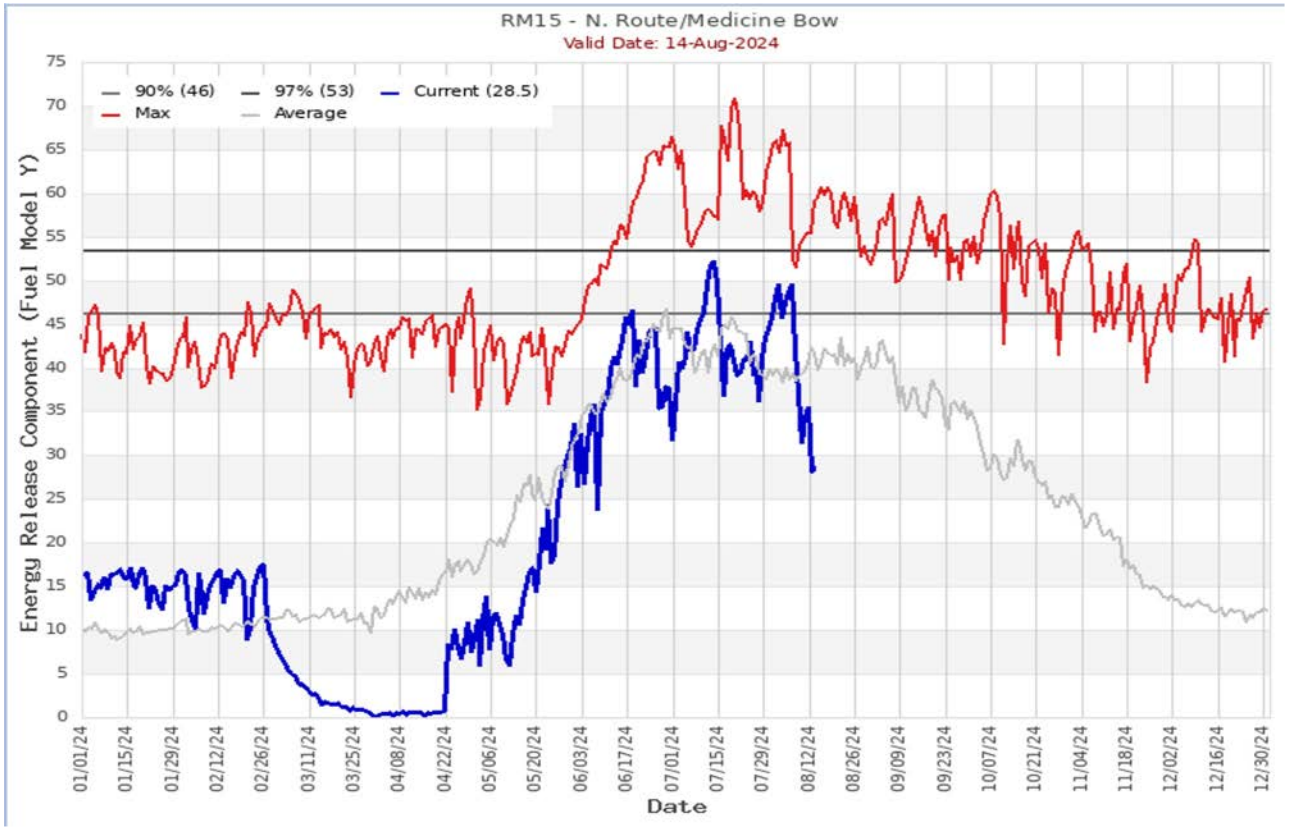


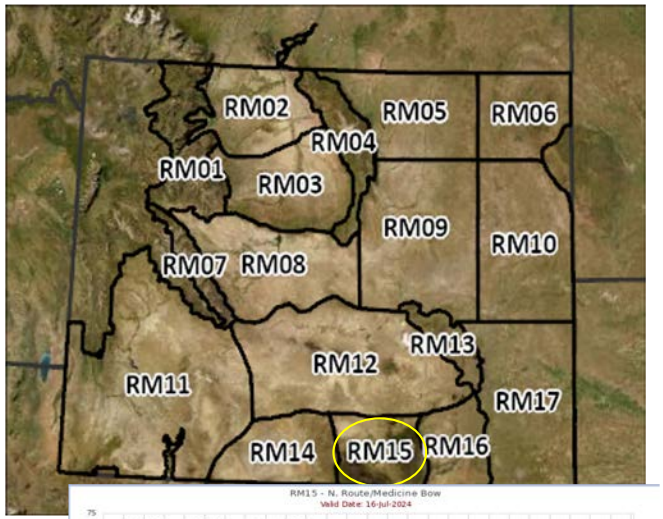


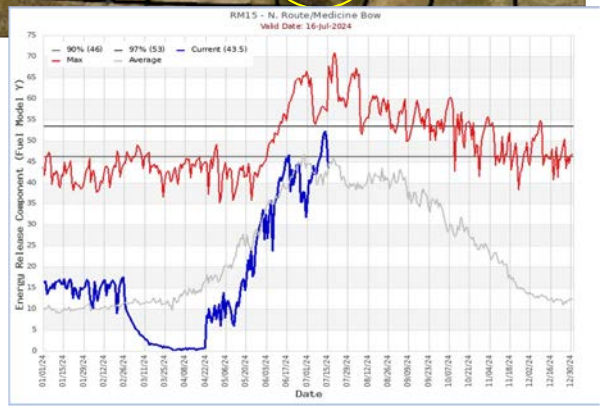


Wildland Fire Potential and Outlook

Energy Release Component:
N Route/Medicine Bow – Valid August 15

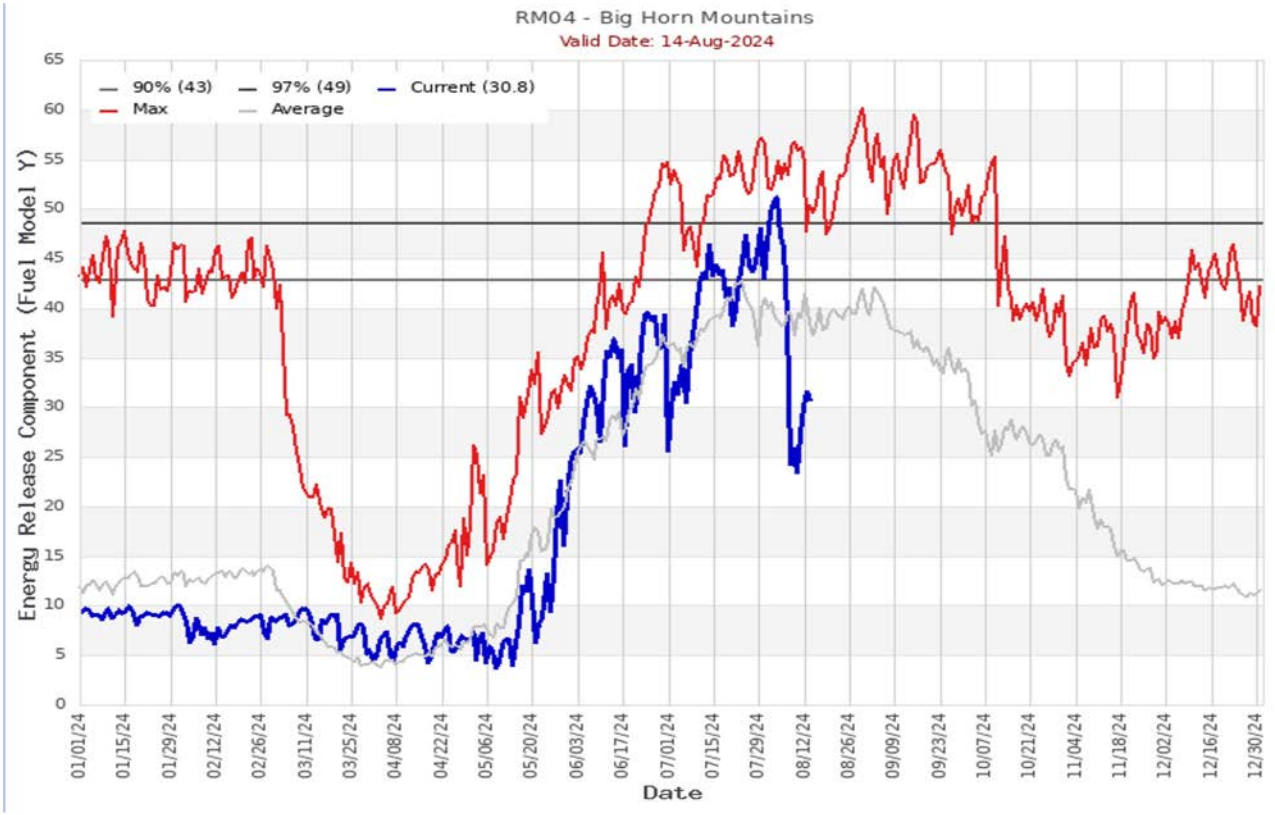


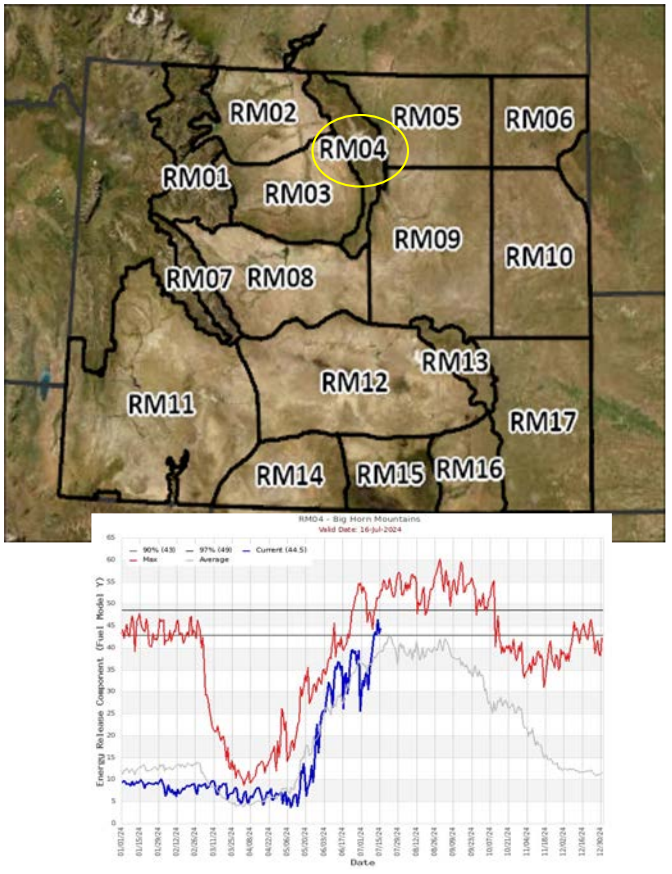




Wildland Fire Potential and Outlook

Energy Release Component:
Big Horn Mountains – Valid August 15





Wildland Fire Potential and Outlook

National Outlook- Released Monthly on 1st of the month

August 2024



September 2024



Wildland Fire Potential and Outlook

National Outlook- Released Monthly on 1st of the month

October 2024



September 2024



Highlight of the Month:

National Weather Service's new Drought Information Statement (aka DGT) Product

Drought Information Statement (DGT)

- The Drought Information Statement discusses local drought conditions, impacts and outlooks.
- The old Drought Statement (DGT for short) product was strictly text based
- It was very time consuming to create each month (2-3 hours) because it had to include very detailed descriptions of locations and data
- Here is a sample:

Drought Information Statement

DROUGHT INFORMATION STATEMENT
National Weather Service Riverton WY
400 PM MDT THU NOV 24 2022

...EXTREME DROUGHT CONTINUES ACROSS PARTS OF WESTERN WYOMING...

.SYNOPSIS:

.Drought Intensity and Extent:
Cooler weather and a gradual increase in precipitation over the last four weeks have led to a slight improvement in both soil moisture and drought conditions, particularly across west-central and central Wyoming. As noted by the U.S. Drought Monitor map issued on November 22nd, just over 81 percent of the state was still under drought conditions which ranged from Abnormally Dry to Extreme Drought, compared to 86 percent a month ago.

Over the past four weeks Extreme (D3) Drought conditions across southwest Teton and northern Sublette Counties have been improved to D2. Additionally, Severe (D2) Drought conditions remained across central and southern Teton, most of Sublette and Lincoln, as well as northwestern Sweetwater Counties.

Moderate (D1) Drought conditions were added to eastern Natrona County, while continuing across central Teton, extreme western Fremont, southeast Sublette, and western and southern Sweetwater Counties. Abnormally Dry (D0) conditions were removed from northern Fremont and western Hot Springs Counties and remained across northern Teton, western and southern Park, eastern Hot Springs and most of Washakie Counties,as well as western and southern Fremont, central and northeast Sweetwater, central and eastern Johnson and most of Natrona Counties.

Drought Information Statement

.Temperature and Precipitation:
Temperatures over the past four weeks have finally become more seasonable after four good cold fronts passed across Wyoming. The coldest system came in mid-November which actually brought some snow as well as the first round of sub-zero readings to much of the state. Overall, temperatures during this period were very cold across the region, averaging 6 to 8 degrees below normal. The coolest region was located across northern and western Big Horn County with readings that were 12 to 15 degrees below normal. The warmest area of the state was observed across central Sublette and most of Fremont and Johnson Counties which had averaged readings of 3 to 6 degrees below normal.

A change in storm trajectory helped to bring more moisture to the parched west and southwest during the past month. This was particularly true of two cold fronts that moved across the state during the first 10 days of November which brought on average over a half of an inch of moisture to the southwest. Overall, the region was just above normal in precipitation with most of the west and southwest on the above side, with the drier areas across the north and central sections. The wettest regions across Wyoming were reported across western Sweetwater and southern Sublette Counties where over 150 percent of normal precipitation were recorded. During this same period the driest area was observed across central Fremont county where less than 25 percent of normal precipitation was recorded.

.Hydrologic Conditions:
Streams across the region continue to slowly recover as more storms and resulting precipitation are directed over Wyoming. The updated report on the U.S. Geological Survey WaterWatch website reported near normal flows across most of Wyoming, with only the far west still recording below normal streamflows as the precipitation deficit will take some time to recover across that area.

Reservoirs across the region have started to level off, while a few have even started to post slight gains over the past 30 days. This is all due to cooler temperatures, increasing precipitation and the closing of the main growing season. The Green River Basin's reservoirs continue to have increased flows to feed Flaming Gorge, which in turn has been increasing downstream flows to assist the Colorado River situation. Area reservoirs across northern and central Wyoming ranged from 85 percent full at Boysen to 17 percent at Jackson Lake, with sites across the south averaging between 85 percent full at Alcova to 14 percent at the Big Sandy reservoir.

Snowpack Conditions:
The snow season started out with spurts and sputters, but over the last few weeks it has gained a foothold and is showing some promise. The snowiest basins so far this snow year are located across the west with the Upper Bear River with 147 percent, the Madison-Gallatin with 141 and the Snake with 114 percent. The drier regions were observed around the north-central sections of the state with 87 percent in the Bighorn and 89 percent in the Tongue Basin.

As you can see, the text product was very, very, very, very, very long.

- In 2023, an initiative was begun to create a graphical version of the DGT
- The new version is in PDF format based on a standardized template designed to
  - Reduce the burden for forecasters
  - Incorporate graphics
  - Enable collaboration with neighboring offices

- The product is a Google Slide presentation that allows the user to update the linked graphical images with the click of a button
- Next, the text is updated to reflect the current conditions shown in the slides
- One advantage of the new DGT is that the order of slides and data is universal across weather offices
- Depending on the location, time of year, and actual conditions, some slides may be skipped when not necessary

- This bulletin is not required to be created on any regular schedule
- However, it becomes *mandatory* if extreme drought conditions *(D3) or higher* are occurring
- The DGT is sent as a PDF (graphics) version, with a text product available, if desired
- All current DGTs are available via the Drought.Gov web page.

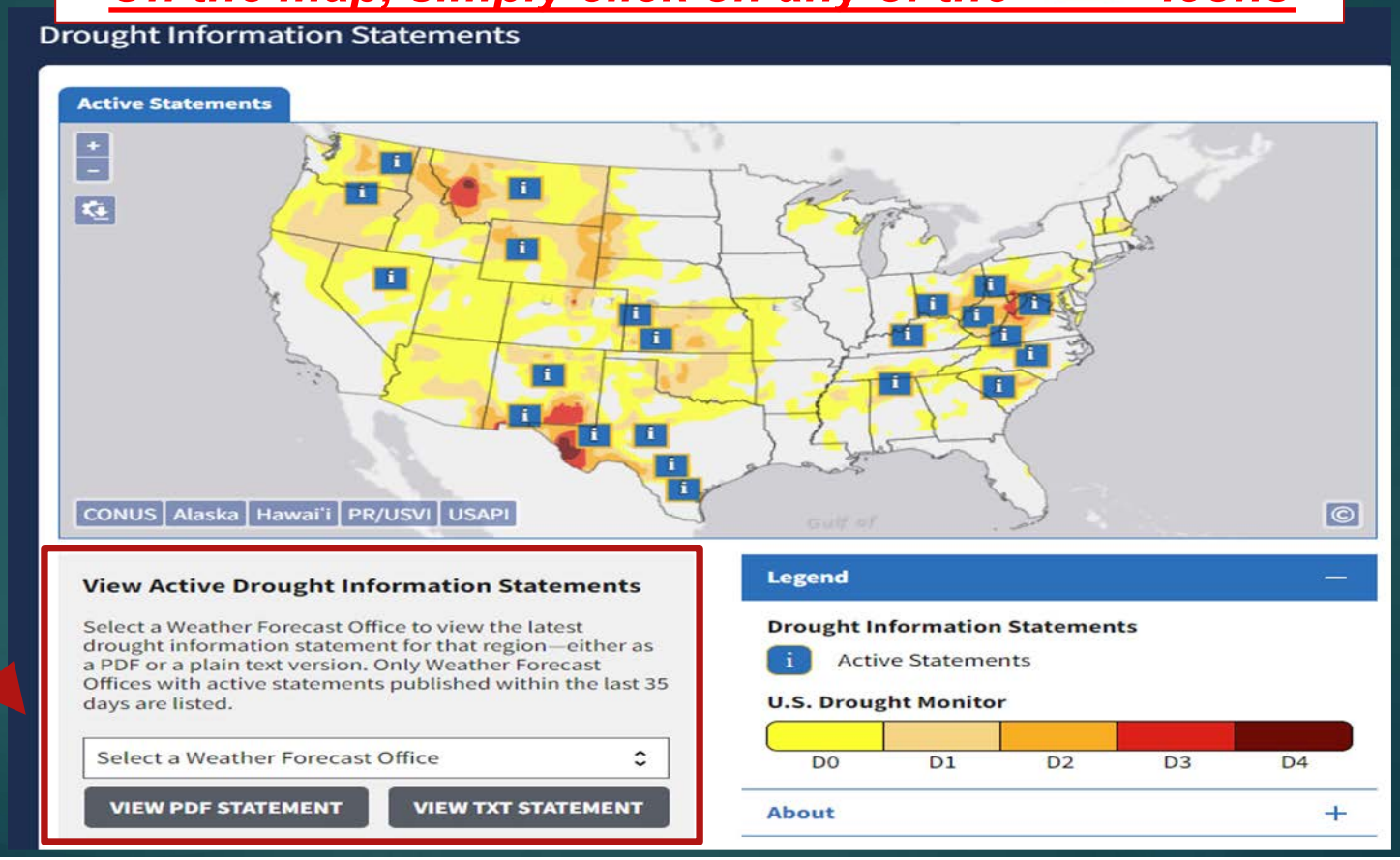
How to Access the DGT From Drought.GOV



From the home page, use the drop down menu under "Data and Maps", and select "Drought Impacts"

How to Access the DGT From Drought.GOV

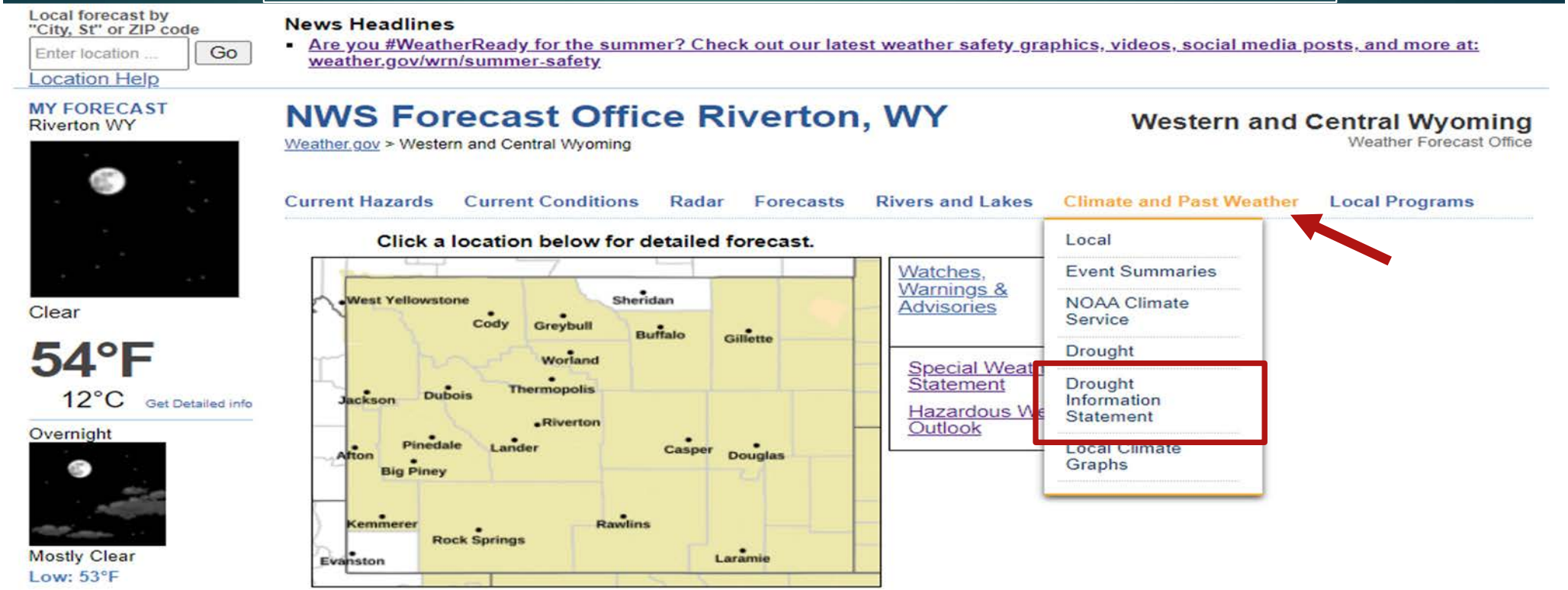
On the map, simply click on any of the icons



OR:

How to Access the DGT From NWS Riverton Home Page

Hover over the top menu "Climate and Past Weather"



weather.gov/Riverton

WFO RIW DGT Page

MY FORECAST
Riverton WY



Clear

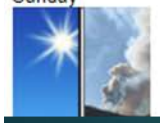
55°F
13°C Get Detailed info

Overnight



Mostly Clear
Low: 53°F

Sunday



Drought Information Statement

Weather.gov > Western and Central Wyoming > Drought Information Statement

Western and Central Wyoming
Weather Forecast Office

Current Hazards | Current Conditions | Radar | Forecasts | Rivers and Lakes | Climate and Past Weather | Local Programs

Drought Information Statements for NWS Riverton WY

August 9, 2024 - Drought Information Statement (PDF)

Link to Graphical Format

Drought Information Statements for NWS Riverton WY (Accessible Text-Only Version)

August 9, 2024 - Drought Information Statement (.txt)

Link to Text Format

Archived (Past) Statements

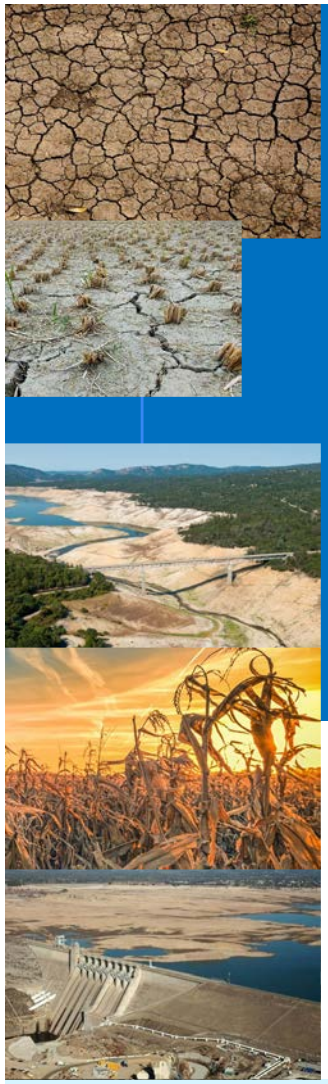
August 9, 2024 - PDF TXT
July 26, 2024 - PDF TXT
July 15, 2024 - PDF TXT
June 30, 2024 - PDF TXT
June 07, 2024 - PDF TXT
May 16, 2024 - PDF TXT

View Past Statements

Sample of New DGT

Here is a sample.

Note that not all slides are current



Drought Information Statement for Western & Central Wyoming

Valid August 9, 2024

Issued By: WFO Riverton, WY

Contact Information:

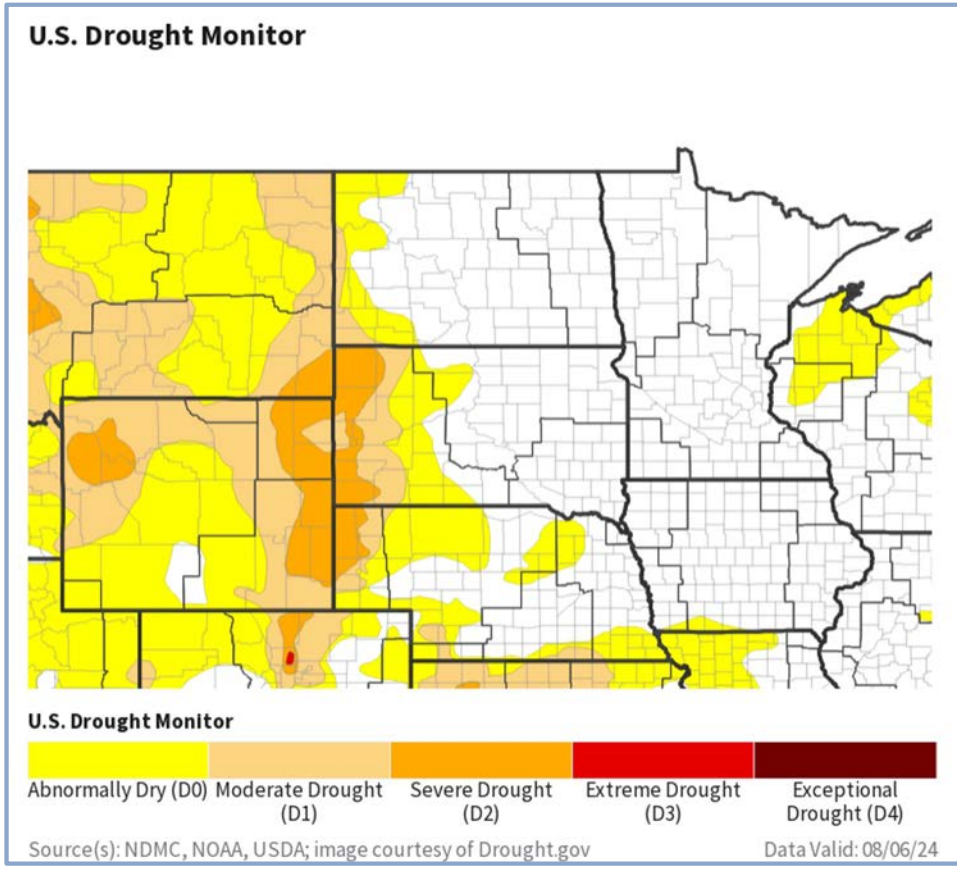
- This product will be updated by August 23, 2024, or sooner if drought conditions change significantly.
- Please see all currently available products at https://drought.gov/drought-information-statements.
- Please visit https://www.weather.gov/riw/DroughtInformationStatement for previous statements.
- Please visit https://www.drought.gov/drought-status-updates for regional drought status updates.

- Severe (D2) drought conditions developed in Park and Teton counties
- Moderate (D1) drought conditions continue across Teton, Park, Sublette, and Lincoln Counties. Fremont, Natrona, Johnson, Hot Springs, and Big Horn Counties also have small areas of moderate drought conditions.
- Abnormally Dry conditions remain across most of the state with the only exception being parts of Sweetwater County.

U.S. Drought Monitor

Link to the latest U.S. Drought Monitor for Wyoming

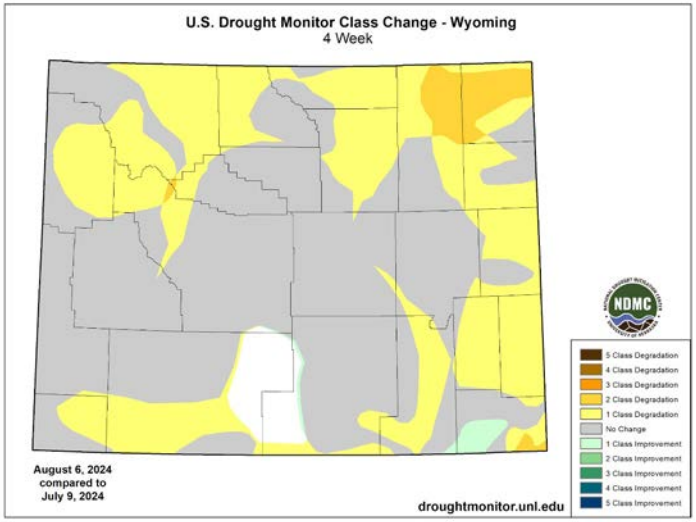
- Drought intensity and Extent
  - **D4 (Exceptional Drought)**: None occurring.
  - **D3 (Extreme Drought)**: None occurring.
  - **D2 (Severe Drought)**: Portions of Teton, Park and Fremont Counties as well as along the eastern border of Wyoming.
  - **D1 (Moderate Drought)**: Areas of Lincoln to Sublette, Teton and Park counties. Western Fremont and Hot Springs counties. Big Horn, Johnson and northeast Natrona counties. This also includes nearly all eastern counties in Wyoming
  - **D0: (Abnormally Dry)**: All other counties except a small section of Sweetwater County.



Recent Change in Drought Intensity

Link to the latest 4-week change map for Wyoming

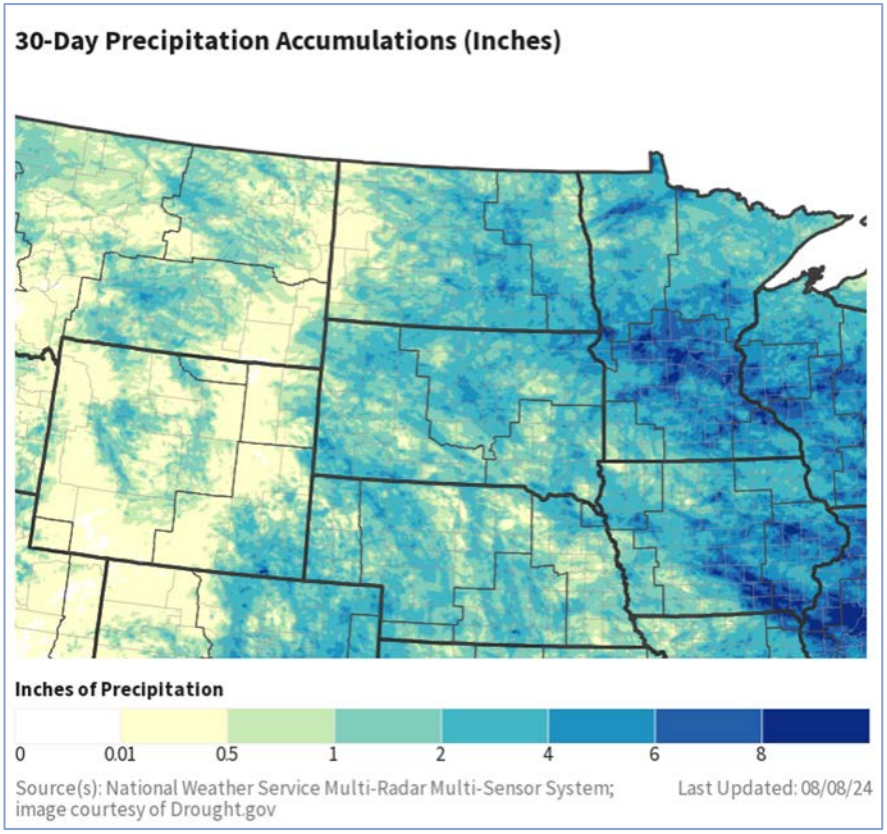
- **Four Week Drought Monitor Class Change**
  - Drought Worsened: Southern Sweetwater and eastern Unita counties, and across much of northern and eastern Wyoming.
  - No Change: Across the far northwest and for much of the middle and southern areas of the state.
  - Drought Improved: Only a couple small slivers of improvement in the southeast.
- **Persistent high pressure remained over the western CONUS keeping conditions mainly hot and dry.** As a result, many places have seen limited precipitation chances and near record heat.

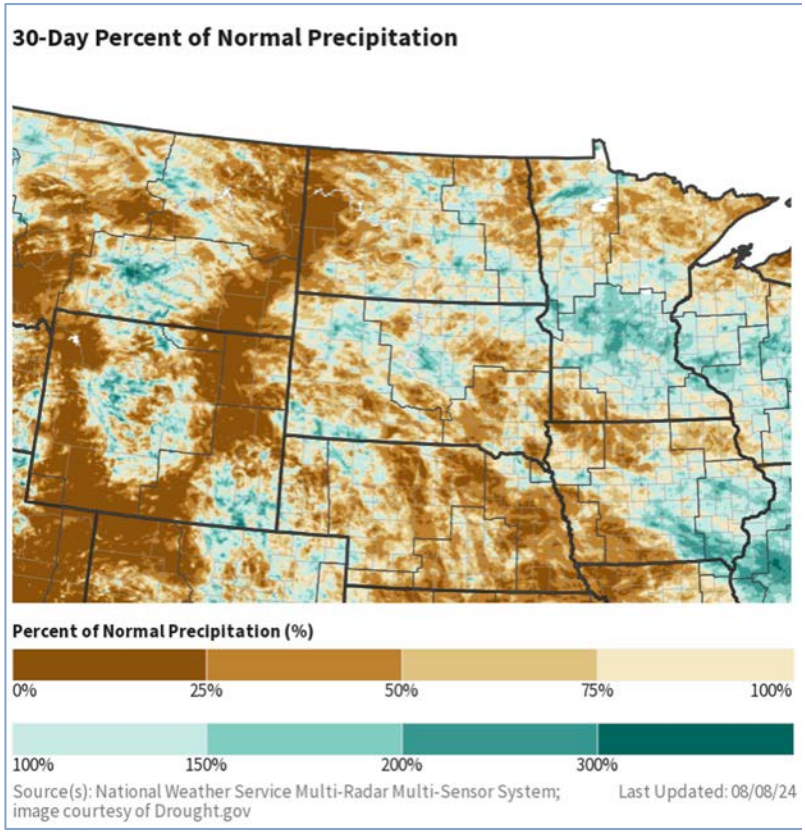


Precipitation

Much of Wyoming had below normal precipitation over the past 30 days.

Above normal precipitation was mainly focused over northern Sweetwater, and portions of Fremont, Hot Springs, Big Horn and western Natrona Counties.

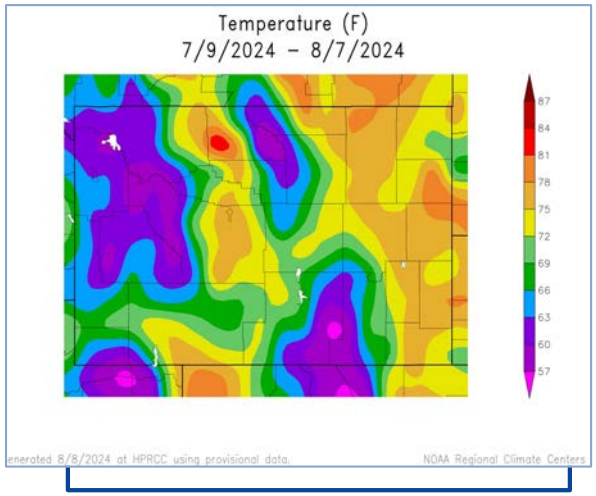


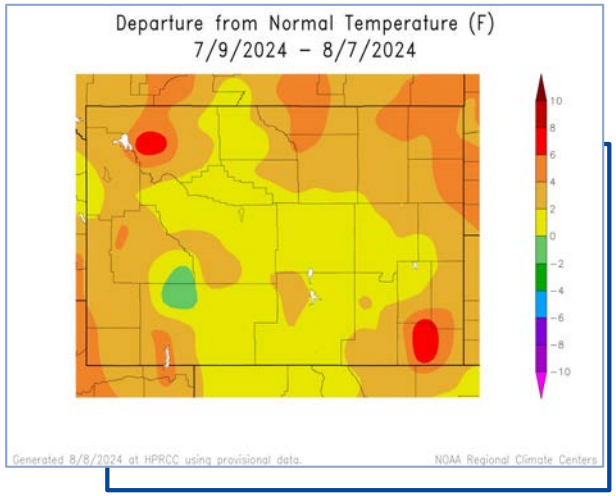


Temperature

Link to [ACIS Climate Maps from the High Plains Regional Climate Center]

Park County was the hot spot with 6-8 degrees above normal. Teton, Lincoln, Sublette, Johnson, Washakie, Big Horn, and Sweetwater Counties saw temperatures 2-6 degrees above normal. The remainder of the state was 0-2 degrees above normal.





Below average temperatures were only noted over the high elevations of Sublette and Sweetwater counties.

Summary of Impacts (graphics on following slides)

Links: See/submit Condition Monitoring Observer Reports (CMOR) and view the Drought Impacts Reporter

Hydrologic Impacts

- Conditions are expected to remain dry across much of the state with some areas seeing worsening drought conditions through the middle of August.
- Any flooding would be the result of thunderstorms producing heavy rainfall over a short period of time.

Agricultural Impacts

- USDA Wyoming Crop Progress and Condition Reports can be found here

Fire Hazard Impacts

- The far southwest areas of the state have small chances with low humidity and gusty winds, but not showing any significant impacts at this time (Most recent Significant Wildland Fire Potential Outlook)

Other Impacts

- Wildland grasses and shrubs have reached critical criteria across many areas in the state with further drying expected.

Mitigation Actions

- Please refer to your municipality and/or water provider for mitigation information
- Clear debris from around structures to protect from potential wildfires

Hydrologic Conditions and Impacts

7-Day Average Streamflow Ending May 15, 2024

- Big Sandy Basin has below normal streamflow for this time of year
- A majority of the region has normal streamflow
- Portions of the Bighorn, North Platte, and Middle Powder River Basins have above normal streamflow as compared to normal

Note: NOT current map or conditions.

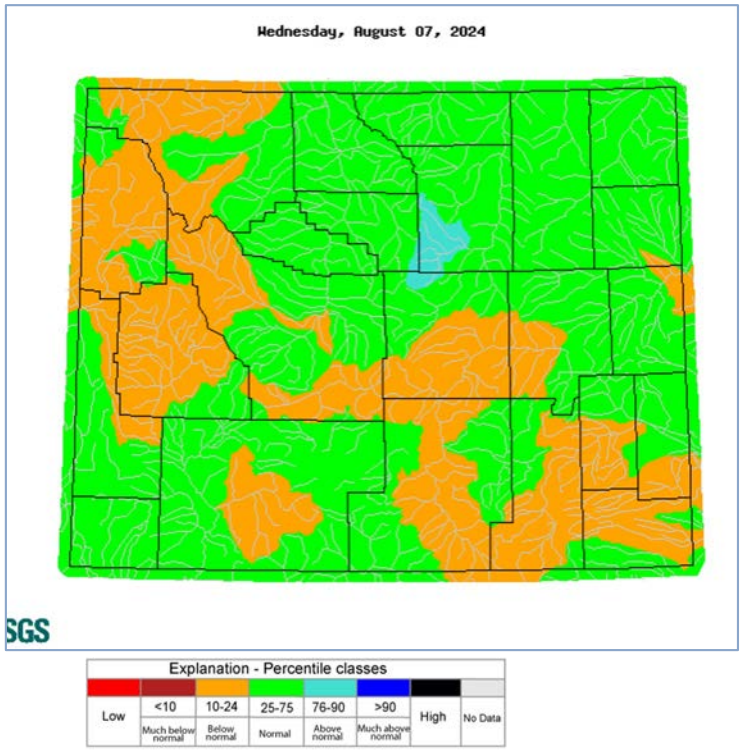
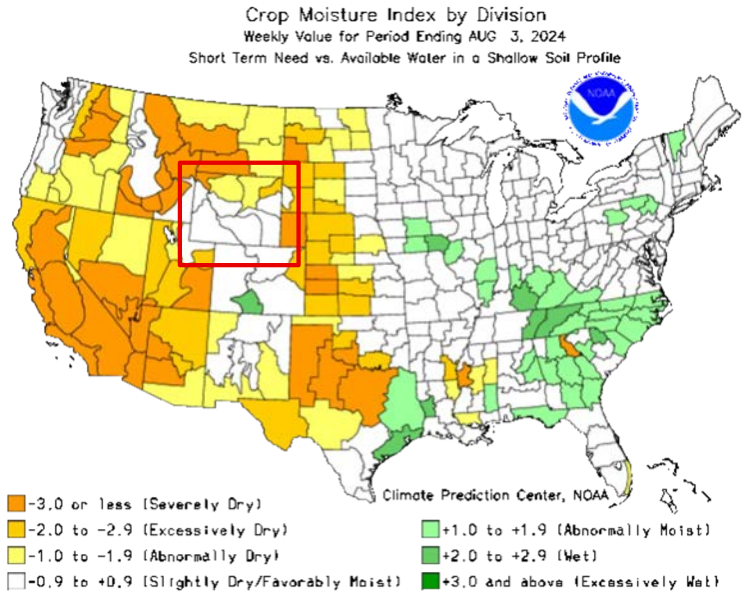


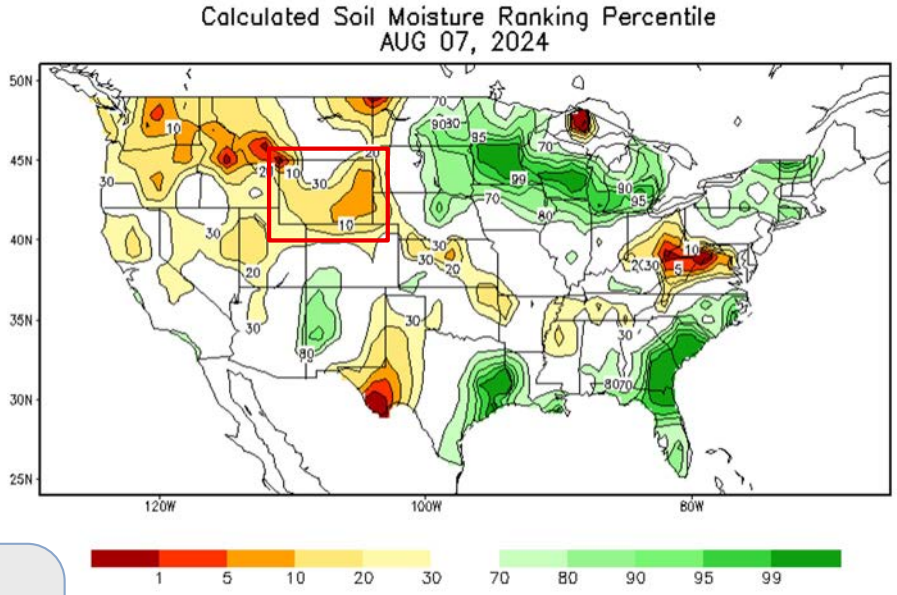
Image Caption: USGS 7 day average streamflow HUC map valid 05 15 2024

Agricultural Impacts



- The lack of significant precipitation has impacted areas of northern and eastern Wyoming

- Short-term water need vs. Available Water in a Shallow Soil profile is trending dry.



Note: NOT current maps or conditions.

Fire Hazard Impacts

Link to [Wildfire Potential Outlooks from the National Interagency Coordination Center.]

- **Grasslands:** Many places in “green up” - wildland fire hazards may be possible as fuels become drier in the coming 30-45 days
- **Mountains:** Fire season begins after the mountain snow melt ends. Peak wildfire season is usually mid-July through early September



August 2024 Outlook

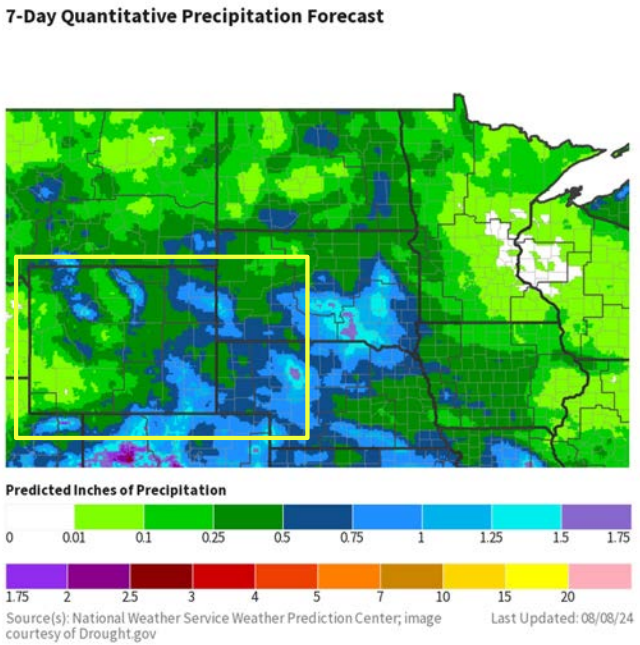


September 2024 Outlook

Seven-Day Precipitation Forecast

Precipitation Outlook Valid May 17-23

- The next storm system is set to arrive early next week (May 20-21), but precipitation totals are not looking heavy at this time
- There is potential for a more vigorous storm arriving from the west Thursday, May 23 (and 24). This storm may pack a better punch and provide cooler temperatures and widespread precipitation
    - Mountain snow, especially in far west and northern Wyoming
    - Lower elevation precipitation will likely be in the form of rain

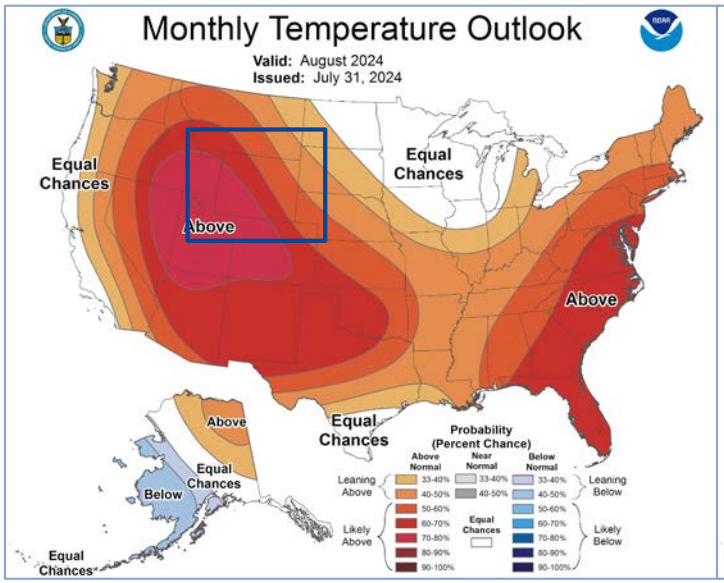


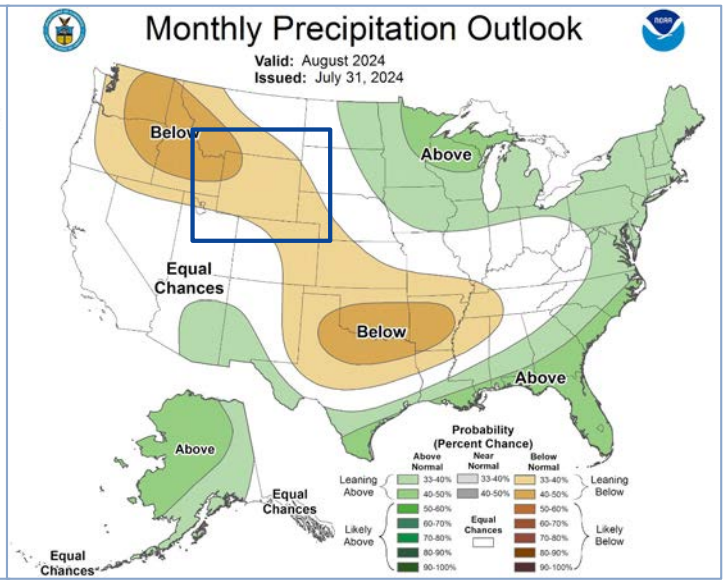
Note: NOT current map or conditions.

Long-Range Outlooks

The latest monthly and seasonal outlooks can be found on the CPC homepage

- Temperatures for August are expected to trend above normal, with much of the area having a 50-70% chance of warmer-than-normal temperatures.
- August precipitation chances are leaning toward below normal amounts with a 33-40% chance.





THIS MAY BE MONTHLY OR SEASONAL (3-MONTH) DATA

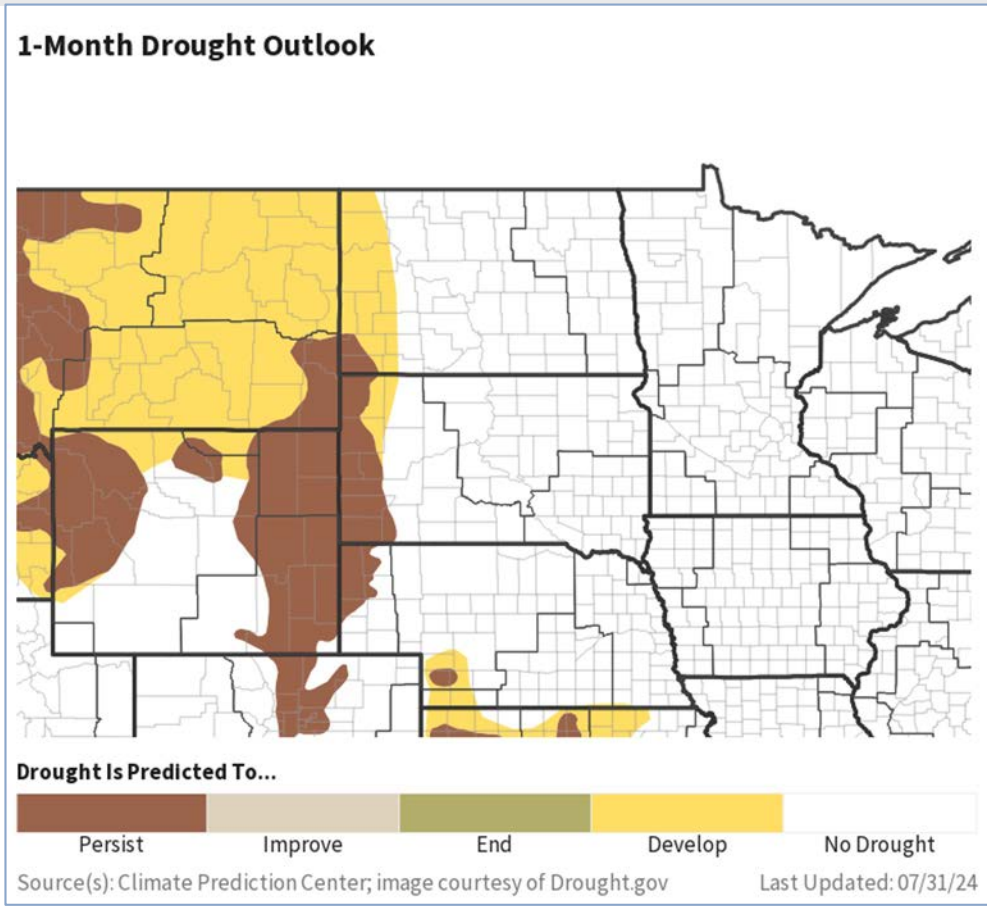
Note: NOT current maps.

Drought Outlook

The latest monthly and seasonal outlooks can be found on the CPC homepage

- Drought conditions are expected to further develop or persist over the west and far north, as well as the eastern counties

Note: NOT current map or outlook.



Links to the latest:
Climate Prediction Center Monthly Drought Outlook
Climate Prediction Center Seasonal Drought Outlook

DGTs may Vary

This sample shows the available slides

Not every office, or every issuance will include them all

Data Sources for the Graphics

- National Integrated Drought Information System (NIDIS): *Drought.gov*
- National Drought Mitigation Center (NDMC), **University of Nebraska**
  - U.S. Drought Monitor: *Droughtmonitor.unl.edu*
  - Drought Impacts Toolkit: *droughtimpacts.unl.edu*

Data Sources (cont)

- Climate Prediction Center (CPC): *cpc.ncep.noaa.gov*
- High Plains Regional Climate Center: *hprcc.unl.edu* (ACIS Climate Maps)
- USDA, National Agricultural Statistics Service: *nass.usda.gov*
- National Interagency Fire Center, Predictive Services: *https://www.nifc.gov/nicc-files/predictive/outlooks/monthly_seasonal_outlook.pdf*

Tony Bergantino
WRDS & State Climate Office
antonius@uwyo.edu

Chase Lane
Bureau of Land Management
clane@blm.gov

Aaron Fiaschetti
USGS
afiaschetti@usgs.gov

Geri Swanson
National Weather Service
Riverton
geri.swanson@noaa.gov

Michelle Hubbard
WY State Engineer's Office
michelle.hubbard@wyo.gov

Windy Kelley
UW Extension & USDA NPCH
wkelley1@uwyo.edu

Tony Anderson
National Weather Service
Cheyenne
tony.anderson@noaa.gov

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!