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RECLAMATION



UNIVERSITY
OF WYOMING

Extension

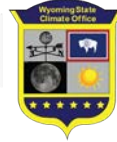


WY Conditions & Outlooks:

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

April 28, 2022

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



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RECLAMATION



Presentation Outline

- **Current Conditions:** Overview
 - Snow Water Equivalent (SWE)
 - Streamflow
 - Reservoir Supply
 - Water Calls and Allocations
- **Outlooks:** Temperature & Precipitation
 - Fuels' Status & Wildland Fire Outlook
- **Questions**



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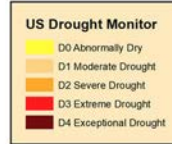
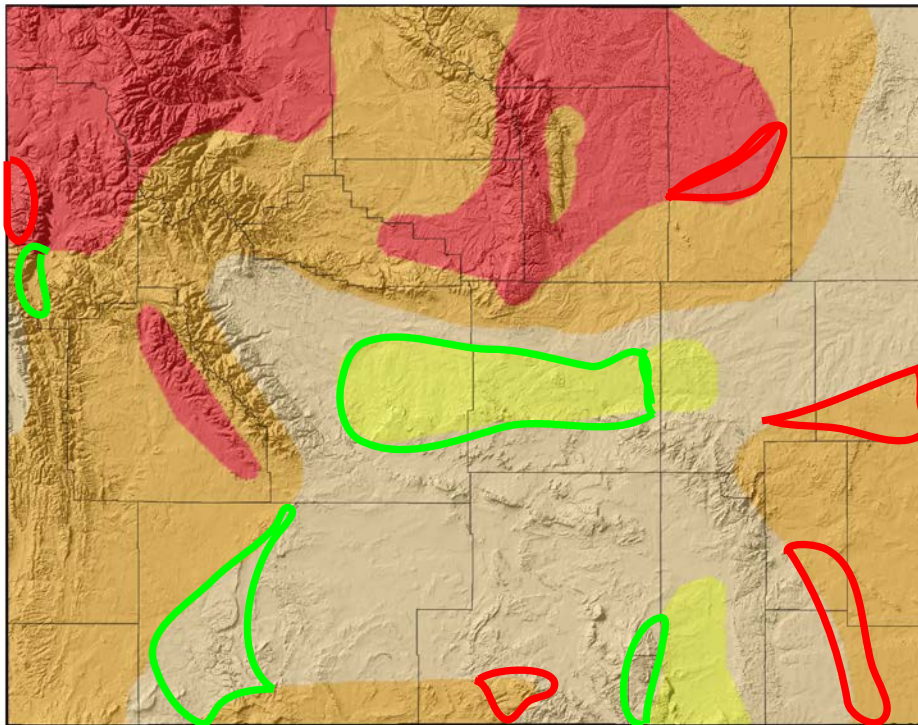
Current Conditions

US Drought Monitor for April 26, 2022

(Released Thursday, April 28, 2022)

Valid 8 a.m. EDT

US Drought Monitor for 26 Apr 2022



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



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

Improvements and **degradations** in the last month. Recent precipitation is starting to erode some of the areas but longer term dryness is filling in others.

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 28 Apr 2022 <http://www.wrds.uwyo.edu>

<https://droughtmonitor.unl.edu>



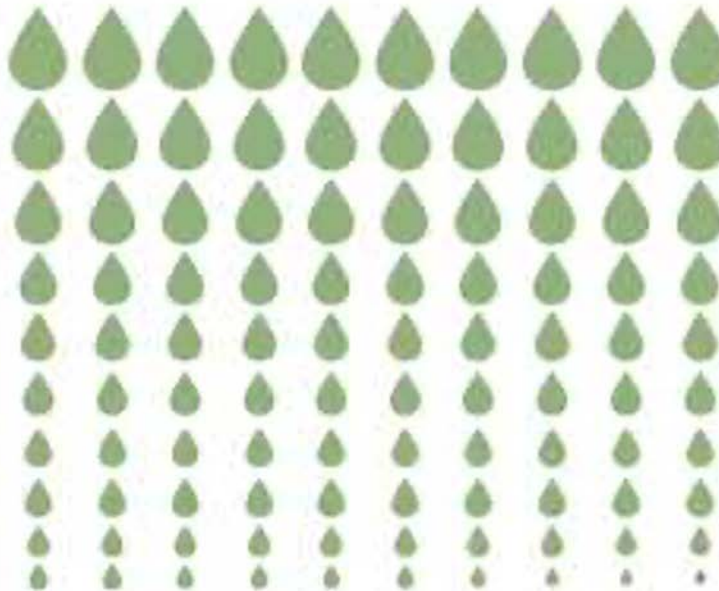
droughtmonitor.unl.edu



How the US Drought Monitor is Formed



2007
39.08 in.



2012
11.58 in.

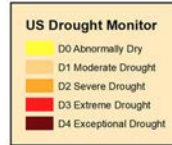
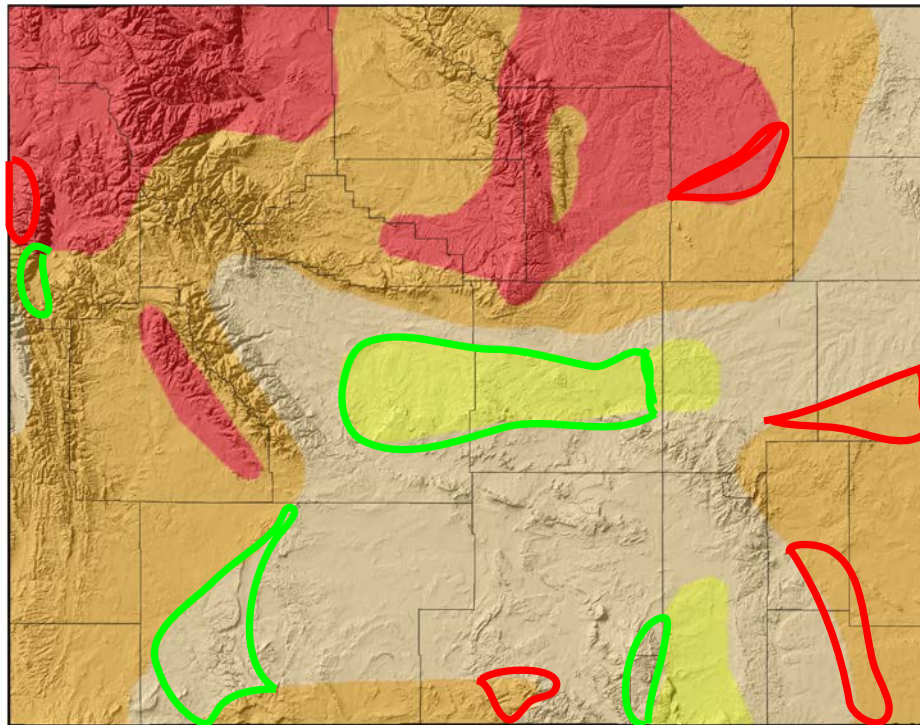


US Drought Monitor for April 26, 2022

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Map Layout Created 28 Apr 2022 <http://www.wrds.uwyo.edu>

<https://droughtmonitor.unl.edu>



droughtmonitor.unl.edu

14-Day Precipitation Percentile (14 Apr 2022 to 27 Apr 2022)

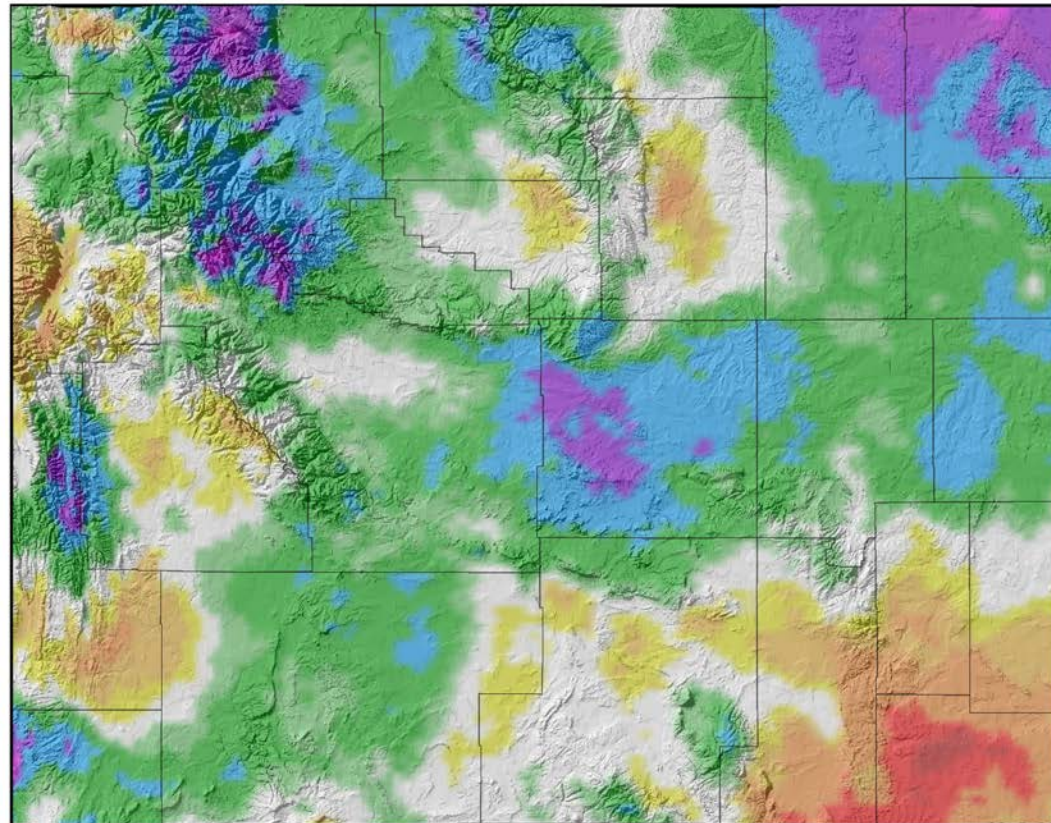
14-Day Precipitation (Percentile) for 14 Apr 2022 to 27 Apr 2022

Above Median:

- Much of Wyoming

Below Median (Areas of Concern):

- Southeast
- Scattered other pockets



Provisional data, subject to revision

Precipitation Data
PRISM Climate Group
<http://prism.oregonstate.edu>



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



Daily precipitation data from PRISM Climate Group, Copyright ©2021, PRISM Climate Group, Oregon State University,
<http://prism.oregonstate.edu>
Map Created 28 Apr 2022 <http://www.wrds.uwyo.edu>
Daily percentiles created from PRISM daily precipitation grids



90-Day Precipitation Percentile (28 Jan 2022 to 27 Apr 2022)

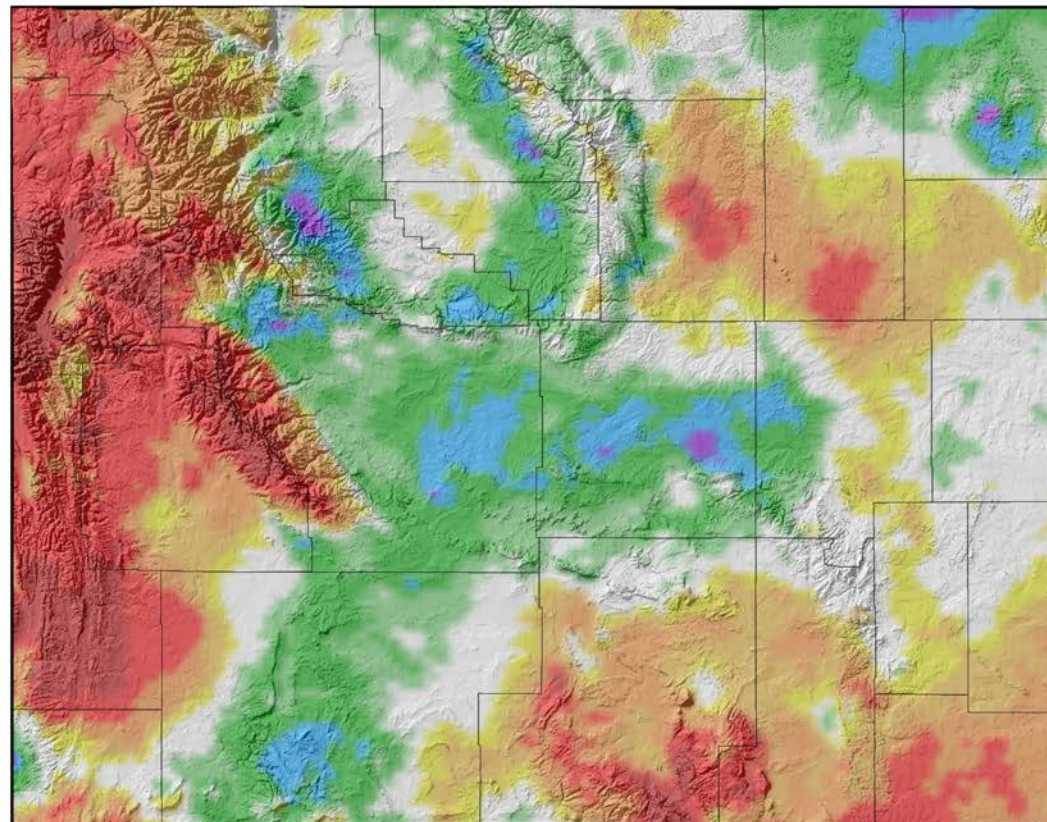
90-Day Precipitation (Percentile) for 28 Jan 2022 to 27 Apr 2022

Above Median:

- Bighorn Basin Edges
- Southeast Park County
- Western Hot Springs County
- Sweetwater County
- Natrona County
- Fremont County
- Northeast

Below Median (Areas of Concern):

- Higher elevation west
- Southeast/South Central
- Johnson County
- Southern Campbell County



Precipitation Data
PRISM Climate Group
<http://prism.oregonstate.edu>



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



Provisional data, subject to revision

Daily precipitation data from PRISM Climate Group, Copyright ©2021, PRISM Climate Group, Oregon State University,
<http://prism.oregonstate.edu>
Map Created 28 Apr 2022 <http://www.wrds.uwyo.edu>
Daily percentiles created from PRISM daily precipitation grids



30-Day Precipitation (Departure from Average)

(29 Mar 2022 to 27 Apr 2022)

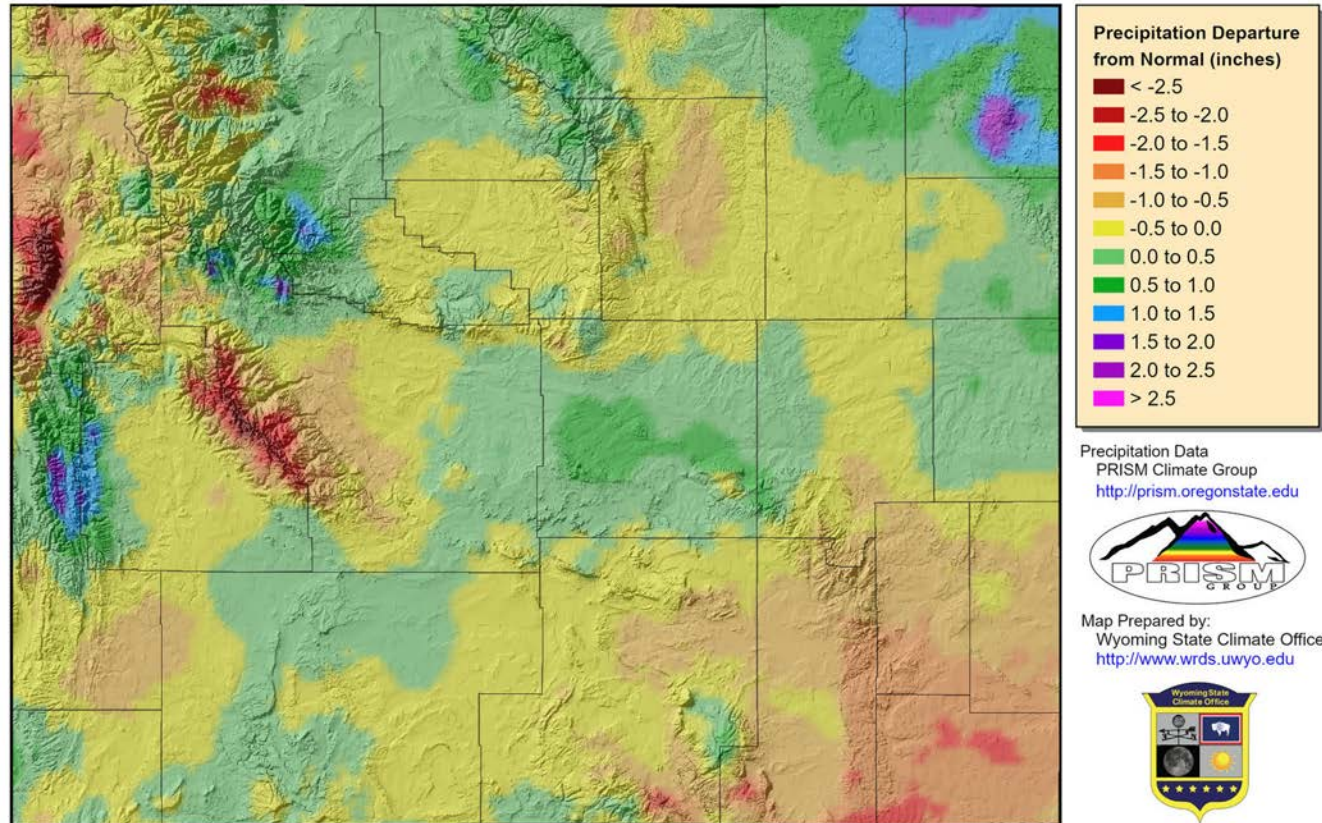
30-Day Precipitation (Departure from 1991-2020 Average) for 29 Mar 2022 to 27 Apr 2022

Below Average (Areas of Concern):

- Higher Elevations, Southeast

Above Average:

- Northeast
- Central
- Northern Bighorn Basin

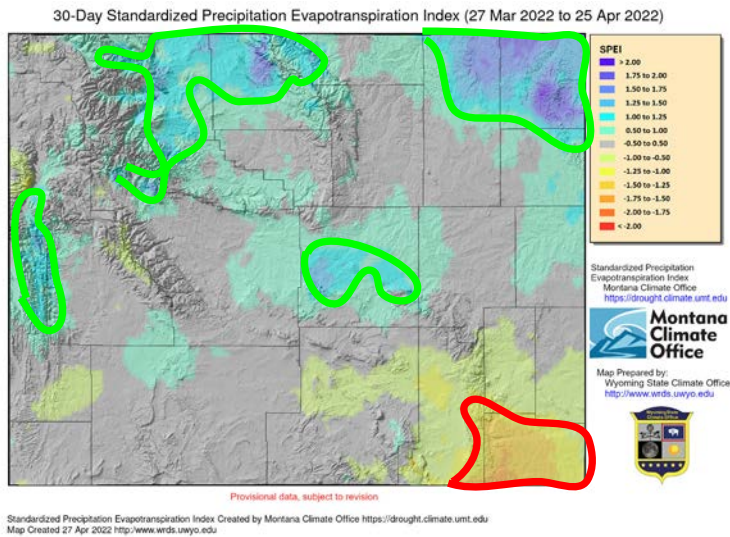


Provisional data, subject to revision

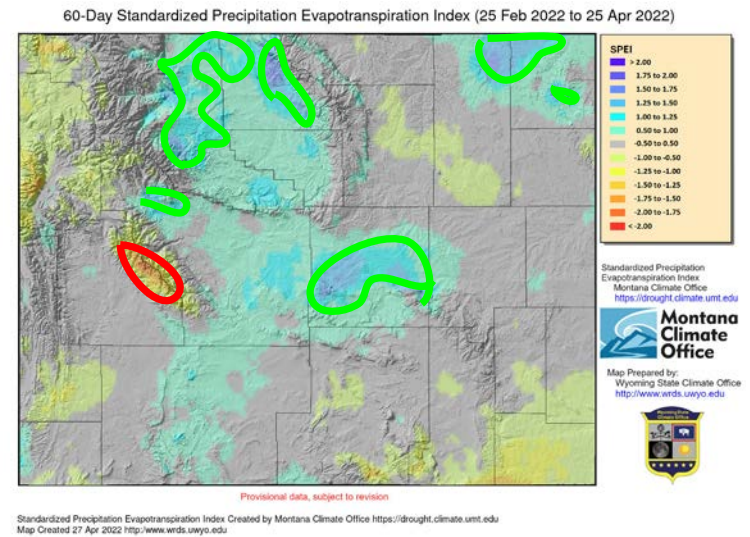
Monthly and Normal precipitation data from PRISM Climate Group, Copyright ©2021, PRISM Climate Group, Oregon State University, <http://prism.oregonstate.edu>
Map Created 28 Apr 2022 <http://www.wrds.uwyo.edu>
Precipitation totals created from PRISM daily precipitation grids



30-Day
→



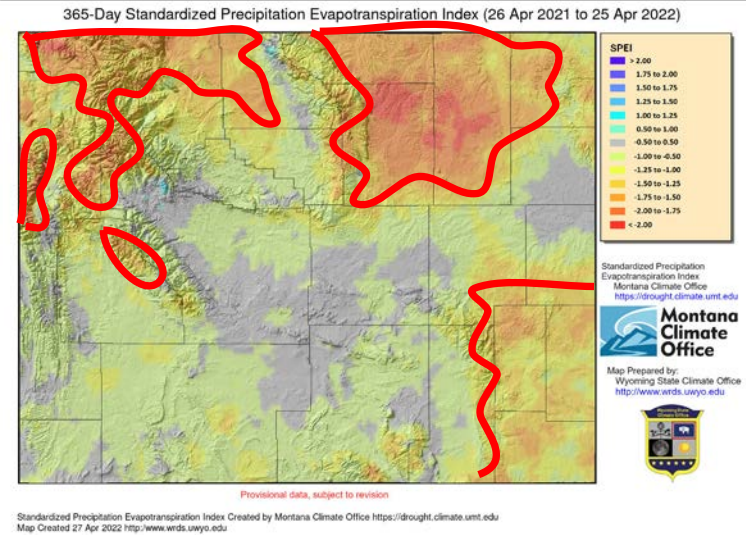
60-Day
→



Standardized Precipitation Evapotranspiration Index (SPEI)

Shorter-term wetness, longer-term dryness with areas of emerging in southeast.

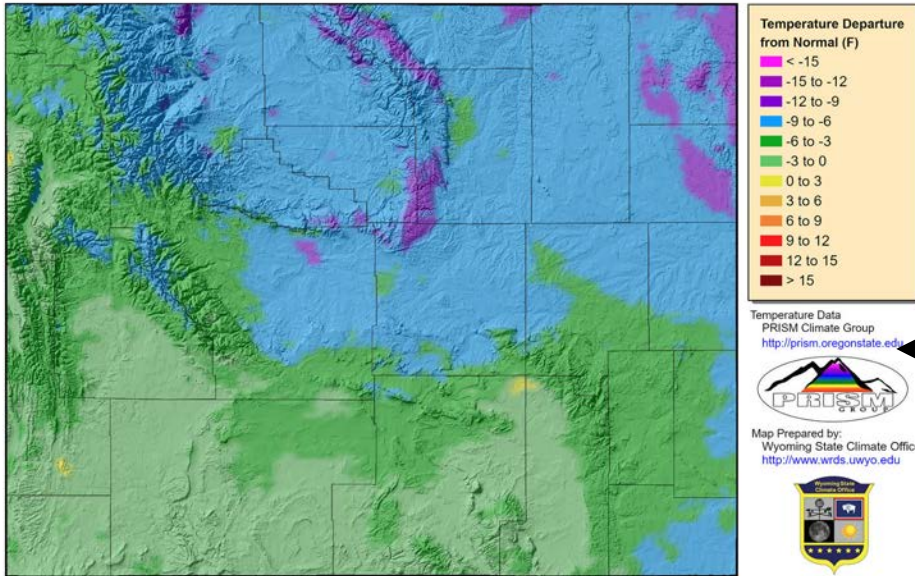
1-Year
→



14-Day Average Minimum Temperature (14 Apr to 27 Apr)

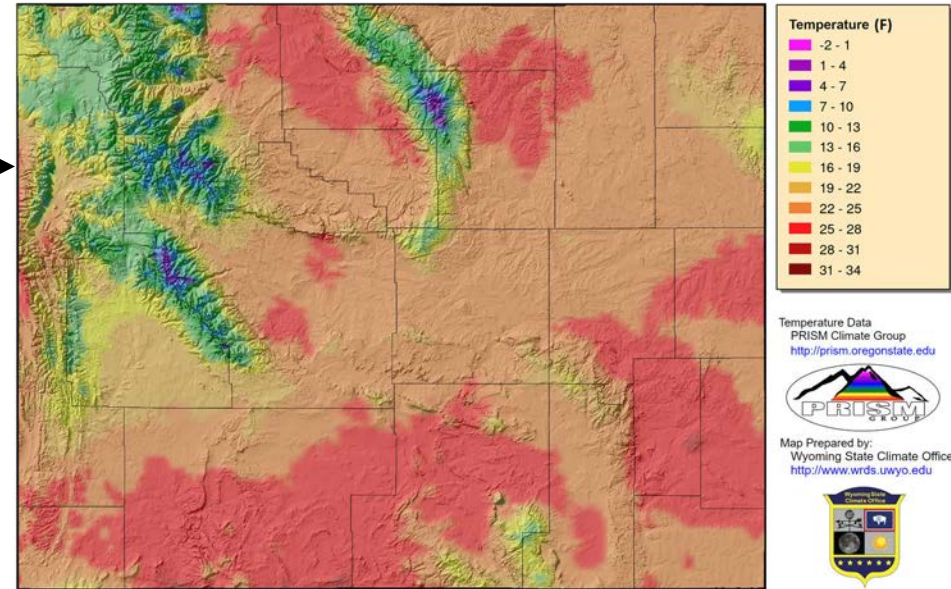
- Lows still below freezing statewide
- Warmest in S/SE and Low Elev N Central

14-Day Average Minimum Temperature (Departure from 1991-2020 Average) for 14 Apr 2022 to 27 Apr 2022



Provisional data, subject to revision
 Daily Temperature data from PRISM Climate Group, Copyright ©2021, PRISM Climate Group, Oregon State University, <http://prism.oregonstate.edu>
 Map Created 28 Apr 2022 <http://www.wrds.uwyo.edu>
 Temperature averages created from PRISM daily temperature grids

14-Day Average Minimum Temperature for 14 Apr 2022 to 27 Apr 2022



Provisional data, subject to revision
 Daily Temperature data from PRISM Climate Group, Copyright ©2021, PRISM Climate Group, Oregon State University, <http://prism.oregonstate.edu>
 Map Created 28 Apr 2022 <http://www.wrds.uwyo.edu>
 Temperature averages created from PRISM daily temperature grids

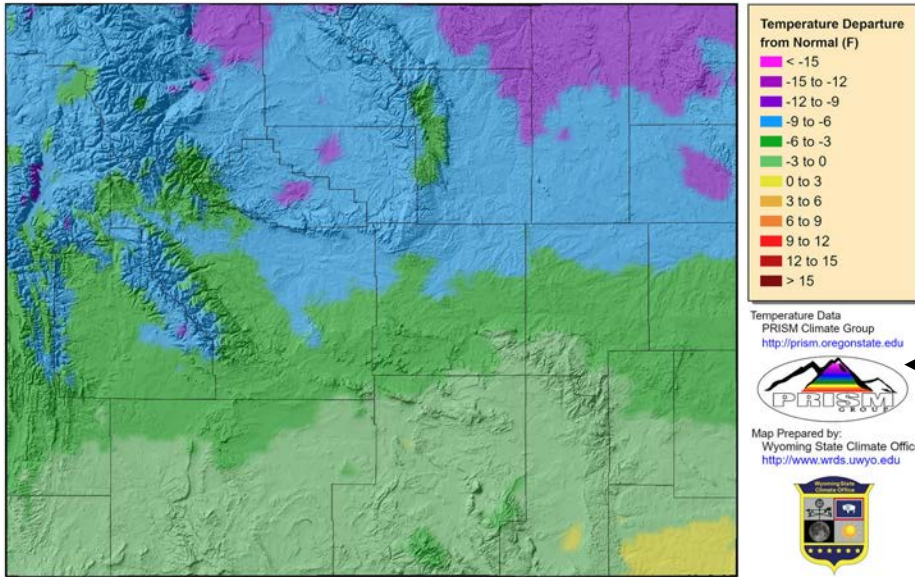
14-Day *Departure from Normal* Average Minimum Temperature

- Below normal almost statewide
- Generally greater negative departures as one goes NE

14-Day Average **Maximum** Temperature (14 Apr to 27 Apr)

- High elevations barely <32F for TMax
- Mid-50s+ F for SE and parts of SW

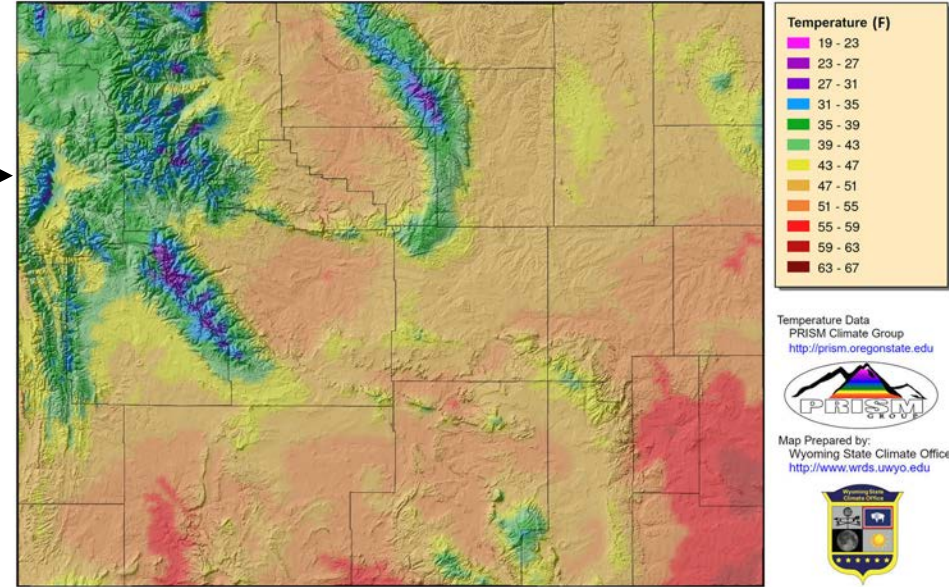
14-Day Average Maximum Temperature (Departure from 1991-2020 Average) for 14 Apr 2022 to 27 Apr 2022



Provisional data, subject to revision

Daily Temperature data from PRISM Climate Group, Copyright ©2021, PRISM Climate Group, Oregon State University, <http://prism.oregonstate.edu>
Map Created 28 Apr 2022 <http://www.wrds.uwyo.edu>
Temperature averages created from PRISM daily temperature grids

14-Day Average Maximum Temperature for 14 Apr 2022 to 27 Apr 2022



Provisional data, subject to revision

Daily Temperature data from PRISM Climate Group, Copyright ©2021, PRISM Climate Group, Oregon State University, <http://prism.oregonstate.edu>
Map Created 28 Apr 2022 <http://www.wrds.uwyo.edu>
Temperature averages created from PRISM daily temperature grids

14- Day *Departure from* Normal Average **Maximum** Temperature

- Below average statewide except Laramie County and City of Laramie
- Generally greater negative departures to north



30-Day Average Mean Temperature (Departure from Average) (29 Mar 2022 to 27 Apr 2022)

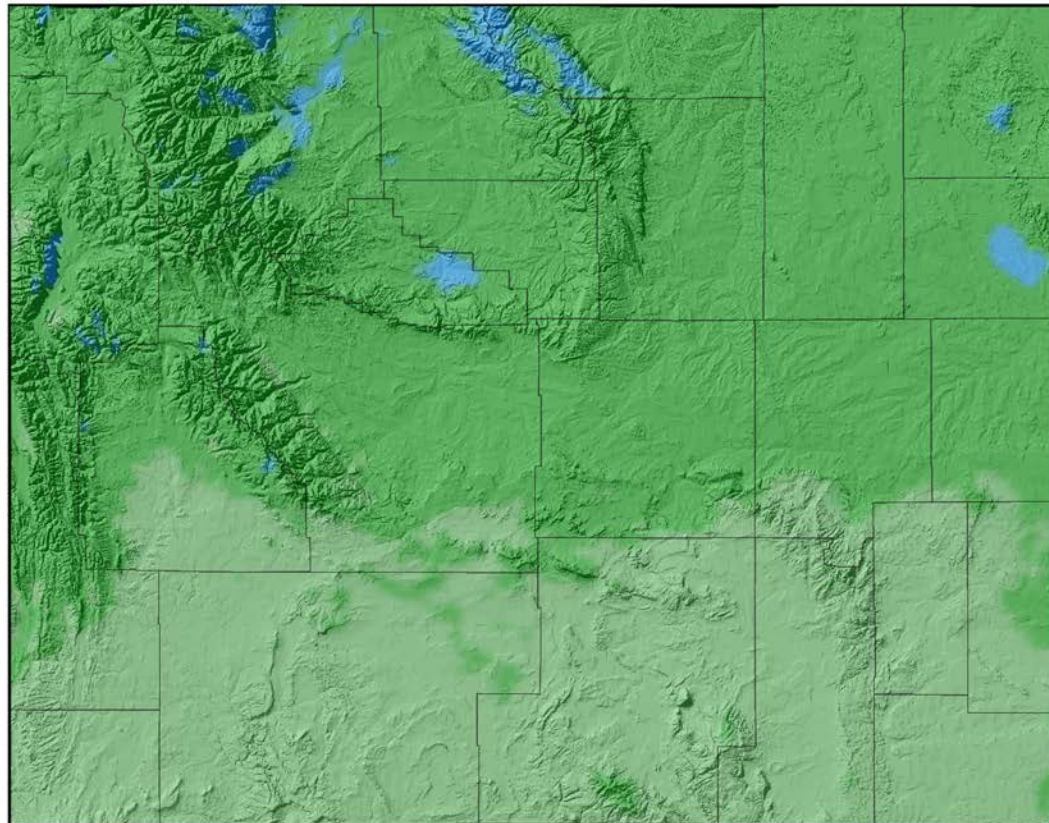
30-Day Average Mean Temperature (Departure from 1991-2020 Average) for 29 Mar 2022 to 27 Apr 2022

Above Average:

- None

Below Average:

- Northern 3F to 6F below
- Southern 0F to 3F below



Temperature Data
PRISM Climate Group
<http://prism.oregonstate.edu>



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



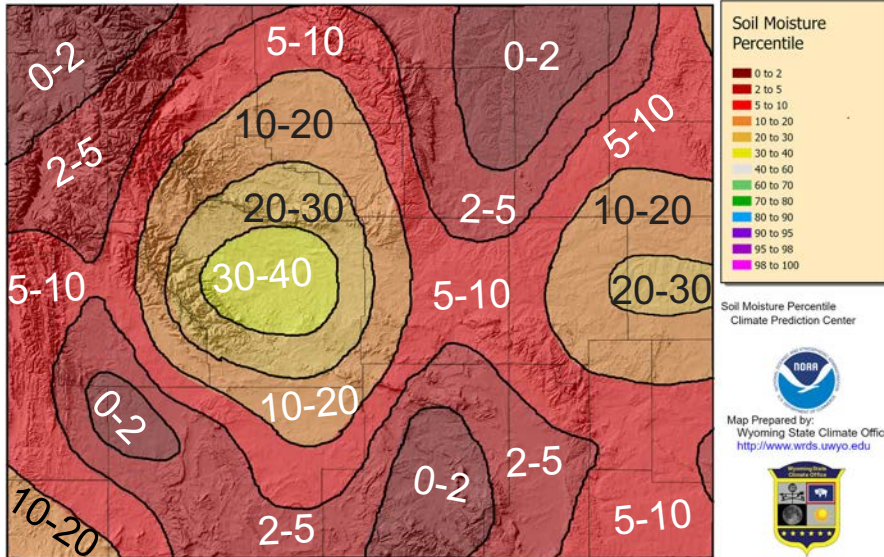
Provisional data, subject to revision

Daily Temperature data from PRISM Climate Group, Copyright ©2021, PRISM Climate Group, Oregon State University, <http://prism.oregonstate.edu>
Map Created 28 Apr 2022 <http://www.wrds.uwyo.edu>
Temperature averages created from PRISM daily temperature grids

Soil Moisture Percentile

Two Weeks Ago
14 Apr 2022

Soil Moisture Percentile for 14 Apr 2022

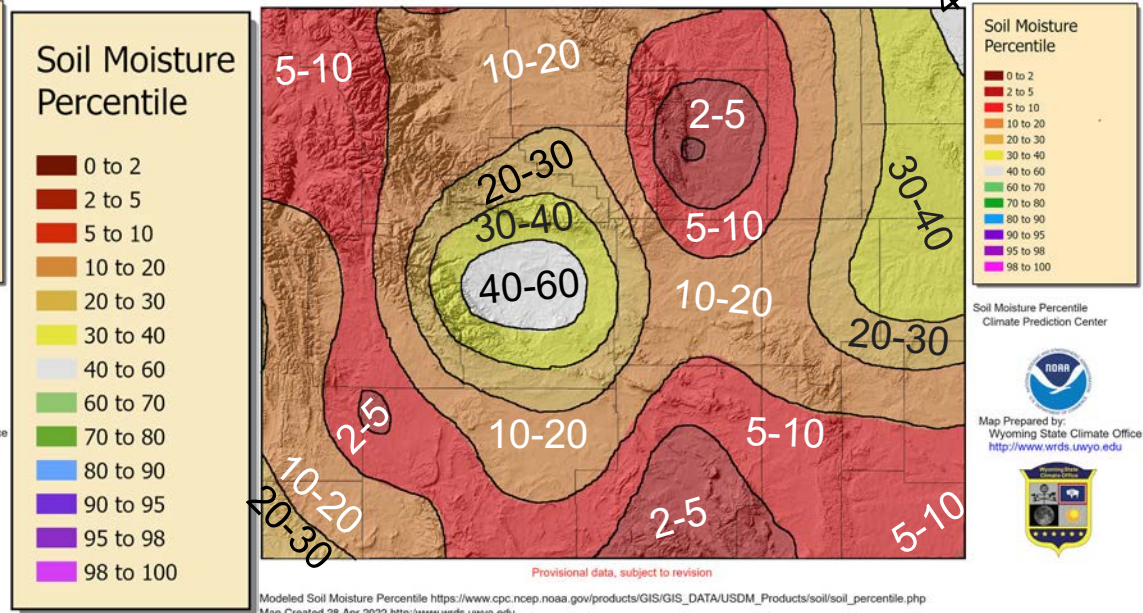


Provisional data, subject to revision

Modeled Soil Moisture Percentile https://www.cpc.ncep.noaa.gov/products/GIS/GIS_DATA/USDM_Products/soil/soil_percentile.php
Map Created 15 Apr 2022 <http://www.wrds.uwyo.edu>

27 Apr 2022

Soil Moisture Percentile for 27 Apr 2022



Provisional data, subject to revision

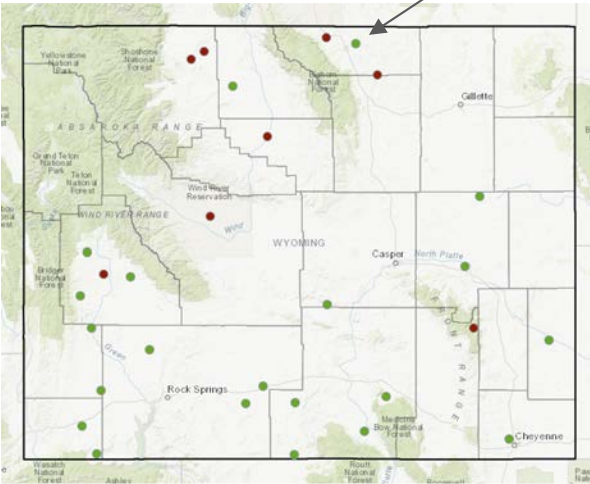
Modeled Soil Moisture Percentile https://www.cpc.ncep.noaa.gov/products/GIS/GIS_DATA/USDM_Products/soil/soil_percentile.php
Map Created 28 Apr 2022 <http://www.wrds.uwyo.edu>

Improvements statewide.

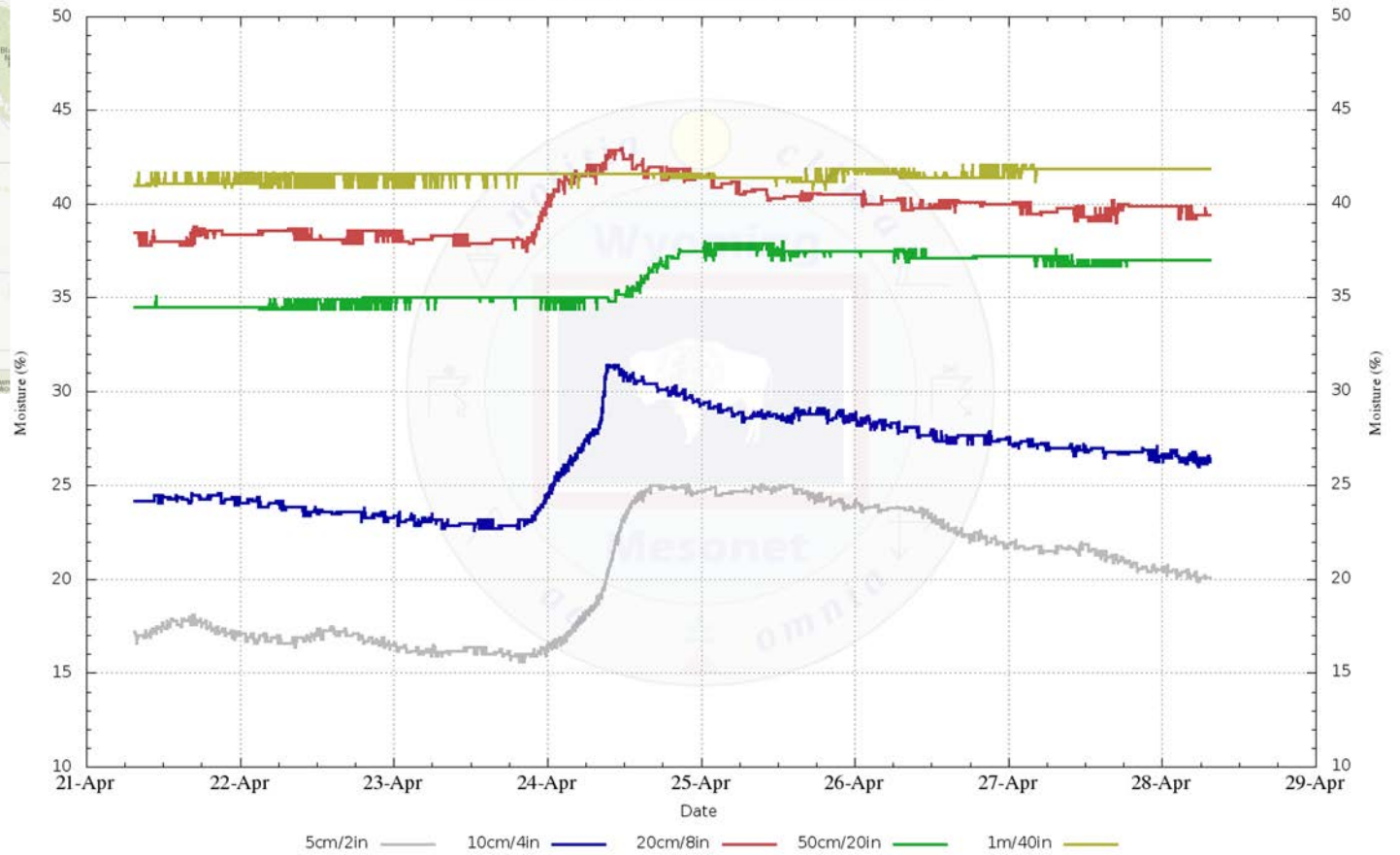
http://www.wrds.uwyo.edu/Soil/Current_SoilMoisture_Ptile.html



Soil Moisture at Sheridan 7ESE



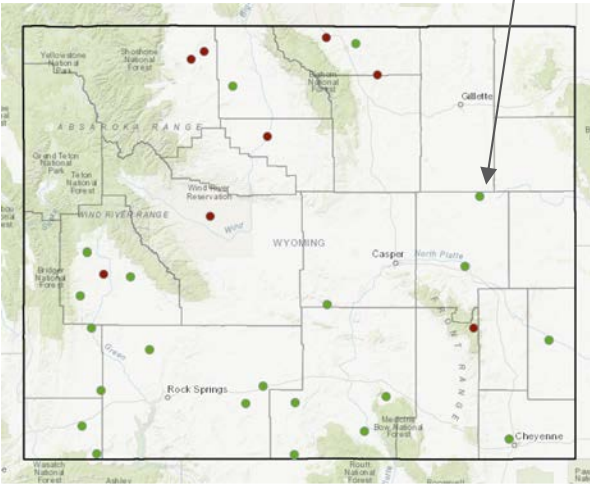
Sheridan - Soil Moisture (Graph Created 08:32 28-Apr-2022)



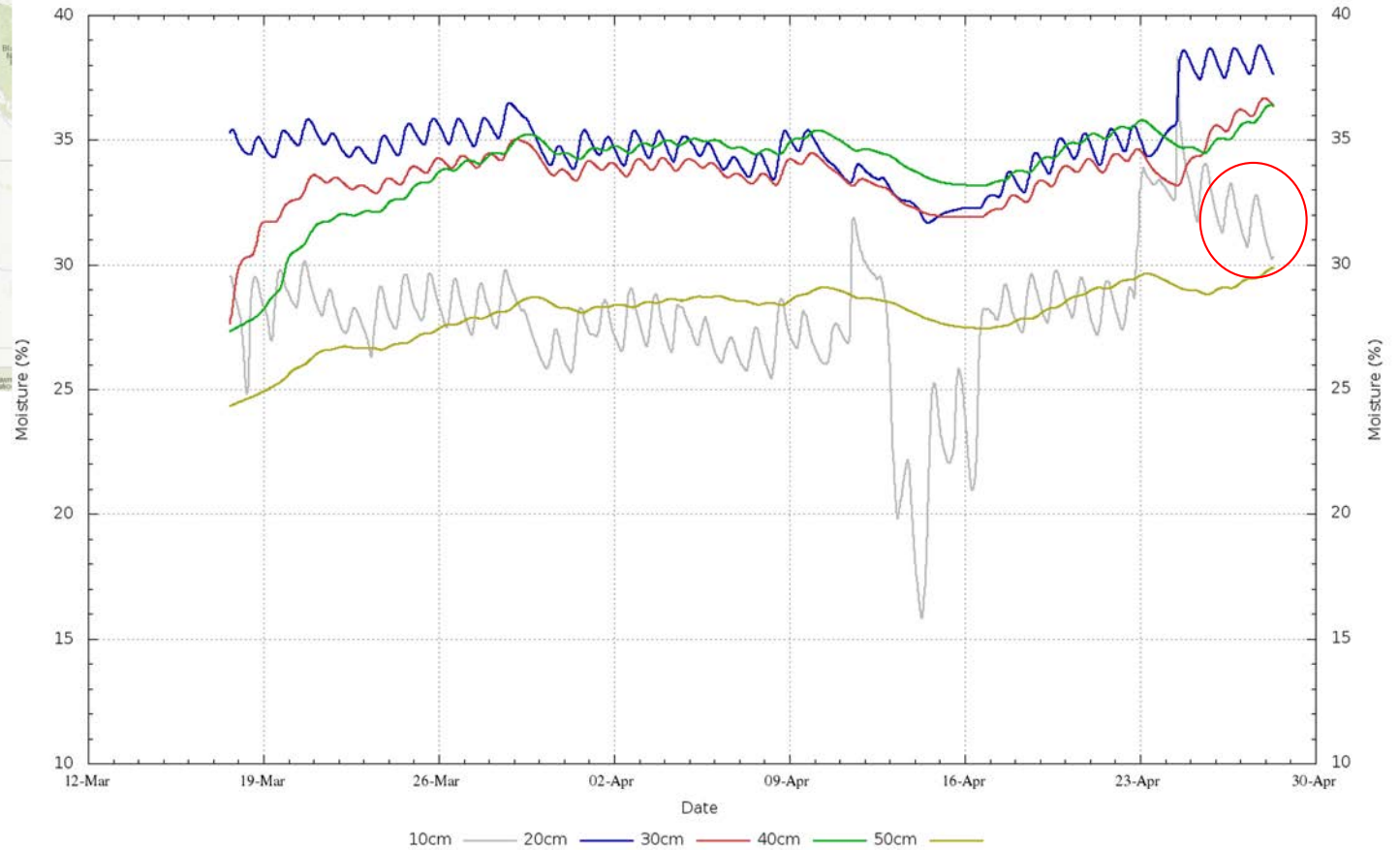
Increasing from Weekend Snows



Soil Moisture at Thunder Basin Grasslands



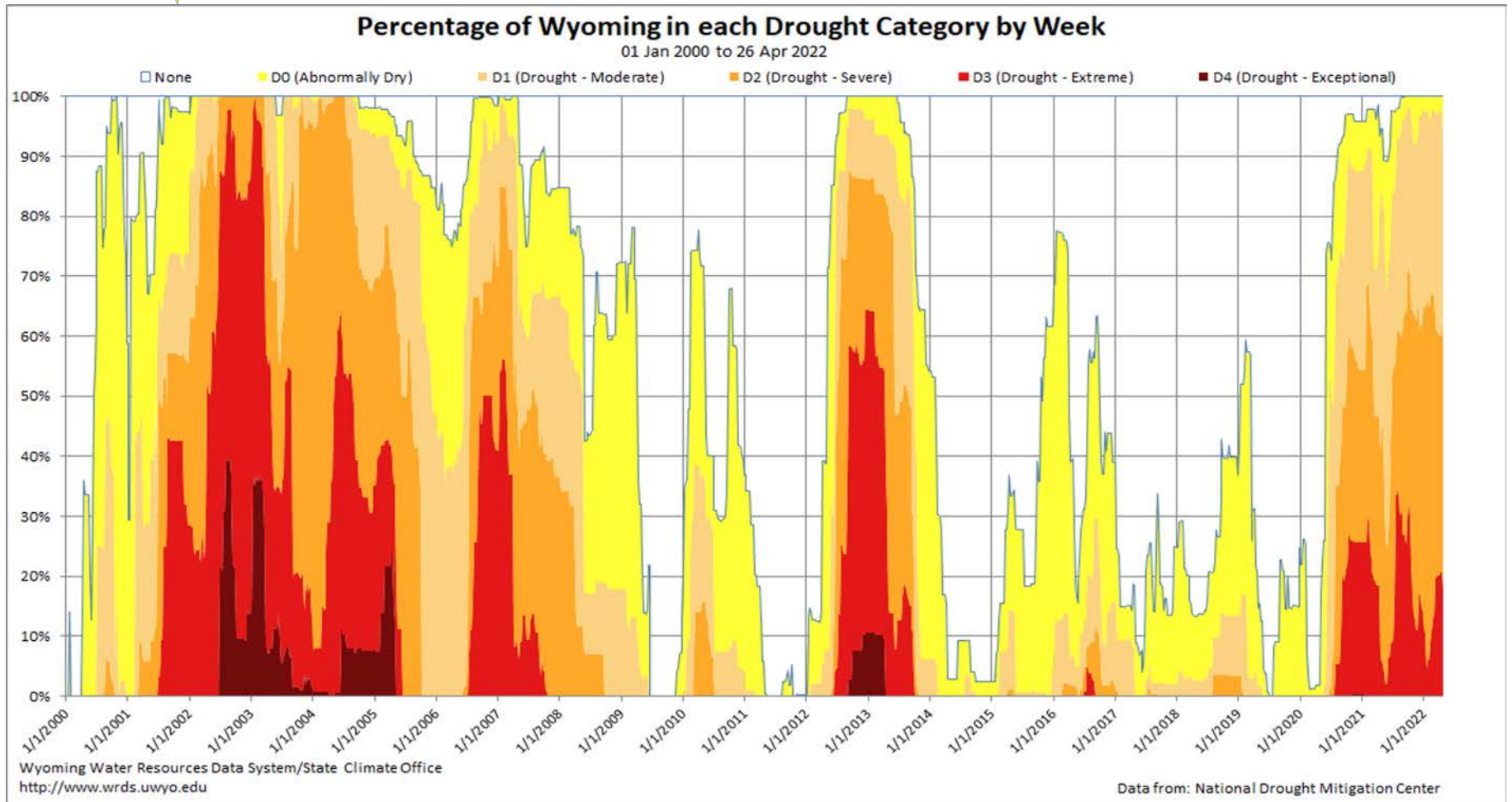
Thunder Basin Grasslands - 2022-04-28 07:30:00 (Created Thu Apr 28 08:35:01 MDT 2022)



Decrease during coldsnap and then recent increase

A decrease of 3.03% from last month

Wyoming Area Affected: 100% D0-D4 ; 94.14% D1-D4



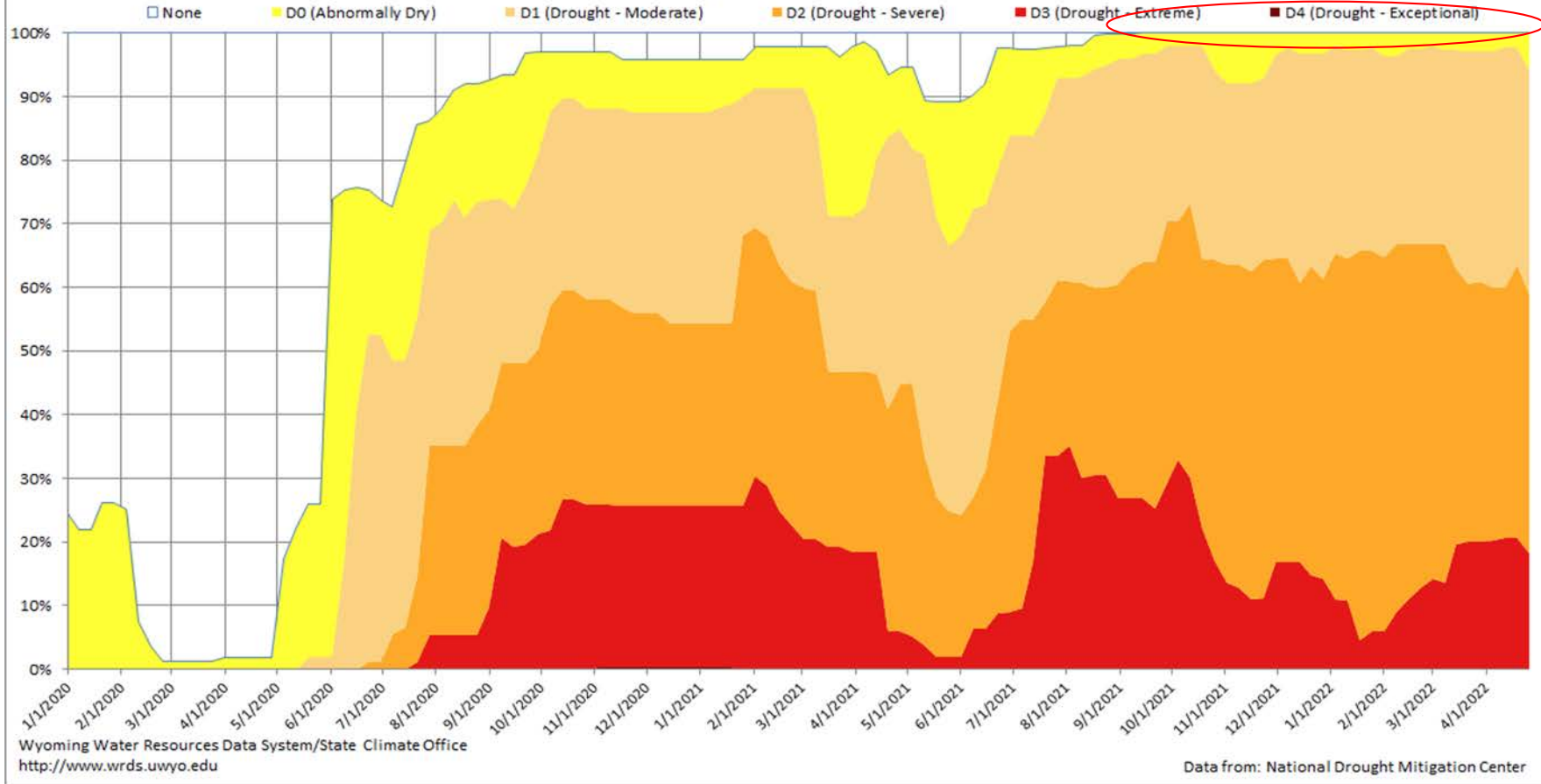
<http://www.wrds.uwyo.edu/drought/droughttimeline.html>



Percentage of Wyoming in each Drought Category by Week

01 Jan 2020 to 26 Apr 2022

33 Weeks with entire state in a "D" category



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



<http://www.wrds.uwyo.edu/Snow/BasinPeakSWE.html>



Peak Snow Water Equivalent Dates and Totals by Basin

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

Basin	This Year Peak Date	This Year Peak SWE (inches)	Days Difference	Difference SWE (inches)	Percent of Median SWE	Median Peak Date	Median Peak SWE (inches)
Belle Fourche	18 Mar 2022	4.2	-16	-2.9	59%	03 Apr	7.1
Bighorn	26 Apr 2022	12.5	6	-1.5	89%	20 Apr	14.0
Cheyenne	15 Mar 2022	4.5	-19	-3.1	59%	03 Apr	7.6
Missouri Headwaters	25 Apr 2022	14.1	7	-3.4	81%	18 Apr	17.5
North Platte	19 Apr 2022	18.6	3	-3.2	85%	16 Apr	21.8
Powder	26 Apr 2022	9.2	9	-1.8	84%	17 Apr	11.0
Snake	25 Apr 2022	17.0	13	-3.6	83%	12 Apr	20.6
Tongue	26 Apr 2022	12.2	-6	-1.4	90%	02 May	13.6
South Platte	19 Apr 2022	13.2	-7	-3.2	80%	26 Apr	16.4
Upper Bear	18 Apr 2022	13.6	6	-4.2	76%	12 Apr	17.8
Upper Green	18 Apr 2022	11.5	7	-3.0	79%	11 Apr	14.5
Upper Snake	23 Mar 2022	13.2	-14	-4.4	75%	06 Apr	17.6
Upper Yellowstone	24 Apr 2022	15.8	0	-3.6	81%	24 Apr	19.4
White-Yampa	18 Apr 2022	17.8	9	-3.2	85%	09 Apr	21.0

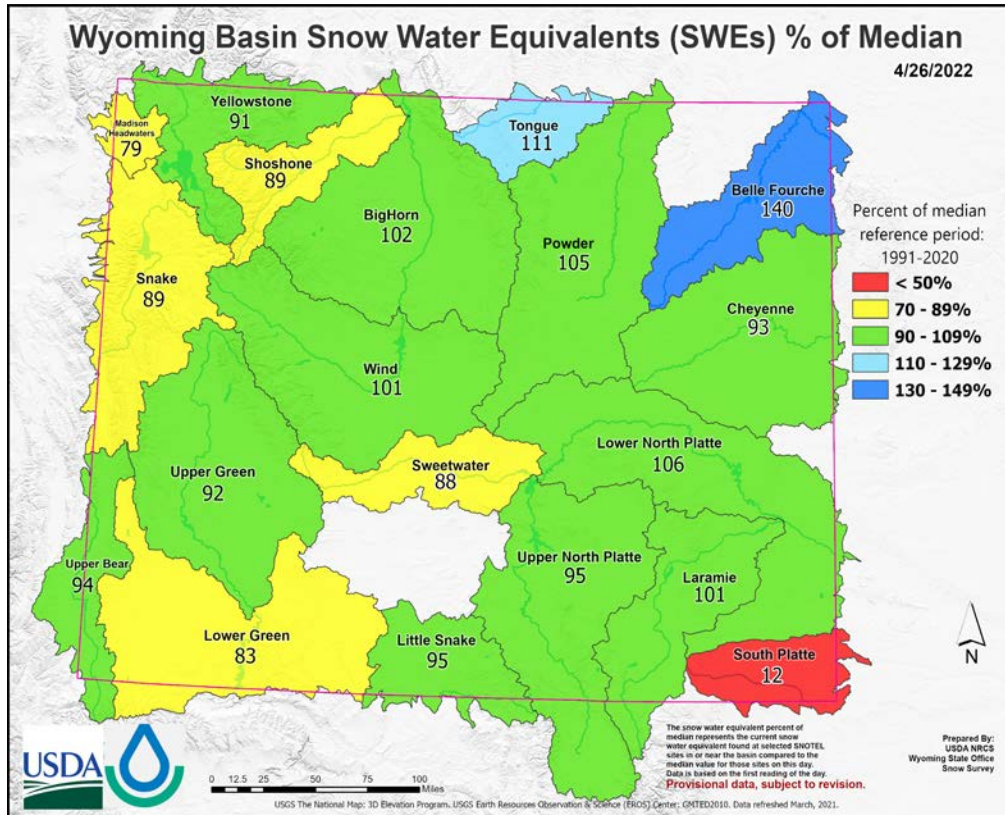
Data from Natural Resources Conservation Service SnoTel Network



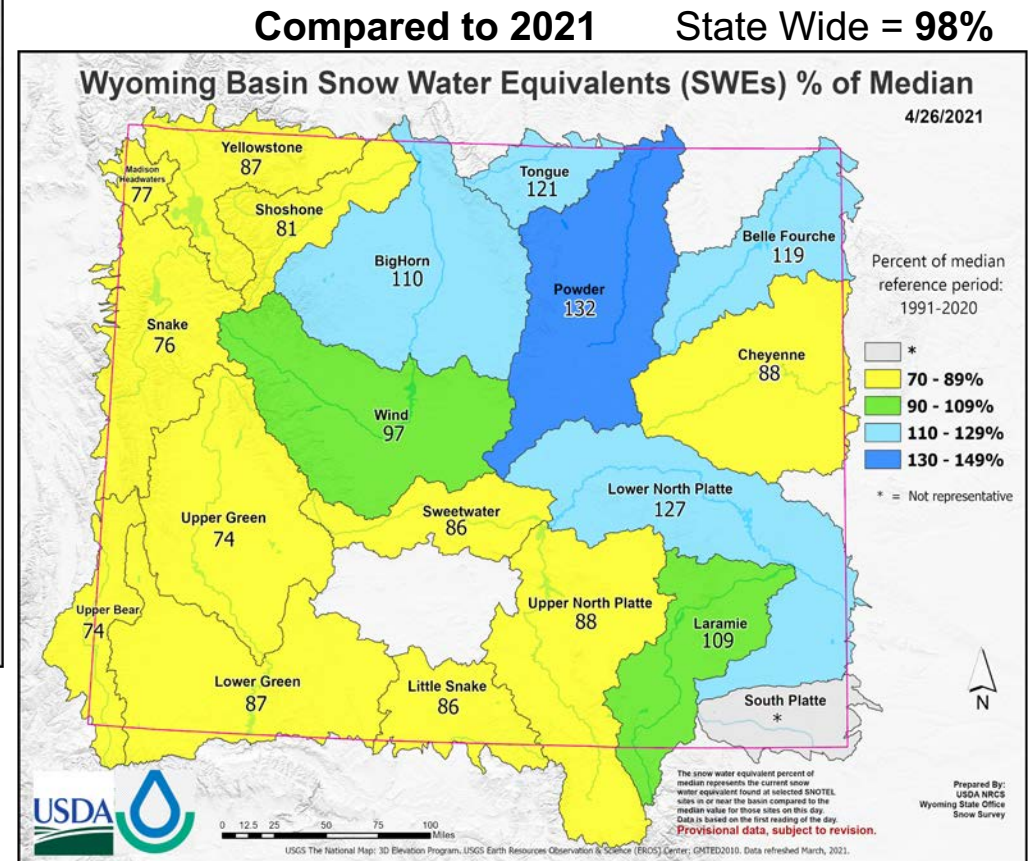
SWEs % Median



<https://www.nrcs.usda.gov/wps/portal/wcc/home/>

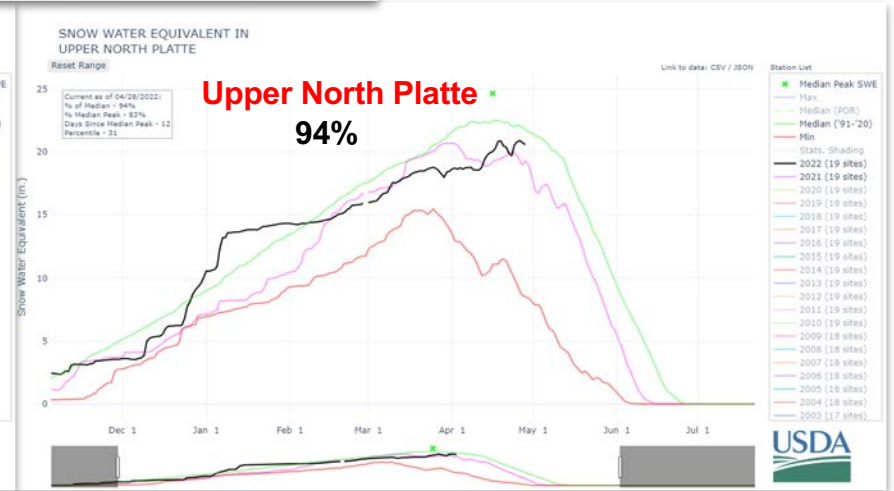
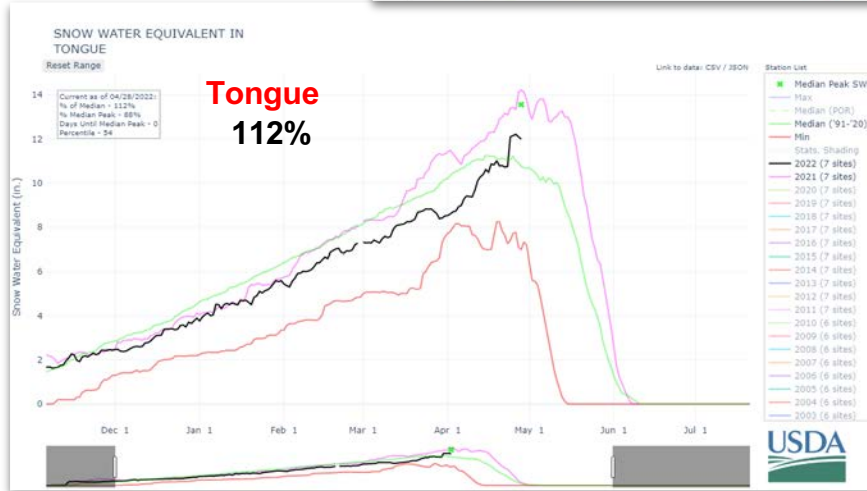
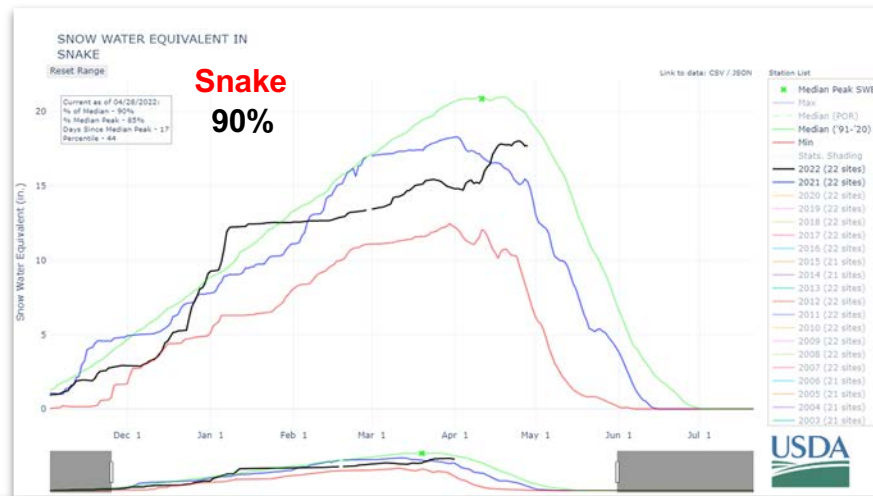


April 26, 2022 State Wide = 99%



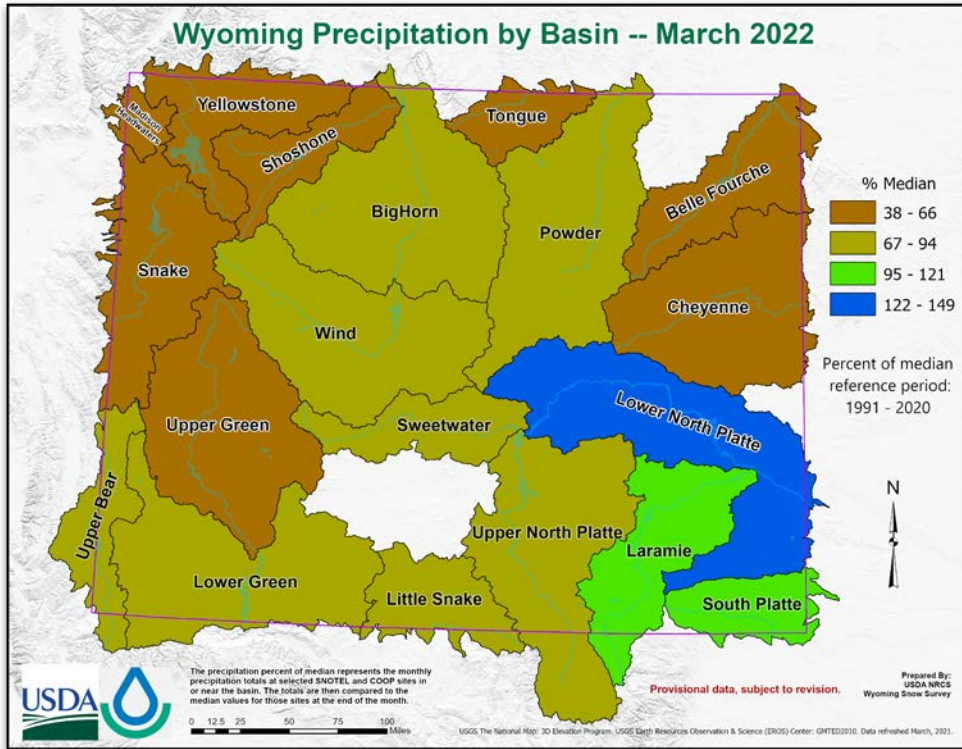


SWEs for Select Basins

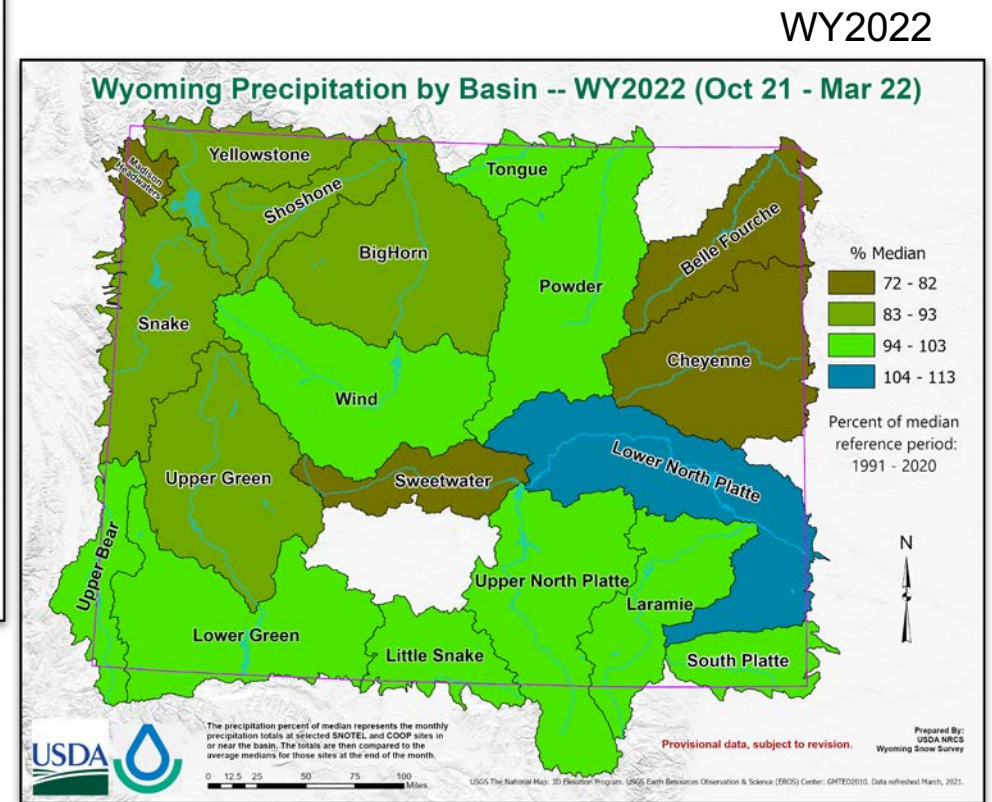




Basin Precipitation



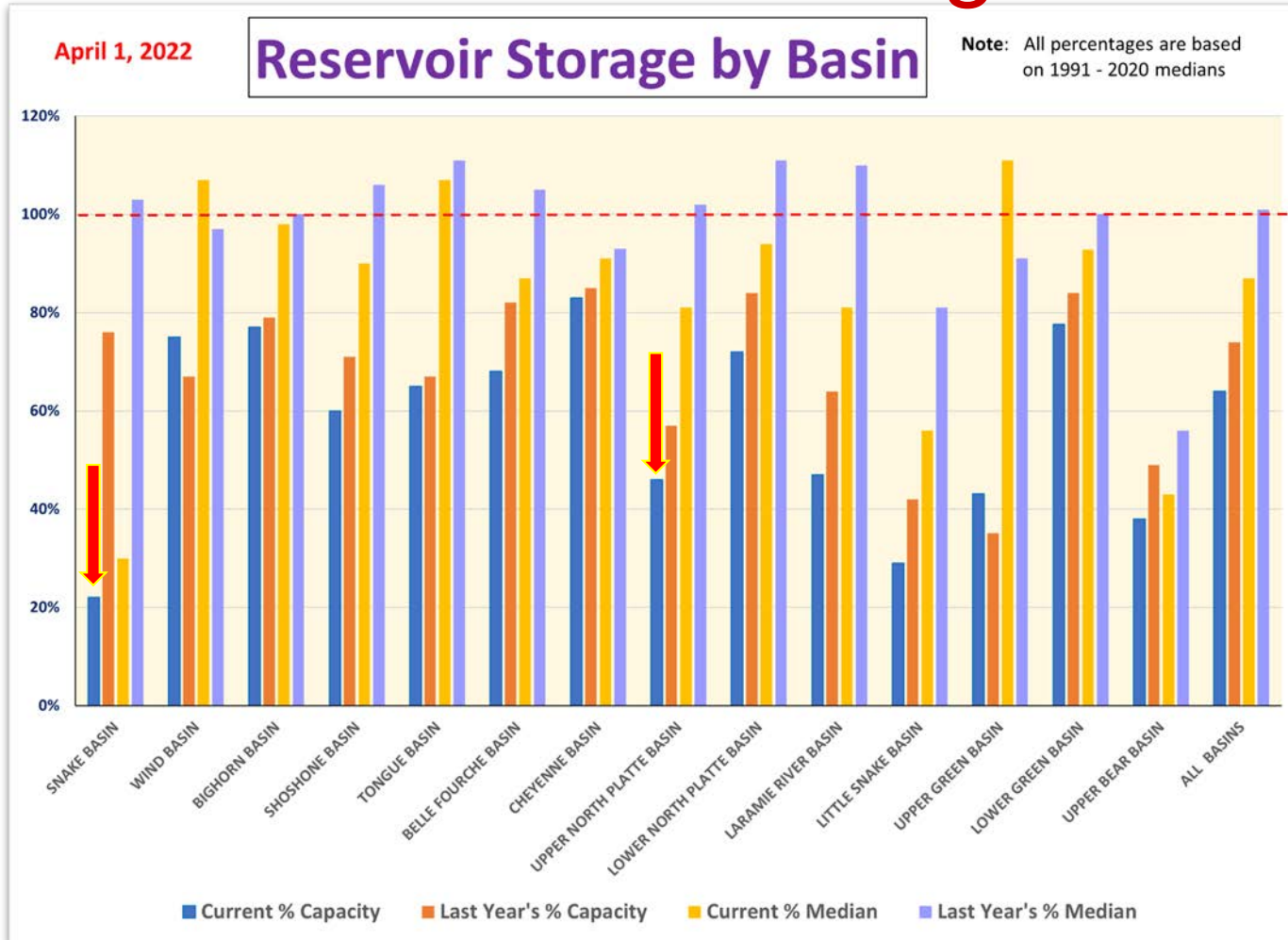
March 2022



WY2022

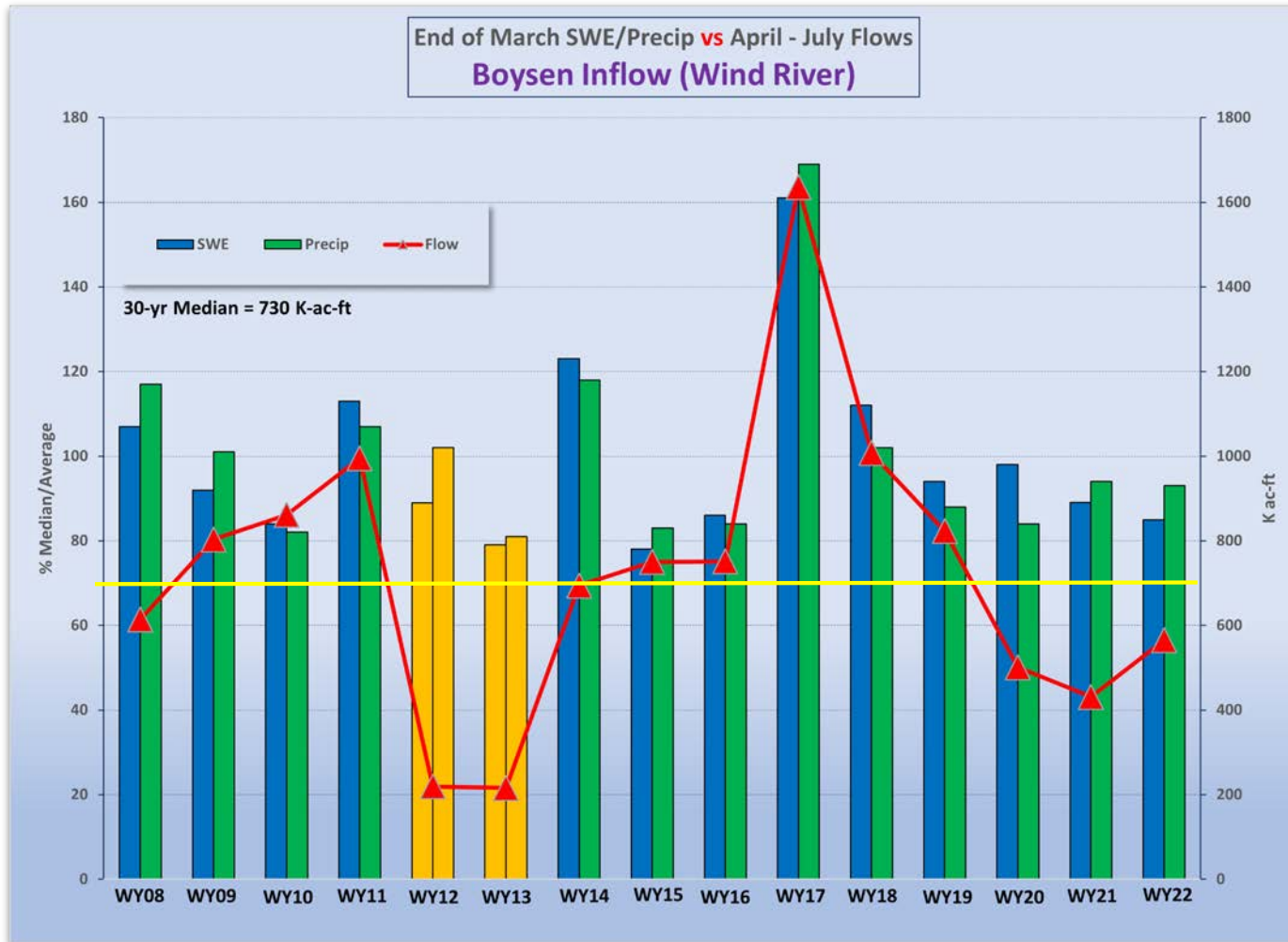


Reservoir Storages



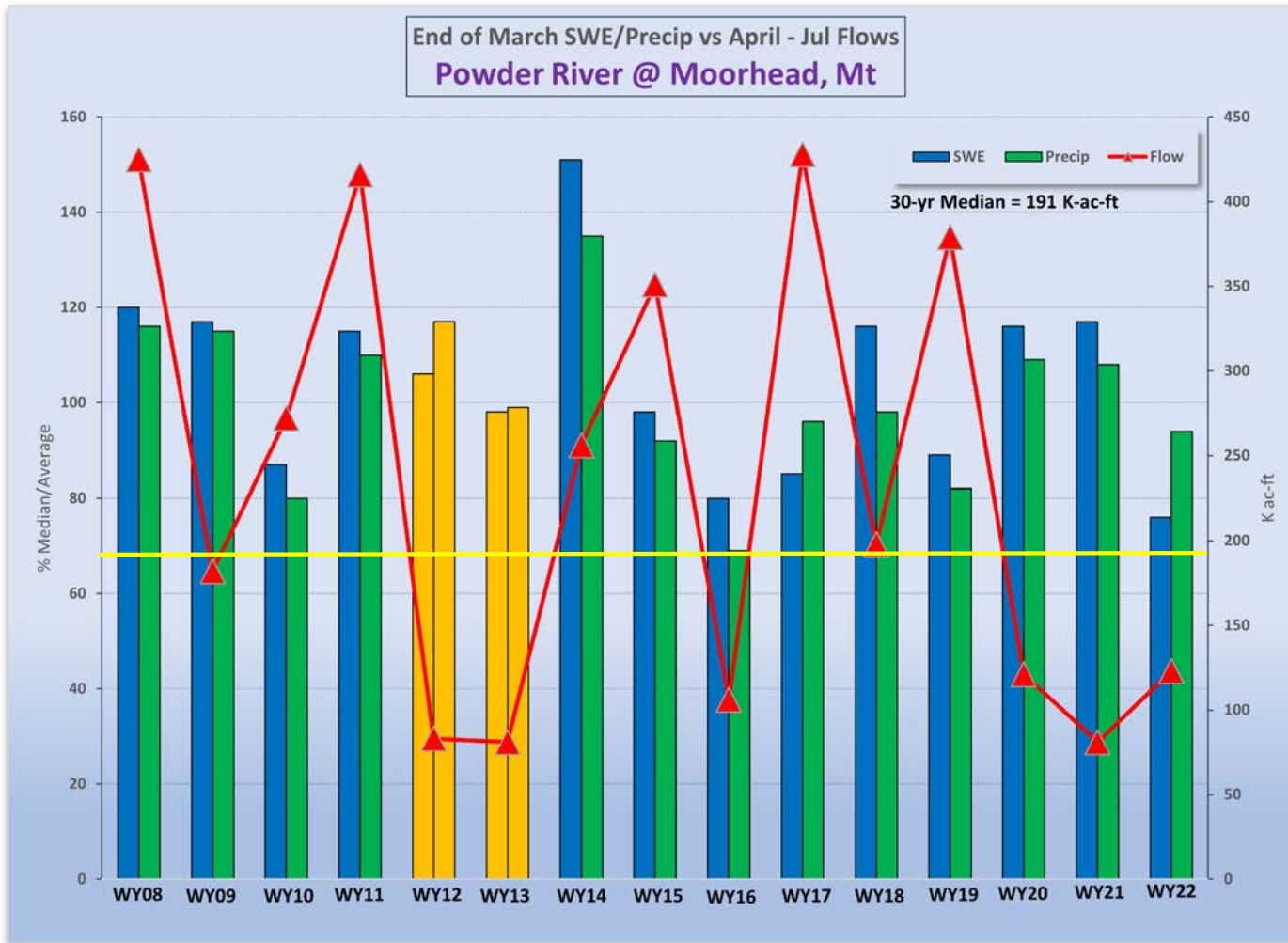


SWEs/Precip vs Flows (Apr-Jul)



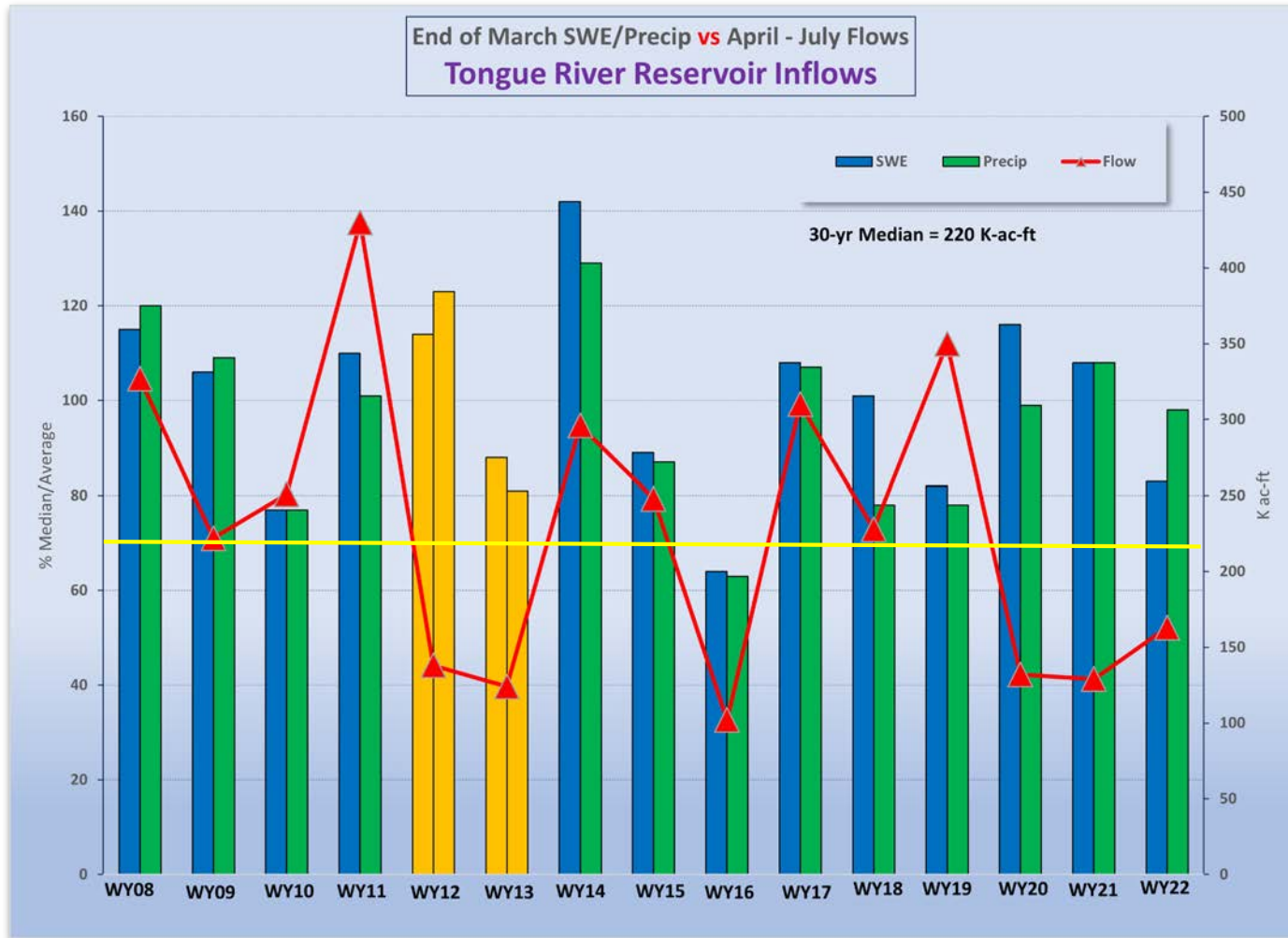


SWEs/Precip vs Flows (Apr-Jul)



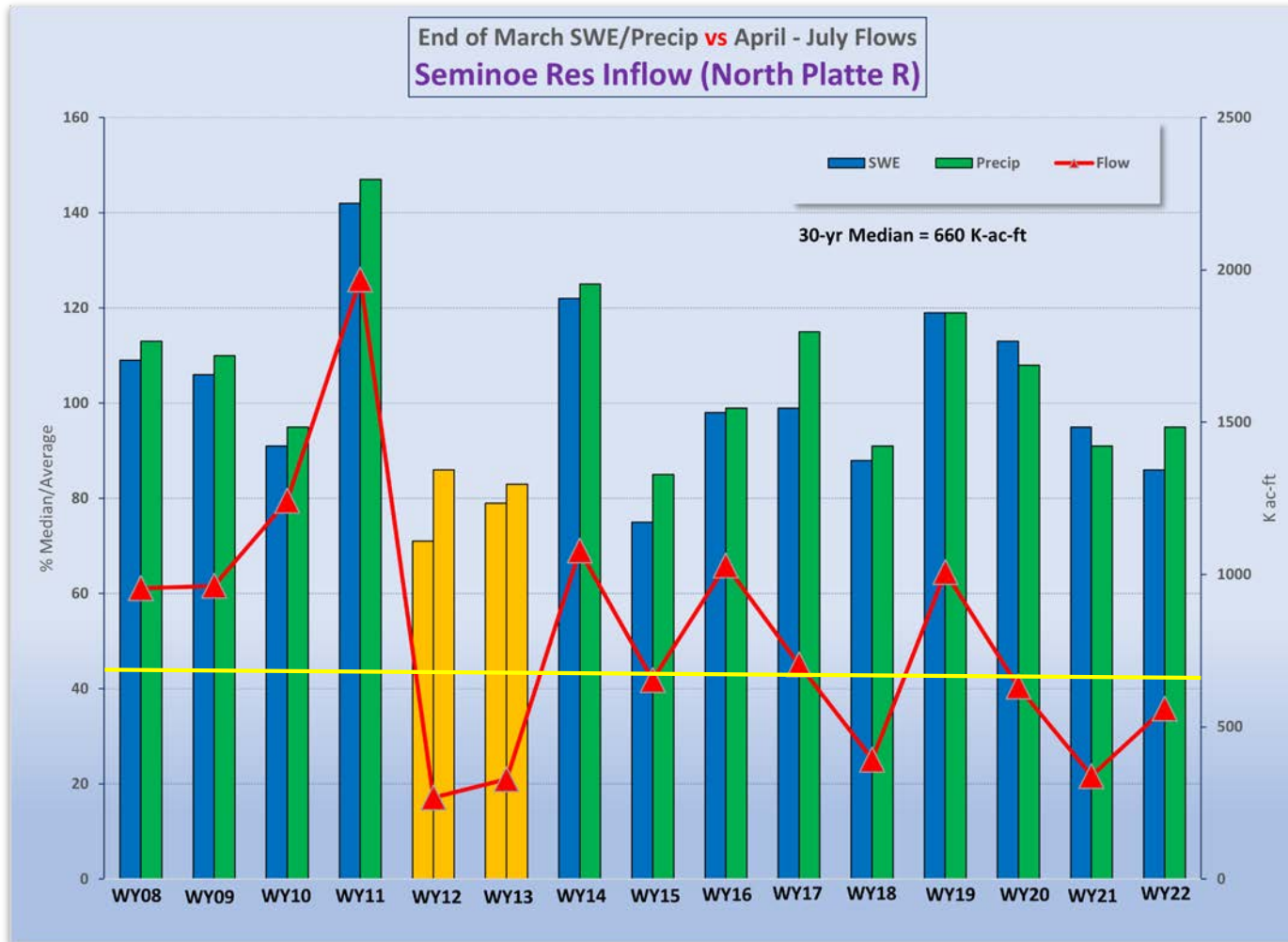


SWEs/Precip vs Flows (Apr-Jul)





SWEs/Precip vs Flows (Apr-Jul)





Water Supply Highlights



- Wyoming snowpack and/or snow water equivalents (SWEs) were **below** median by late March.
- Precipitation totals across Wyoming for March were **below** median. Water year precipitation totals continued to be slightly **below** median.
- Overall reservoir storages for late March continue to be **below** median.
- Stream flow snowmelt volumes during April through July across Wyoming are forecasted to be generally **below** median.



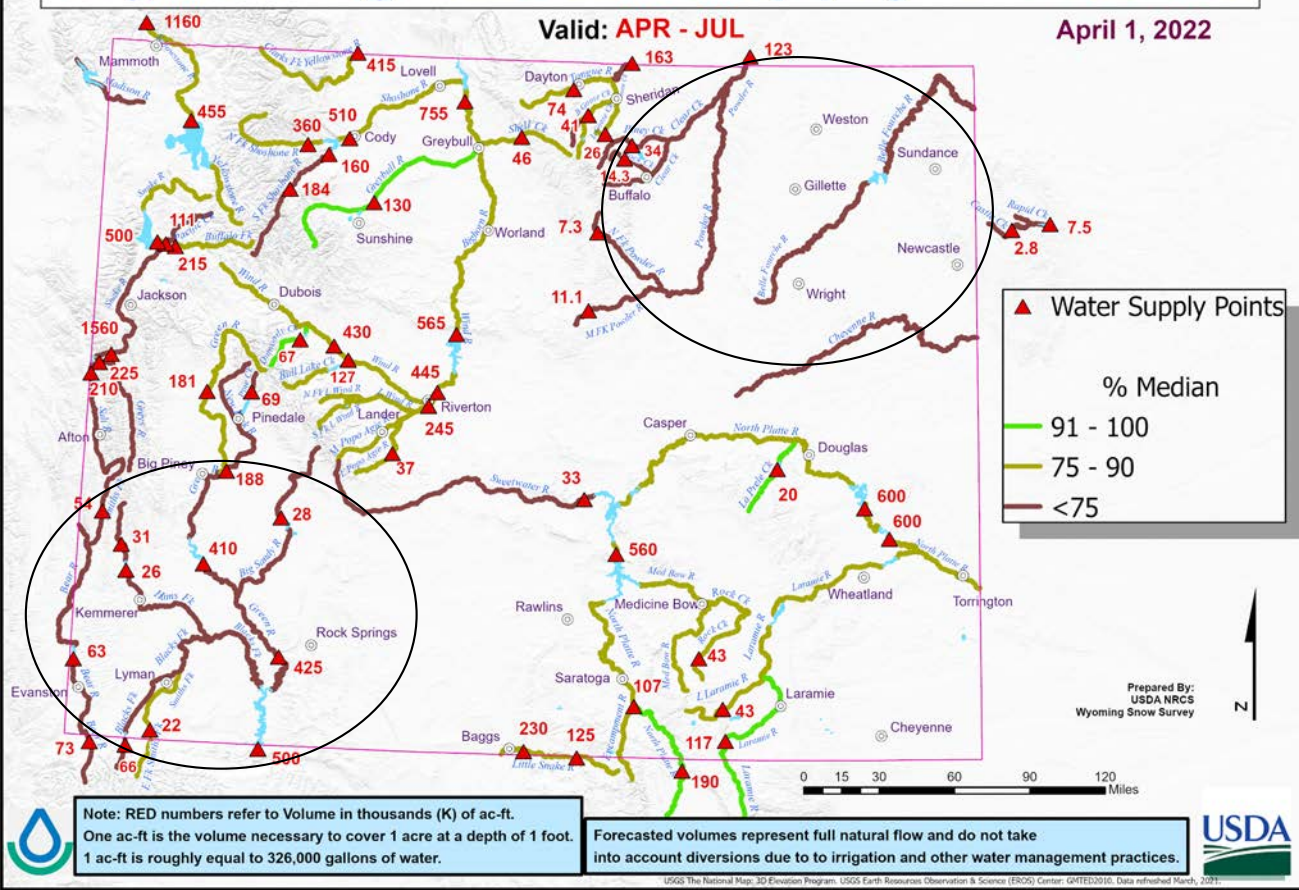
Water Supply Outlook



Wyoming Water Supply Outlook

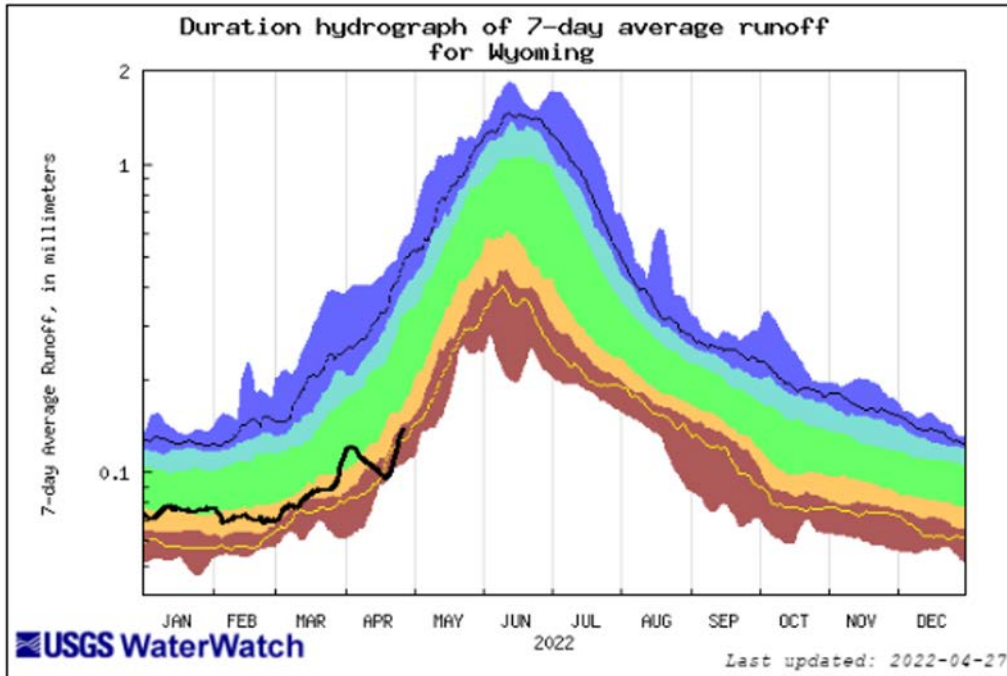
Valid: APR - JUL

April 1, 2022





WY Streamflow Overview (April 28, 2022)



- Coming out of winter baseflow
- Early stages of runoff
- Runoff (mountain snowpack) should be in full swing by mid-May

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

<https://waterdata.usgs.gov/>

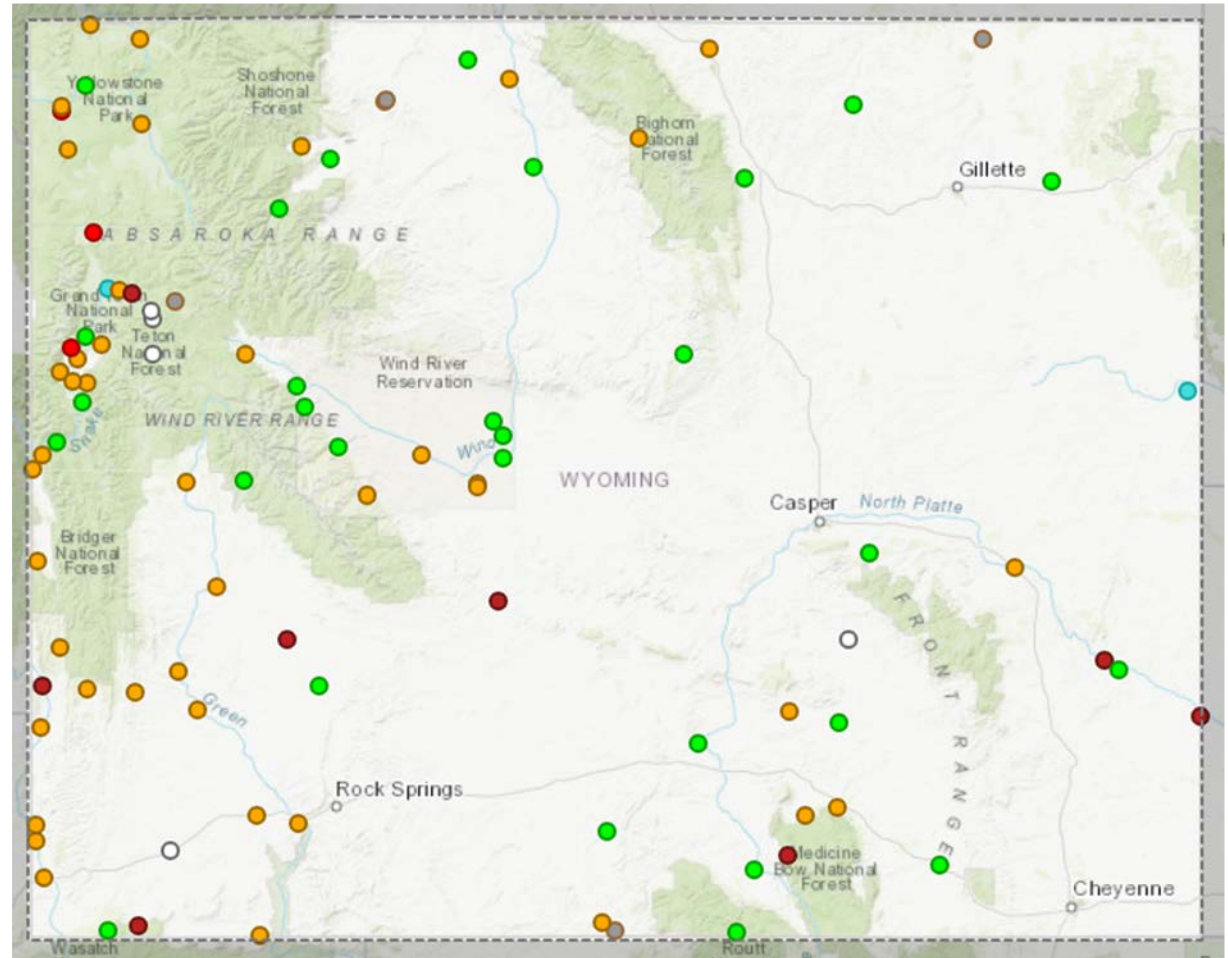


Current Streamflow Conditions (April 28, 2022)

Streamflow Status

Streamflow: Status

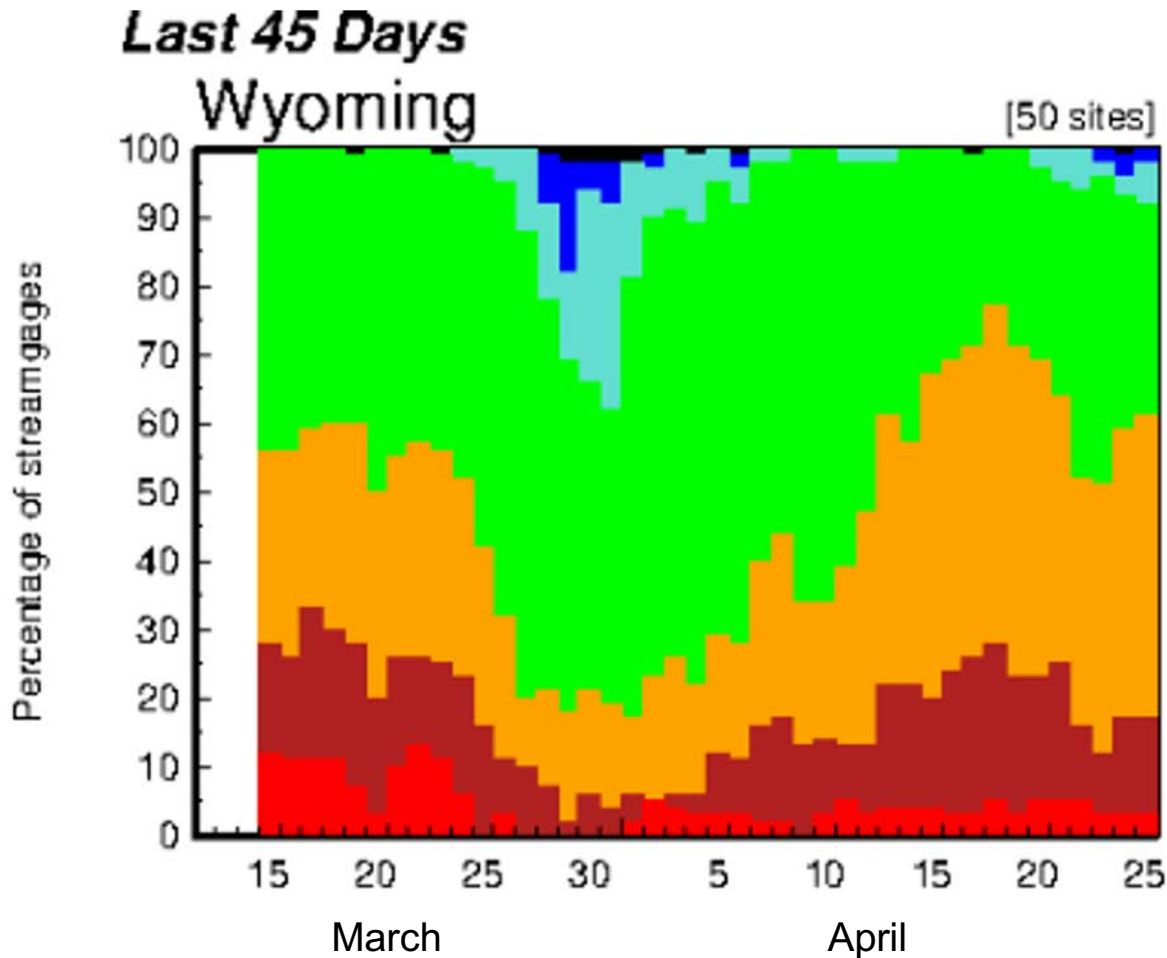
- Above flood stage
- All-time high for this day (100th percentile (maximum))
- Much above normal (>90th percentile)
- Above normal (76th – 90th percentile)
- Normal (25th – 75th percentile)
- Below normal (10th – 24th percentile)
- Much below normal (<10th percentile)
- All-time low for this day (0th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



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



Daily Streamflow Trends (Apr 28)



- Approx 1/3 of sites reporting
- Runoff/precipitation late March

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		

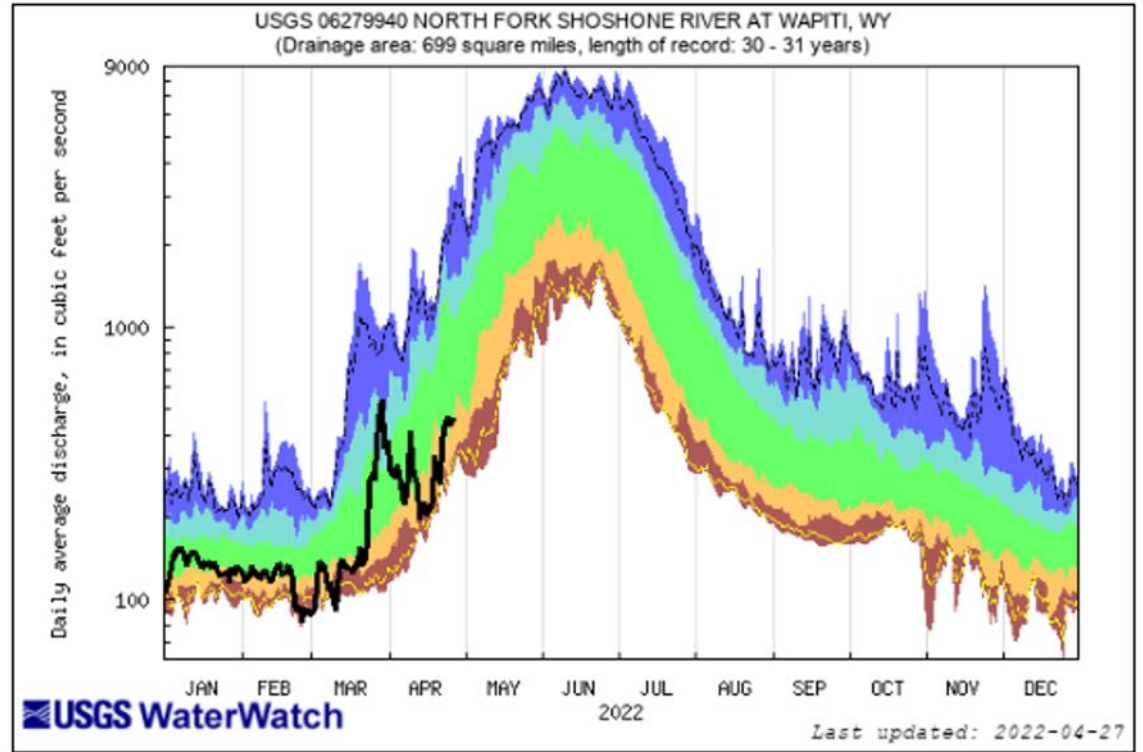
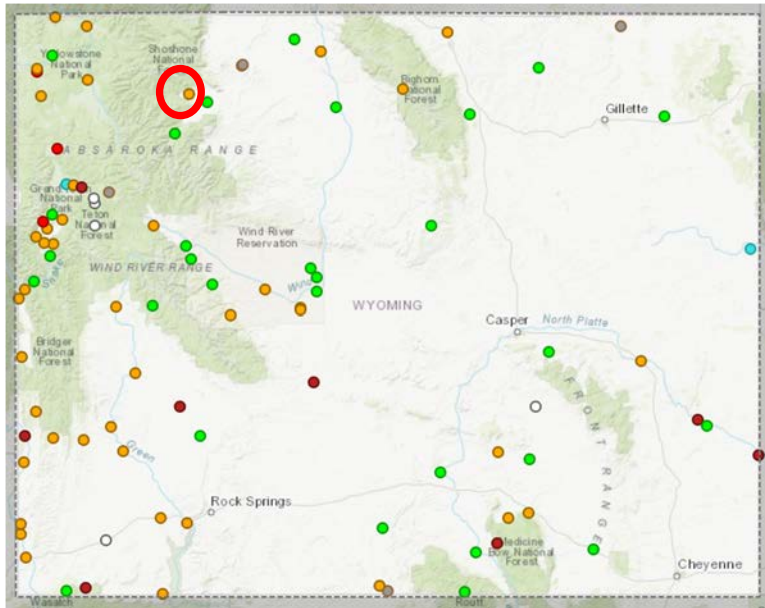
<https://waterwatch.usgs.gov>



North Fork Shoshone River at Wapiti, WY

Last updated Apr 28,2022

Select WY Streamflows



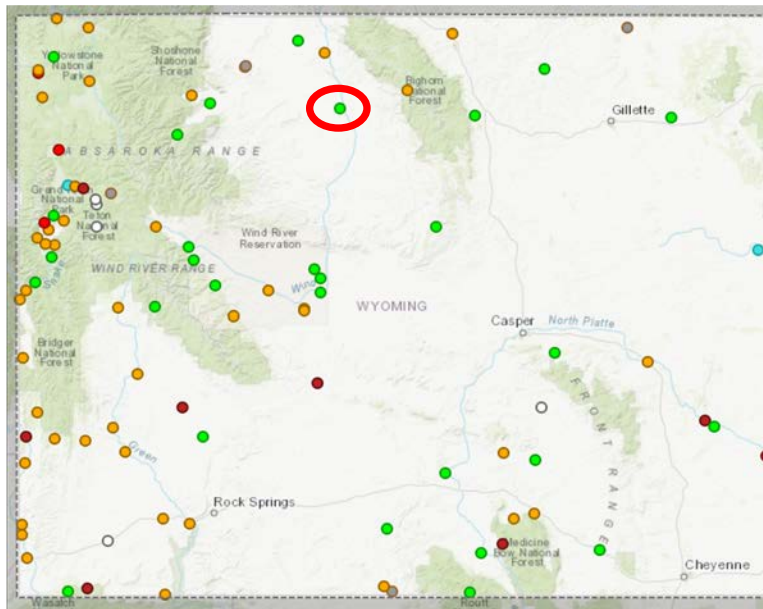
<https://dashboard.waterdata.usgs.gov/>

<https://waterdata.usgs.gov/>

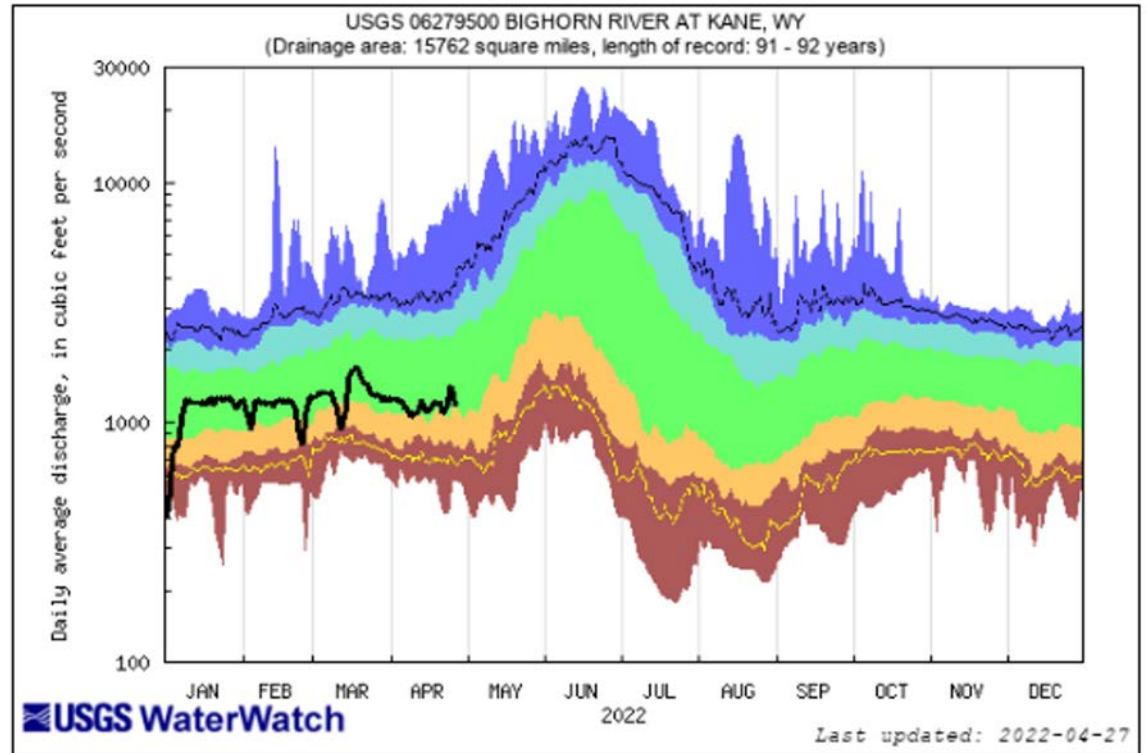
Explanation - Percentile classes						
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile -highest
Much below Normal	Below normal	Normal	Above normal	Much above normal		Flow



Select WY Streamflows



Bighorn River at Kane, WY Last updated Apr 28, 2022



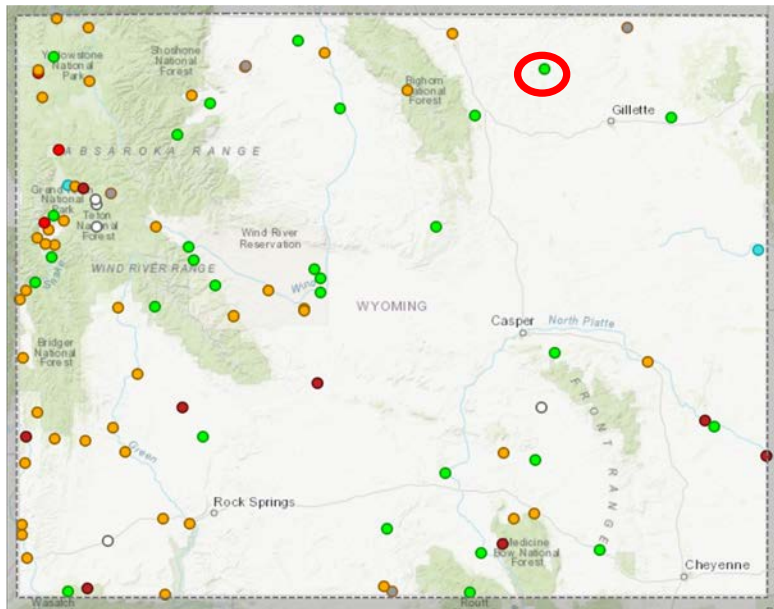
<https://dashboard.waterdata.usgs.gov/>

<https://waterdata.usgs.gov/>

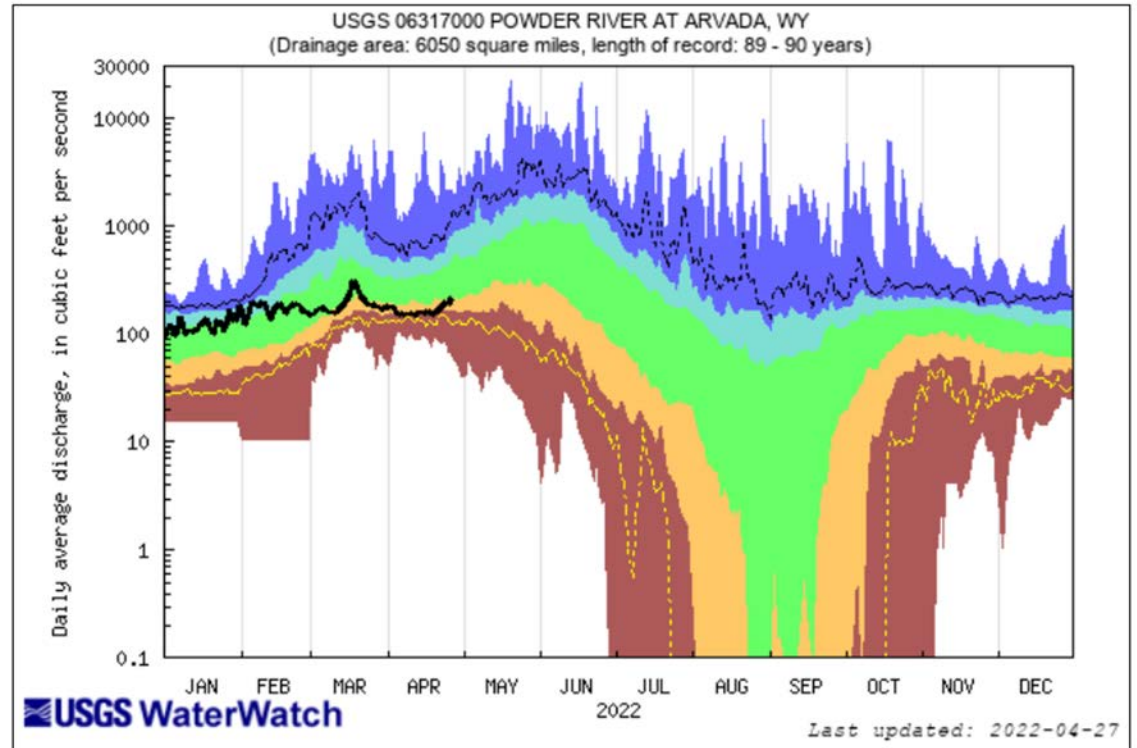
Explanation - Percentile classes						Flow
lowest-10th percentile	5	10-24	25-75	76-90	95	
Much below Normal	Below normal	Normal	Above normal	Much above normal	90th percentile-highest	



Select WY Streamflows



Power River at Arvada, WY Last updated Apr 28, 2022



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

<https://waterdata.usgs.gov/>

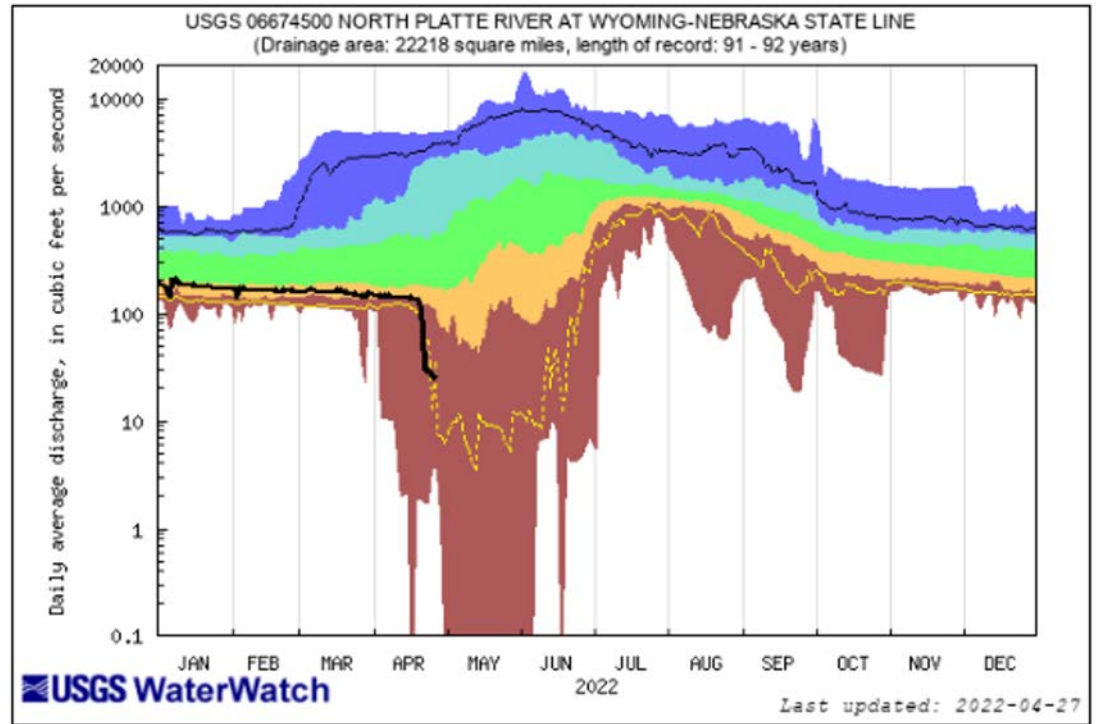
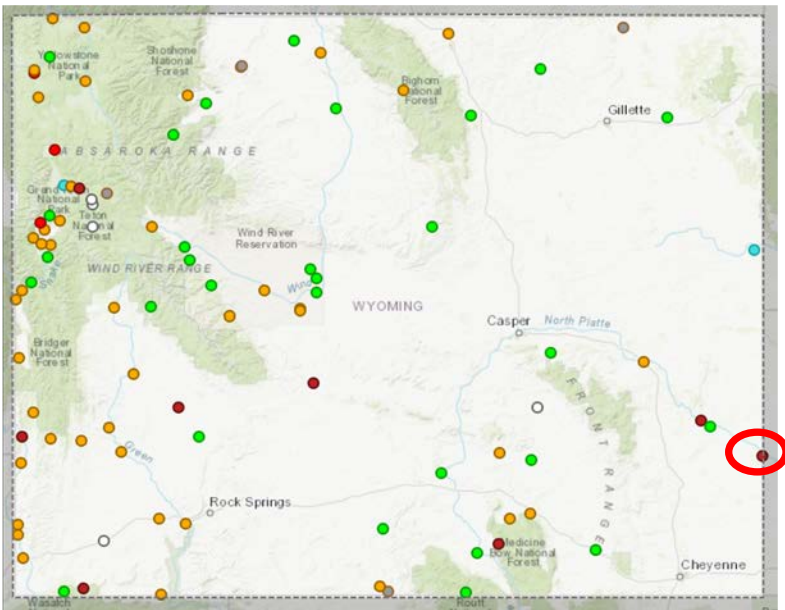
Explanation - Percentile classes						
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile - highest
Much below Normal	Below normal	Normal	Above normal	Much above normal		Flow



North Platte River at WY-NE State Line, WY

Last updated Apr 28, 2022

Select WY Streamflows



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

<https://waterdata.usgs.gov/>

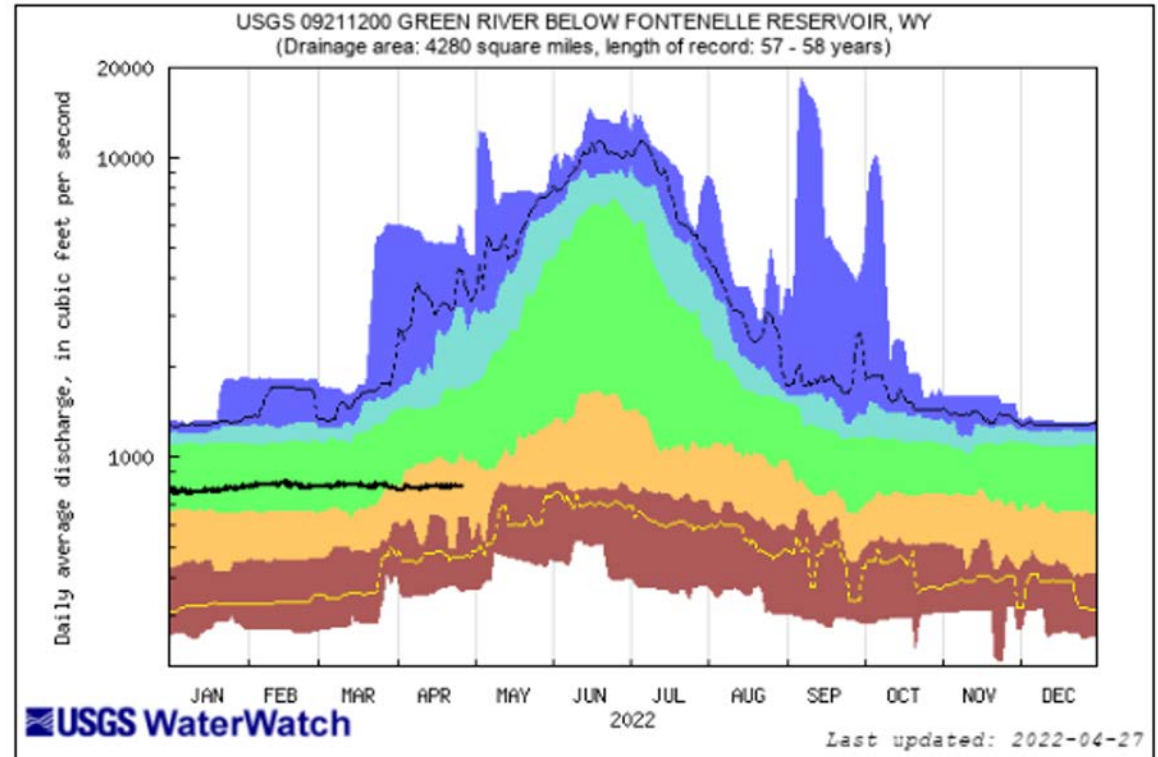
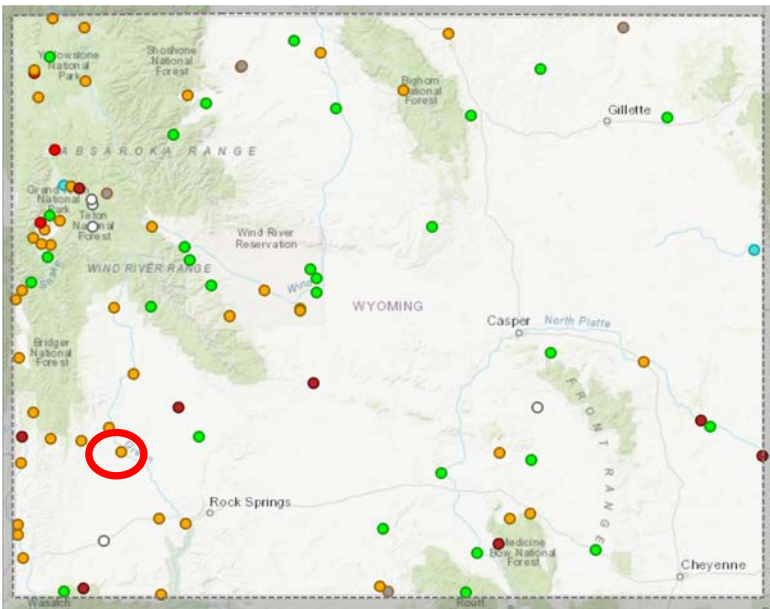
Explanation - Percentile classes						Flow	
lowest-10th percentile	5	10-24	25-75	76-90	95		99th percentile-highest
Much below Normal		Below normal	Normal	Above normal		Much above normal	



Green River below Fontenelle Reservoir, WY

Last updated Apr 28, 2022

Select WY Streamflows



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

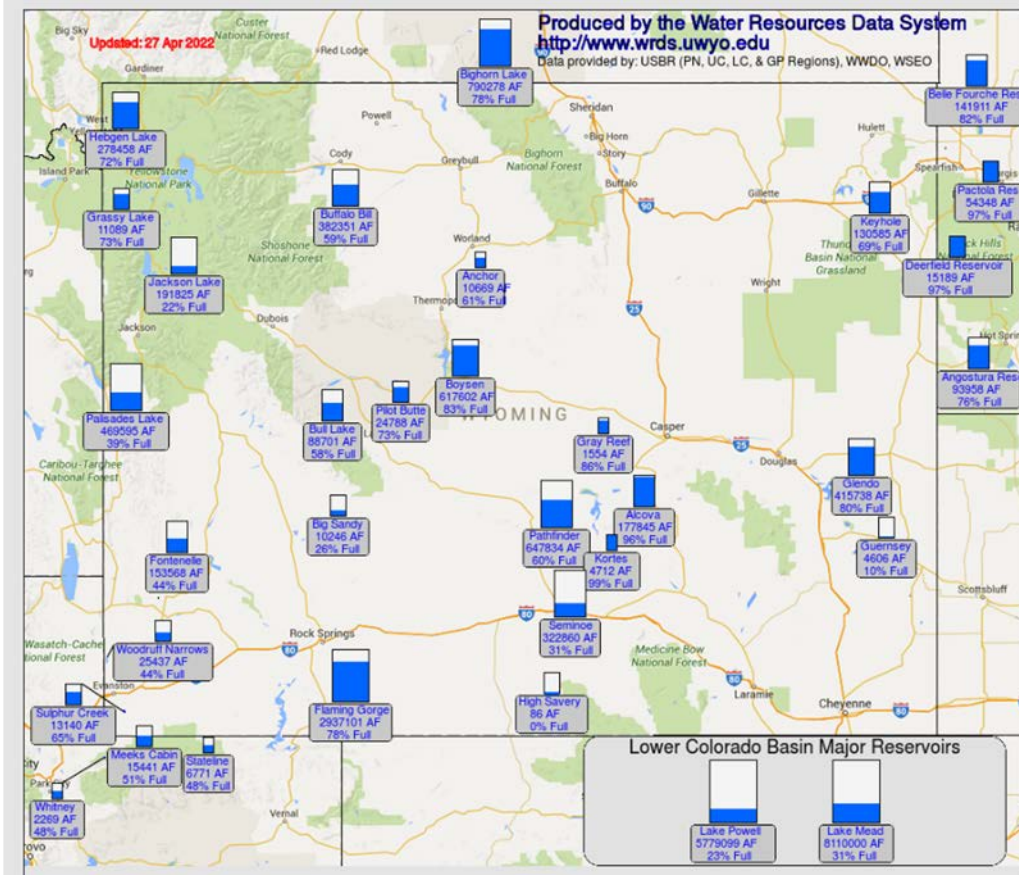
<https://waterdata.usgs.gov/>

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 (Update 4/28/22)

Apr 28, 2022

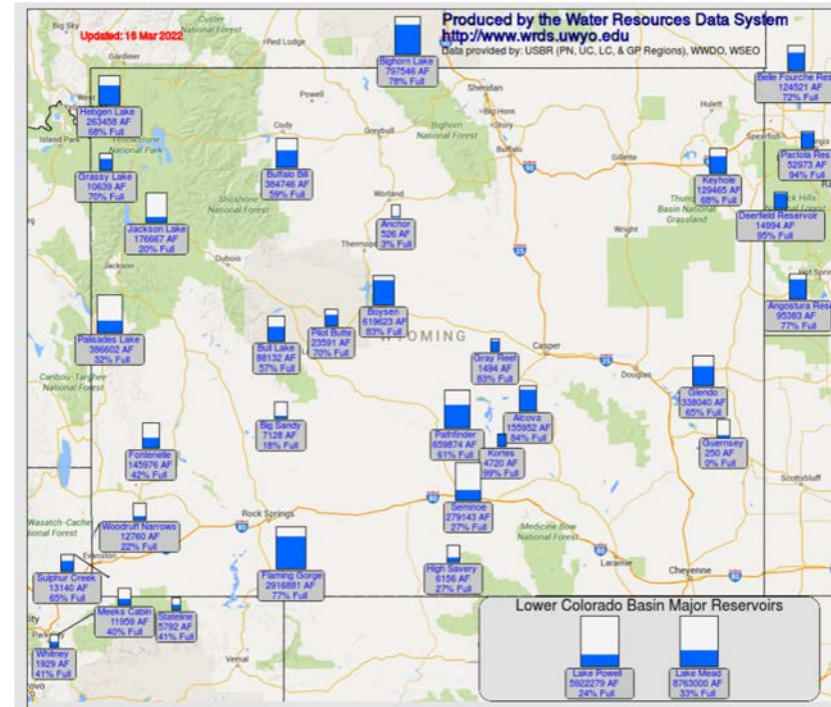


http://www.wrds.uwyo.edu/surface_water/teacups.html

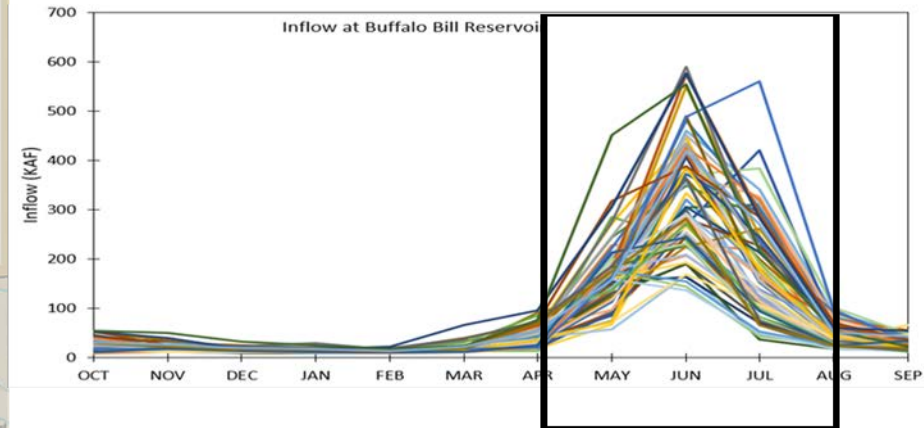
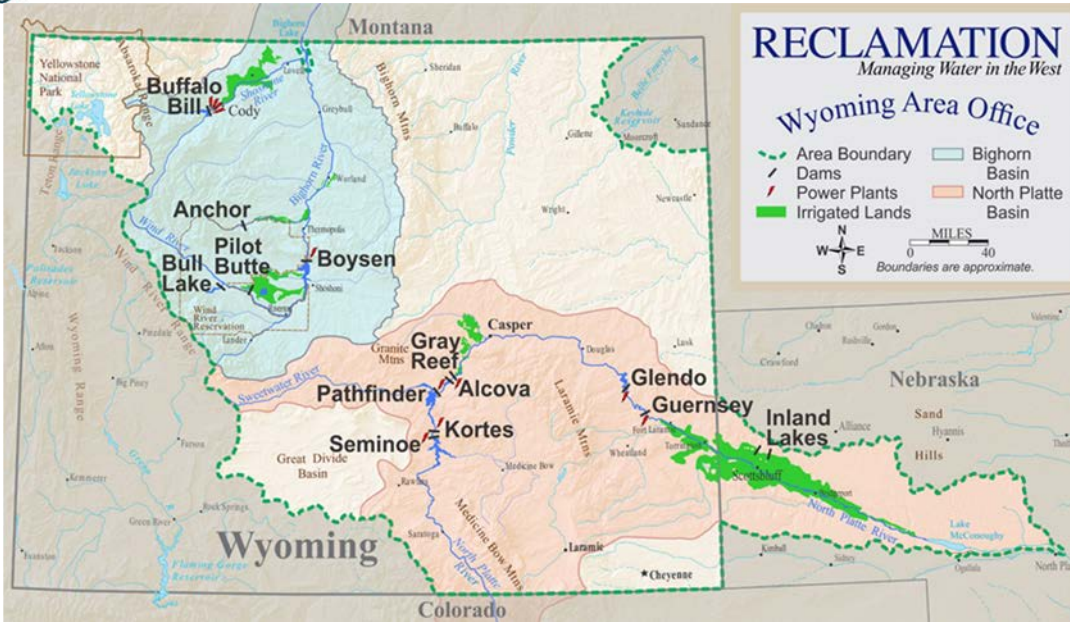
Compared to March

- No significant changes
- Slight increases

Mar 16, 2022



Current Reservoir Conditions: Bighorn System



- April through July

- ~80% of Annual Runoff Occurs at Buffalo Bill

- ~75% of Annual Runoff Occurs at Seminoe

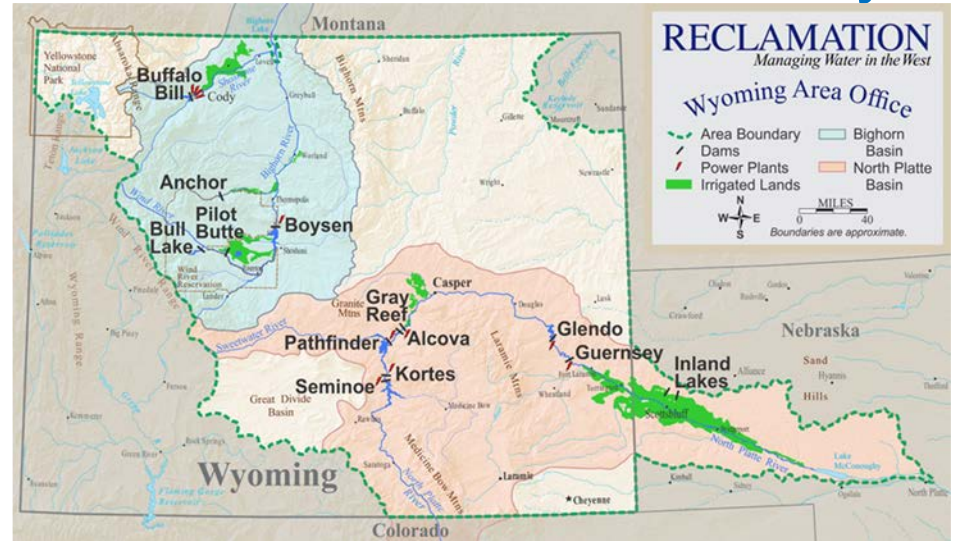
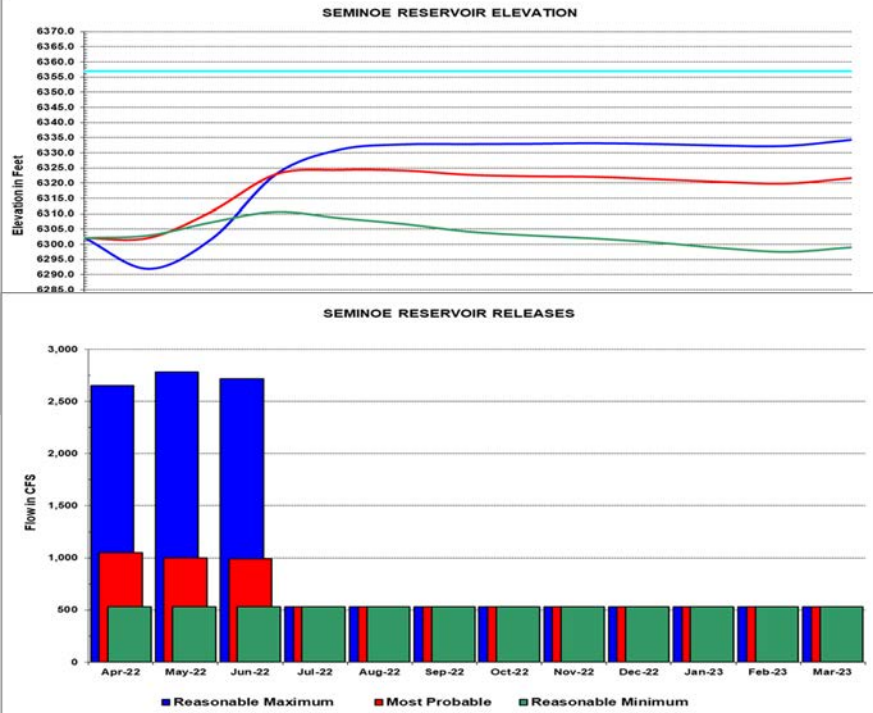
- ~60% of Annual Runoff Occurs at Boysen

As of April 27, Bighorn System: 71% of Full, 105% of Average

<u>Reservoir</u>	<u>Content</u>	<u>Capacity</u>	<u>% of Full</u>	<u>% of Avg</u>
Bull Lake	88,700	152,500	58%	113%
Buffalo Bill	380,600	646,600	59%	96%
Boysen	617,300	741,600	83%	116%



Current Reservoir Conditions: North Platte System



**As of April 26, North Platte System:
57% of Full, 89% of Average**

April 1, 2022 Forecast

Estimated April - July Inflow

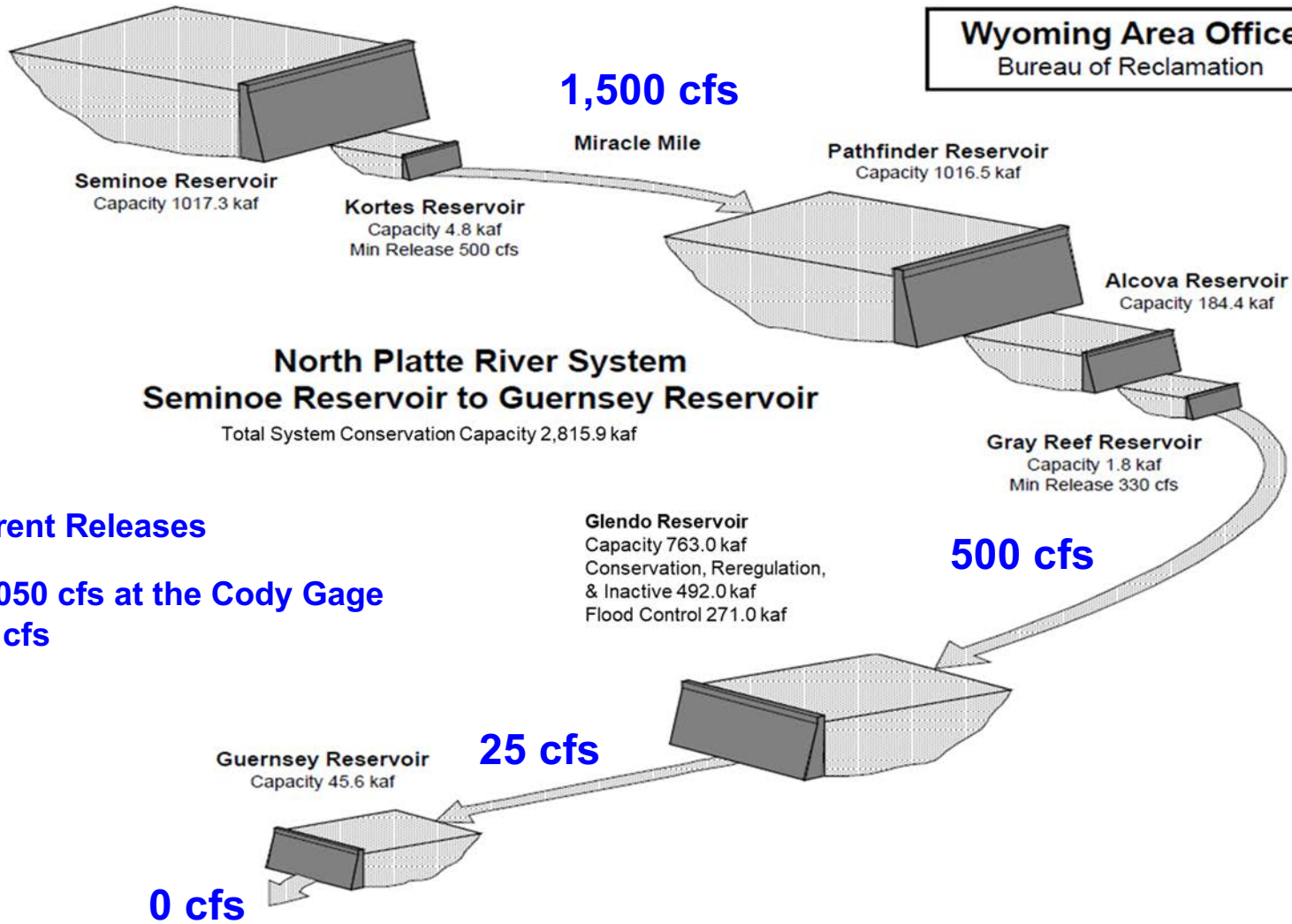
- **Minimum:** 200,000 acre-feet
- **Expected:** 450,000 acre-feet
- **Maximum:** 850,000 acre-feet

<u>Reservoir</u>	<u>Content</u>	<u>Capacity</u>	<u>% of Full</u>
Seminoe	322,900	1,017,300	32%
Pathfinder	647,800	1,070,000	61%



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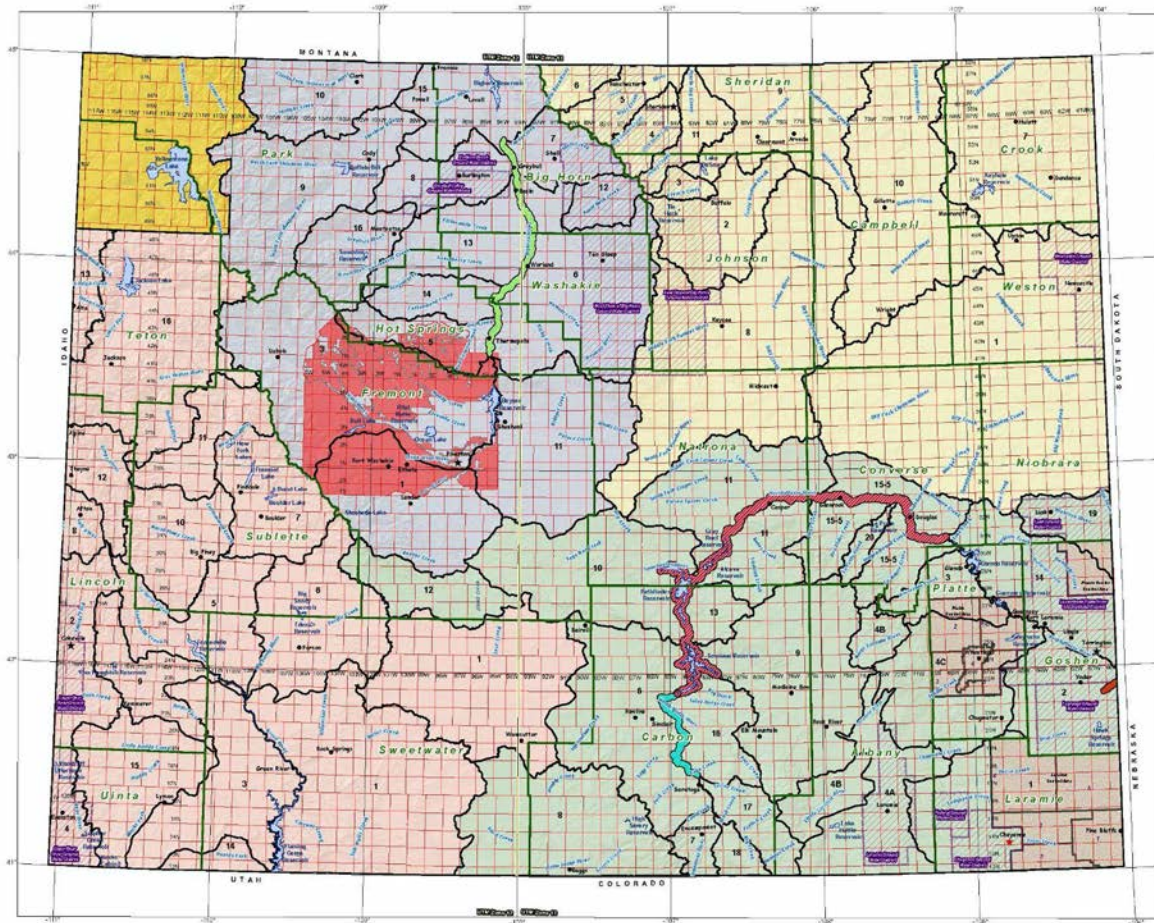
Wyoming Area Office
Bureau of Reclamation



Big Horn Basin Current Releases

- Buffalo Bill: 1050 cfs at the Cody Gage
- Boysen: 1000 cfs

Glendo Reservoir
Capacity 763.0 kaf
Conservation, Reregulation,
& Inactive 492.0 kaf
Flood Control 271.0 kaf



Wyoming Water Division Map

- ★ Operation State Engineer Headquarters
- ★ Operation District 1 Headquarters
- ★ Operation District 2 Headquarters
- ★ Operation District 3 Headquarters
- ★ Operation District 4 Headquarters
- ★ Operation District 5 Headquarters
- ★ Operation District 6 Headquarters
- ★ Operation District 7 Headquarters
- ★ Operation District 8 Headquarters
- ★ Operation District 9 Headquarters
- ★ Operation District 10 Headquarters
- ★ Operation District 11 Headquarters
- ★ Operation District 12 Headquarters
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- ★ Operation District 97 Headquarters
- ★ Operation District 98 Headquarters
- ★ Operation District 99 Headquarters
- ★ Operation District 100 Headquarters

Division 1, District 4 A, B, and C designation only for hydrographer/commission point of contact NOT sub-districts of District 4

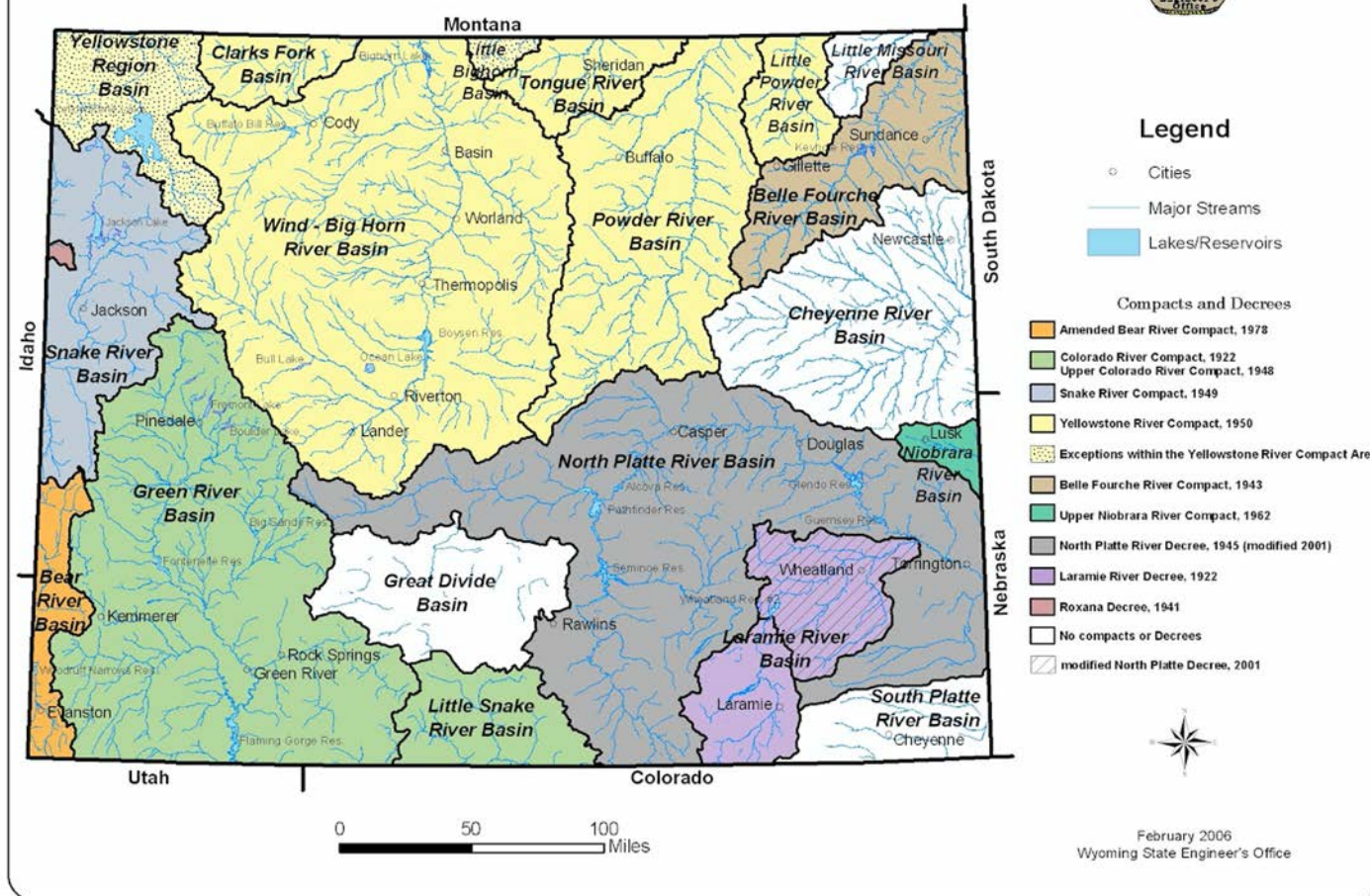


Created: February 2015
 Coordinate System: NAD 83 (Geographic), Wyoming State Plane FIPS 4962 Feet
 Datum: 1983
 False Easting: 100,000.00
 False Northing: 100,000.00
 Central Meridian: -107.0000
 Scale Factor: 0.999999
 Units: Feet
 1 in = 12 miles





Wyoming River Basin Compacts and Decrees





Division 1

North Platte River Decree

North Platte River Basin

1. April 5, 2022 Call by BOR to fill Inland Lakes account
2. April 7, 2022 SE validated call to fill Inland Lakes account
3. April 8, 2022 Regulation in the basin begins (priority date of December 6, 1904)
 - a. Municipalities and Industries are to record diversions and work on finding replacement water for April 8th-30th time frame (TWUA or Pathfinder Mod account)
 - b. Irrigators regulated to December 6, 1904
4. Nearly constant outreach occurring with water users



Division 2

Yellowstone River Compact

Tongue River Basin

1. April 1, 2022 Call from Montana to fill Tongue River Reservoir
2. Wyoming monitoring Post January 1, 1950 rights
 - a. Diversions for irrigation
 - b. Reservoir storage
 - c. Domestic rights to $\frac{1}{2}$ acre
3. Meeting with public and our Montana counterparts to monitor and discuss changing hydrology



Division 3

1. Owl Creek 1888
2. Gooseberry Creek 12/21/1906

Division 4

1. None at this time



Contact Information for Calls/Administration

Division 1 Superintendent—Cory Rinehart, 532-2248

Division 2 Superintendent—David Schroeder, 674-7012

Division 3 Superintendent—Joshua Fredrickson, 856-0747

Division 4 Superintendent—Kevin Payne, 279-3441



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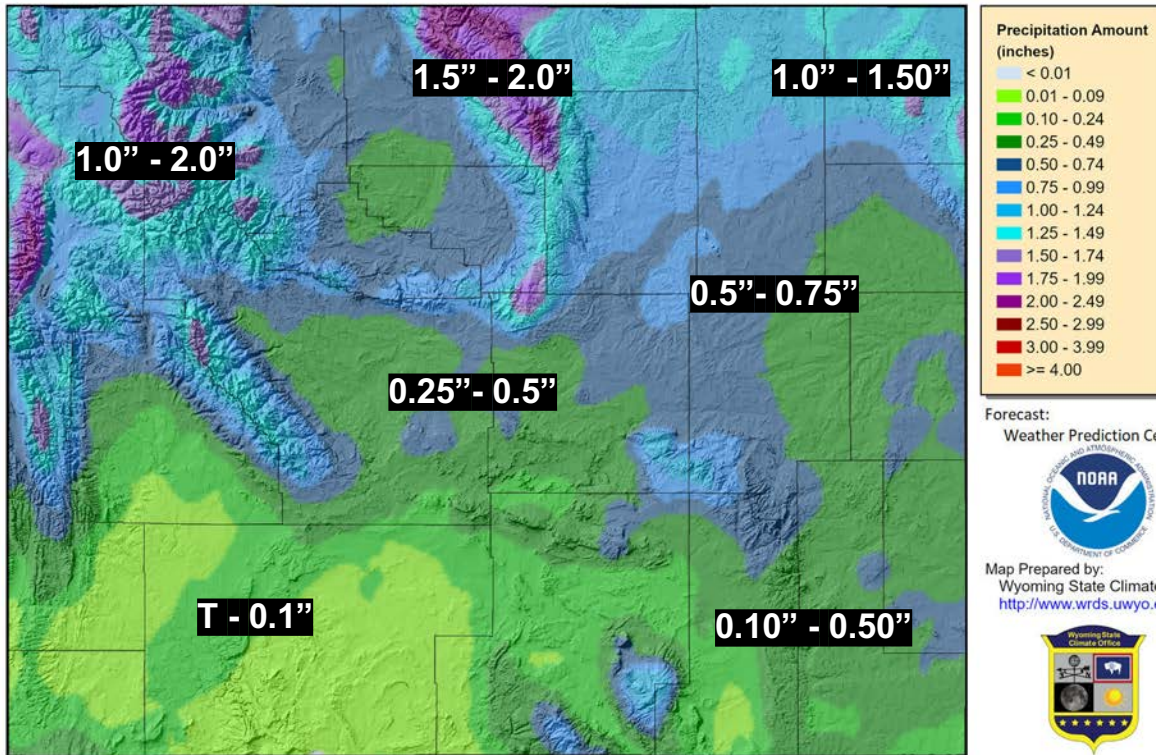
Forecasts & Outlooks



7-Day Total Precipitation Forecast

Apr 28 - May 4

7-Day Quantitative Precipitation Forecast 28 Apr 2022



Provisional data, subject to revision

- Wet & active pattern.
- Several opportunities for precipitation:
 - Thurs PM - Sat AM
 - Sun PM - Mon AM
 - Tue - Wed
- Highest amounts of moisture across northern half.
- Fairly dry in southwest and south central.

Note: Forecast includes “Snow Water Equivalent” ≈ Rain + Melted Snow

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 28 Apr 2022 <http://www.wrds.uwyo.edu>

https://bit.ly/7_dayQPForecast



6-10 Day Temp & Precip Outlook

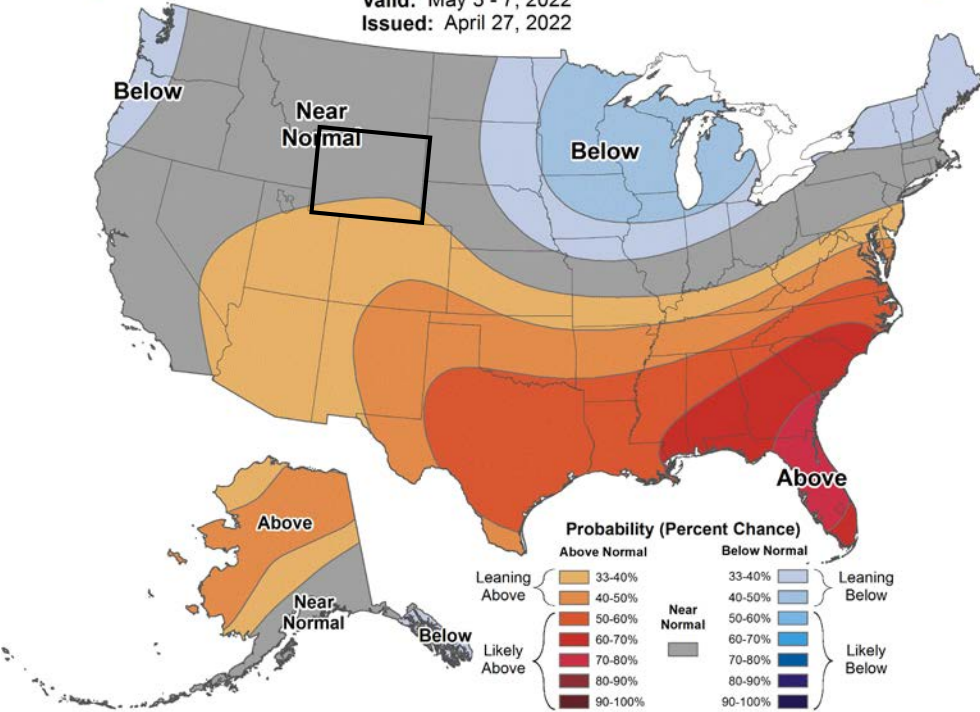
May 3 - May 7



6-10 Day Temperature Outlook



Valid: May 3 - 7, 2022
Issued: April 27, 2022



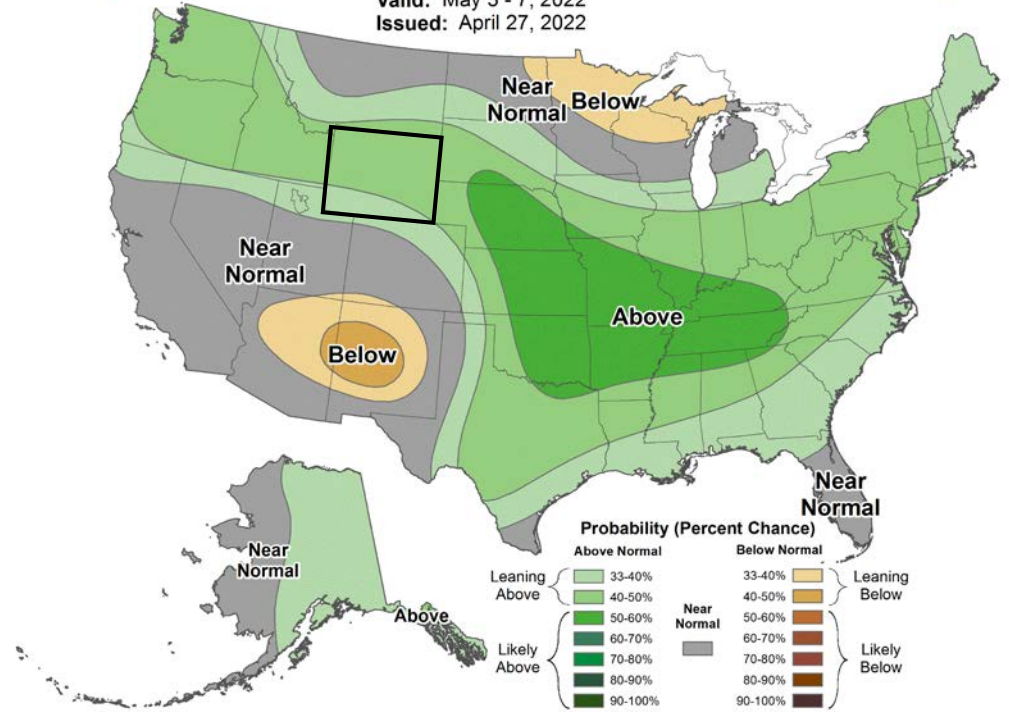
Near climatology



6-10 Day Precipitation Outlook



Valid: May 3 - 7, 2022
Issued: April 27, 2022



Leaning wetter than normal

https://bit.ly/CPC6_10Day



8-14 Day Temp & Precip Outlook

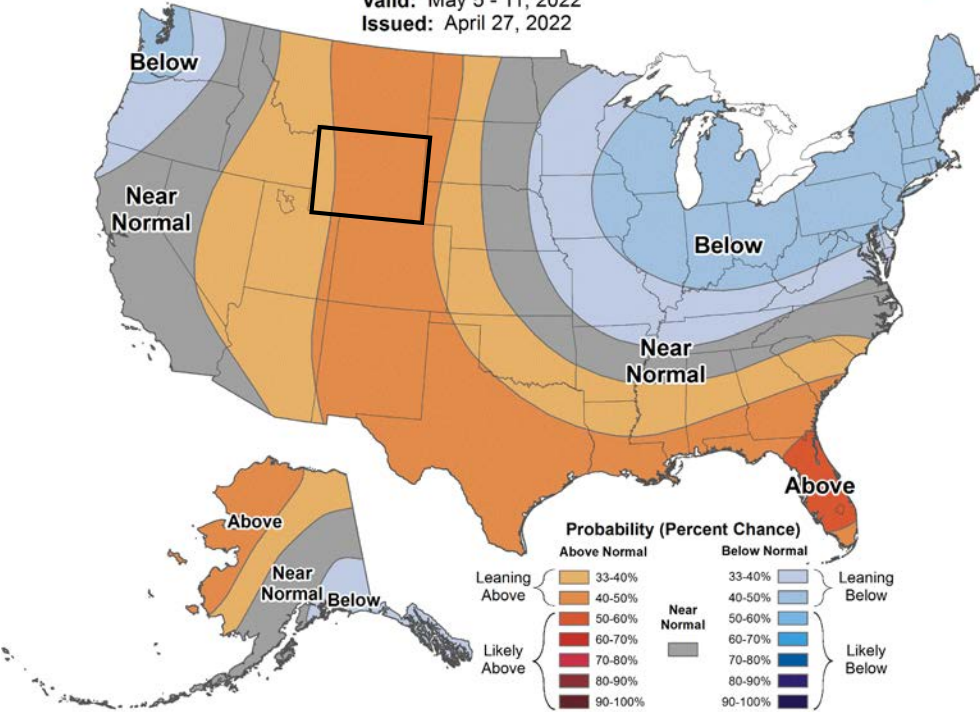
May 5- May 11



8-14 Day Temperature Outlook



Valid: May 5 - 11, 2022
Issued: April 27, 2022



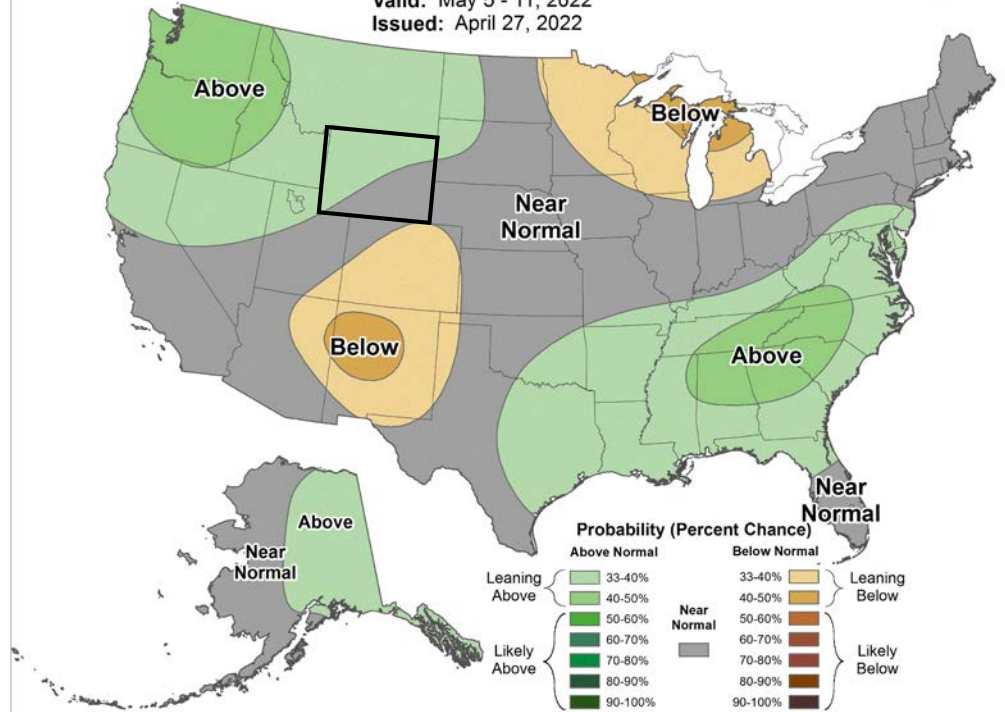
Leaning warmer than normal



8-14 Day Precipitation Outlook



Valid: May 5 - 11, 2022
Issued: April 27, 2022



Near climatology

https://bit.ly/CPC8_14Day



3-Month Temp & Precip Outlook

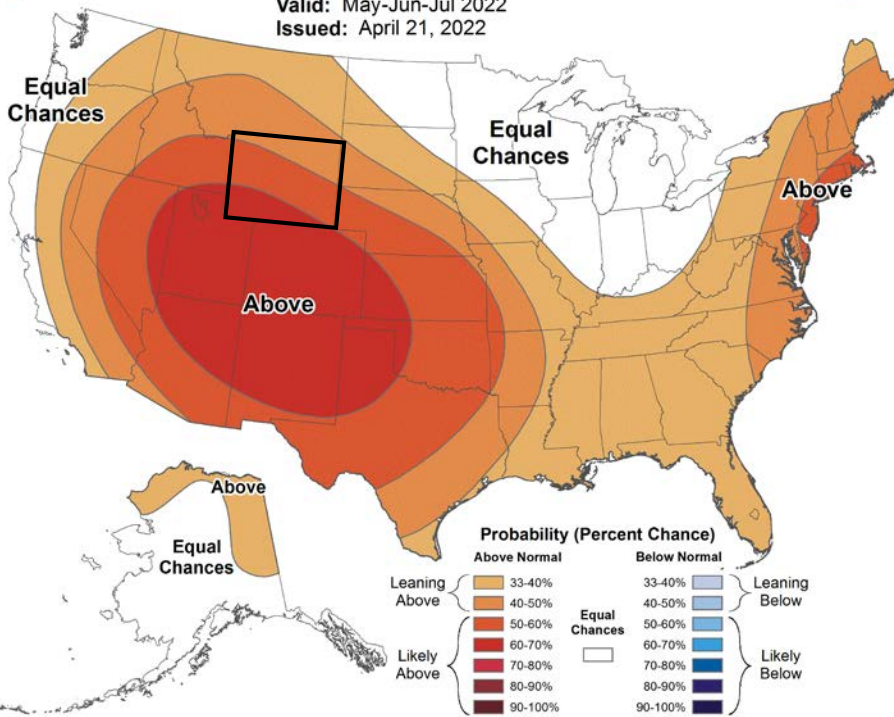
May - Jul 2022



Seasonal Temperature Outlook



Valid: May-Jun-Jul 2022
Issued: April 21, 2022



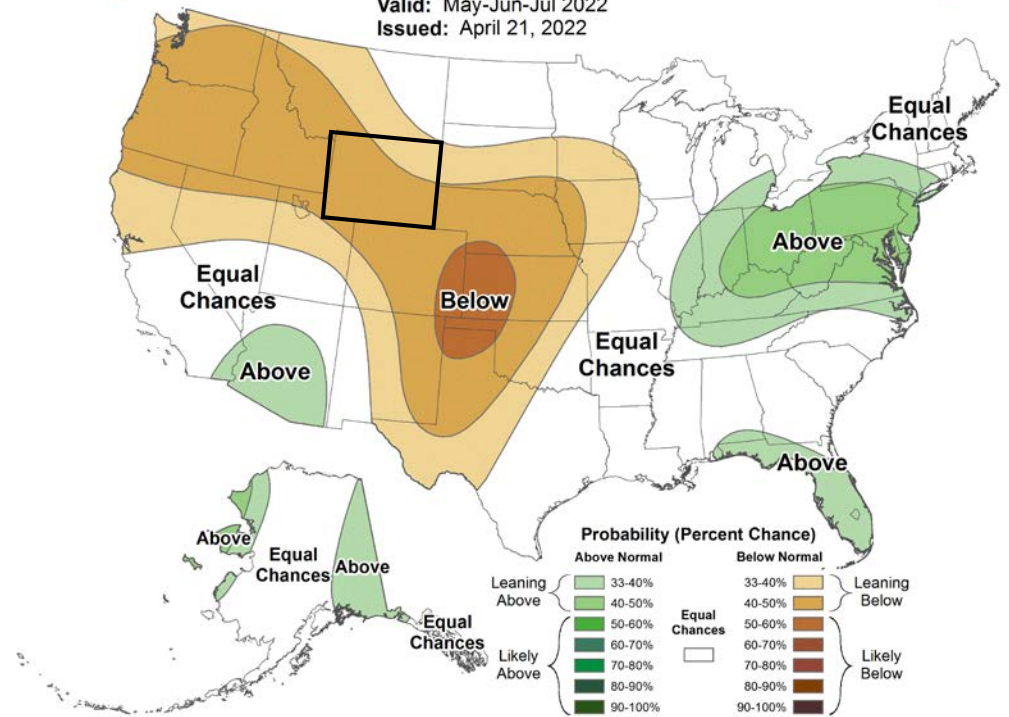
Likely warmer than normal



Seasonal Precipitation Outlook



Valid: May-Jun-Jul 2022
Issued: April 21, 2022



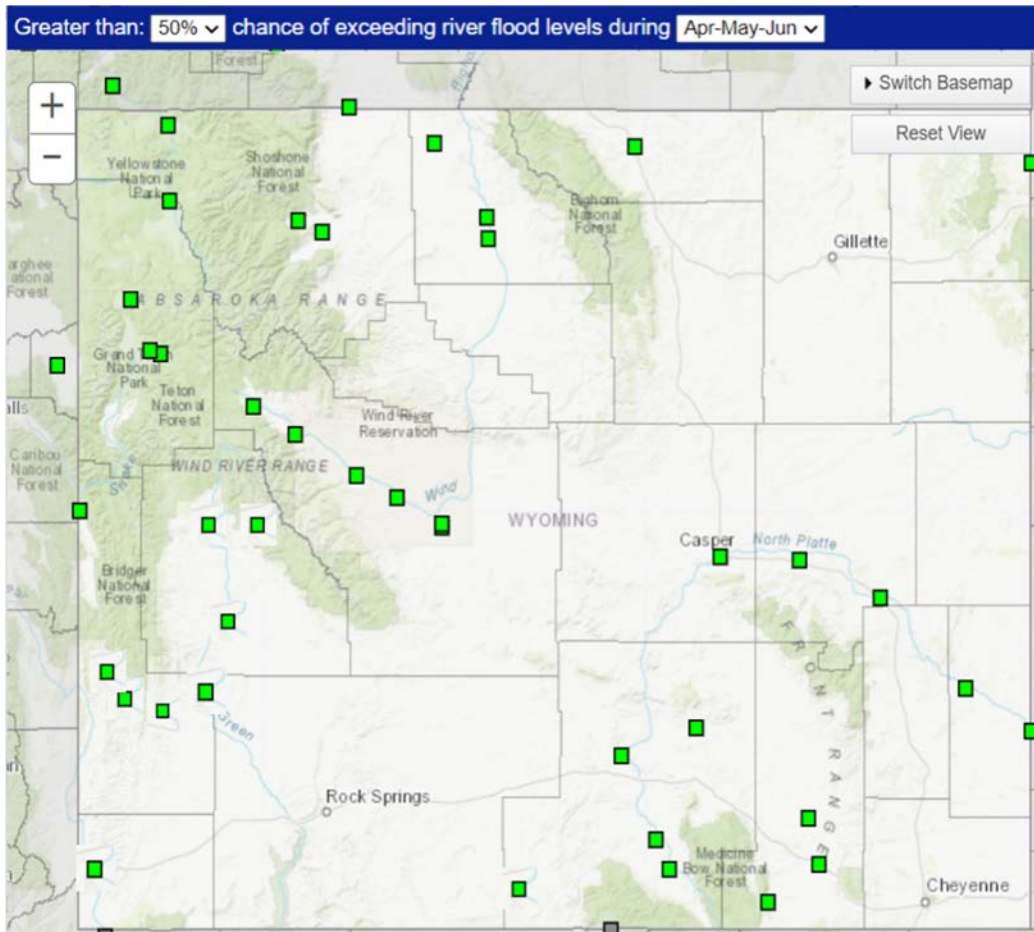
Lean toward drier than normal

https://bit.ly/CPC_Seasonal



Wyoming Flood Potential

April - June 2022



- Chances for river flooding is low through mid June.
- This graphic depicts the NWS river forecast locations, colored by the highest flood category expected during the next 90 days (greater than 50% chance).
- All Wyoming river forecast points are projected to stay below minor flood stage.

Note: River ice action is not accounted for.

water.weather.gov/ahps/long_range.php



Fuel Moistures and Energy Release Component

Energy Release Component (ERC) is a number related to the available energy (BTU) per unit area (square foot) within the flaming front at the head of a fire. It may also be considered a composite fuel moisture value as it reflects the contribution that all live and dead fuels have to potential fire intensity.

1000-Hour Fuel Moisture (1000-hr FM) represents the modeled moisture content in dead fuels in the 3 to 8 inch diameter class and the layer of the forest floor about four inches below the surface. The 1000-hr FM value is based on a running 7-day computed average using length of day, daily temperature and relative humidity extremes (maximum and minimum values) and the 24-hour precipitation duration values.

100-Hour Fuel Moisture (100-hr FM) 1" to 3" Dead Fuels

10-Hour Fuel Moisture (10-hr FM) ¼" to 1" Dead Fuels

1-Hour Fuel Moisture (1-hr FM) 0" to ¼" Dead Fuels

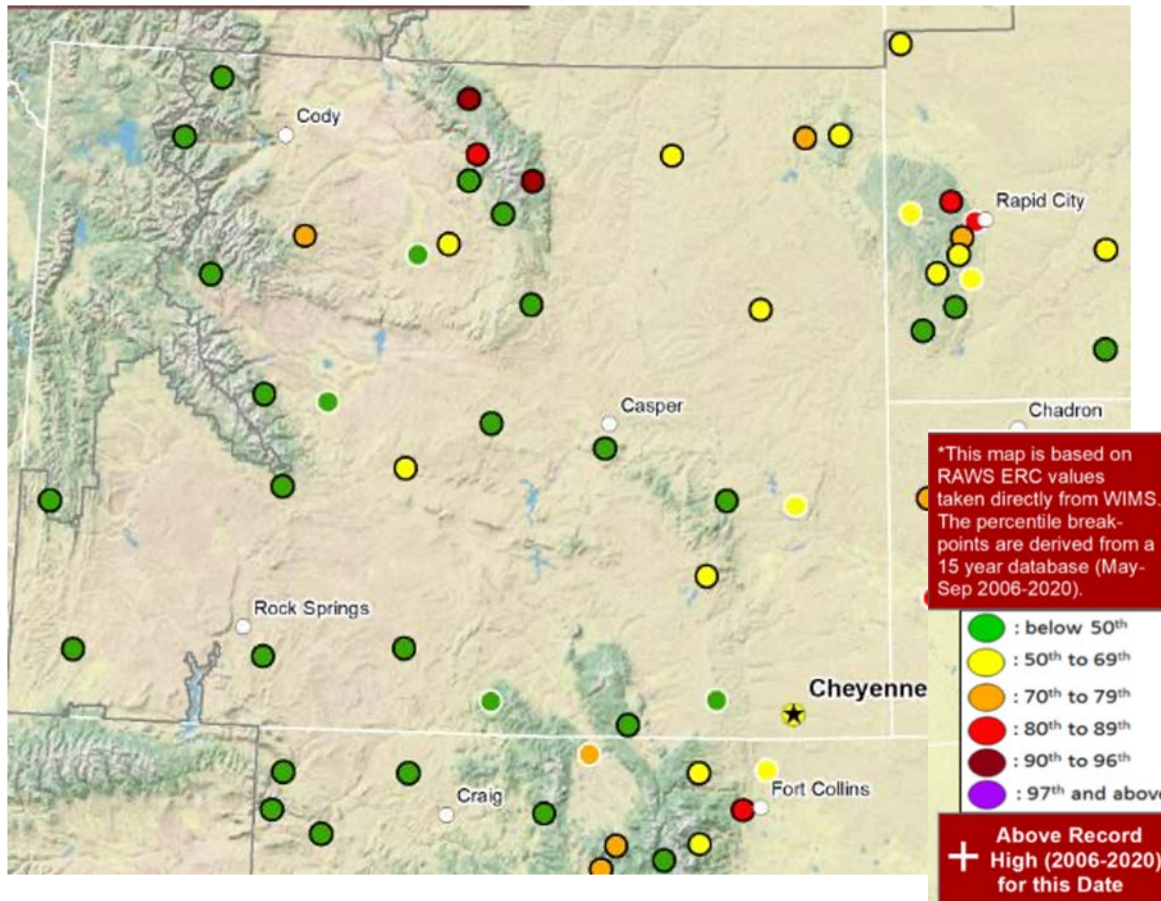
Live Fuel Moisture- Fuels transition from dormancy to green-up in the spring and early summer, then back to dormancy in the fall.



Energy Release Component

Current Status

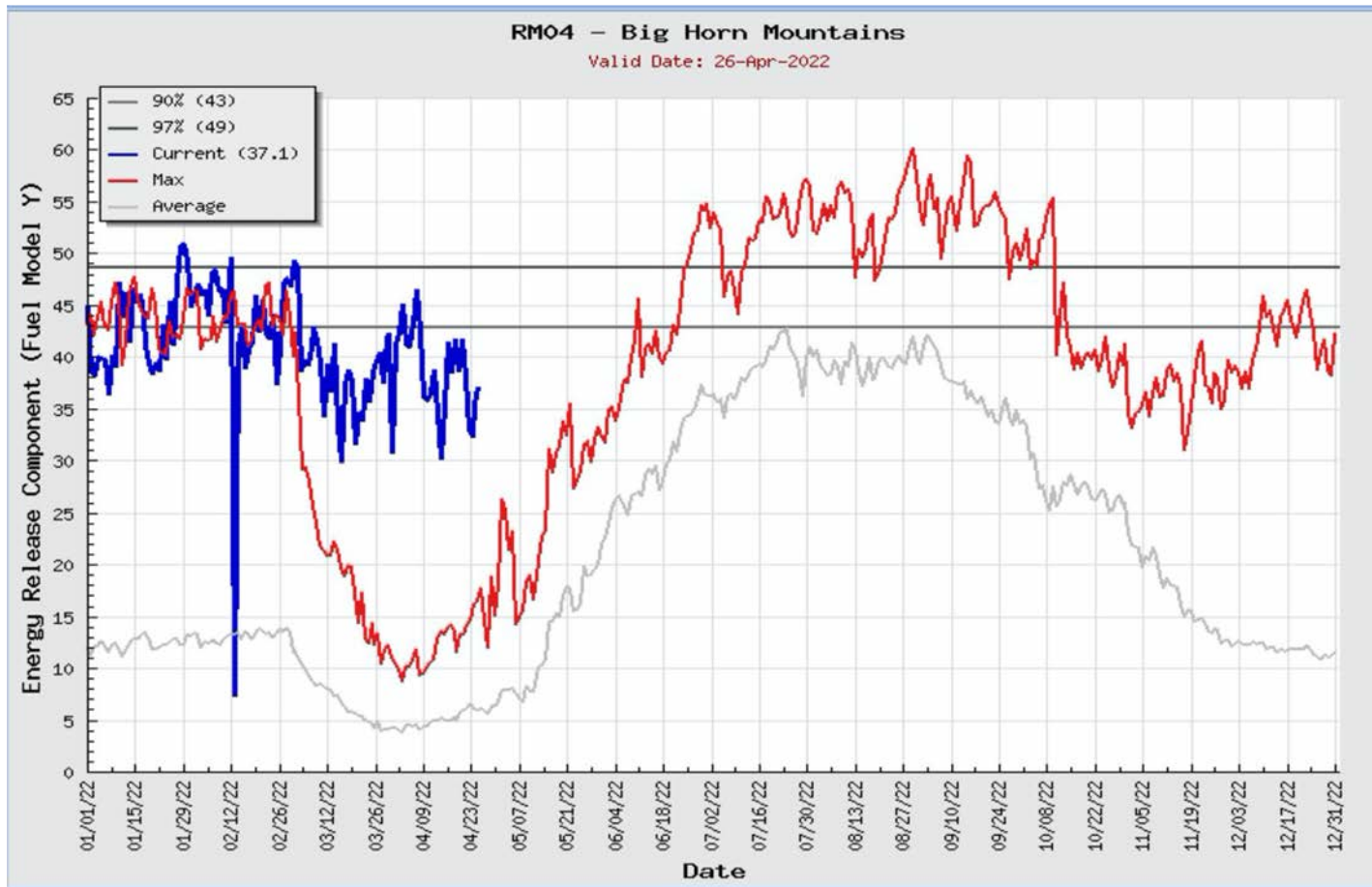
- Values are relative to this date in history.
- Although some areas show 90th to 96th percentile, late April is not typical “fire season” in Wyoming





Energy Release Component

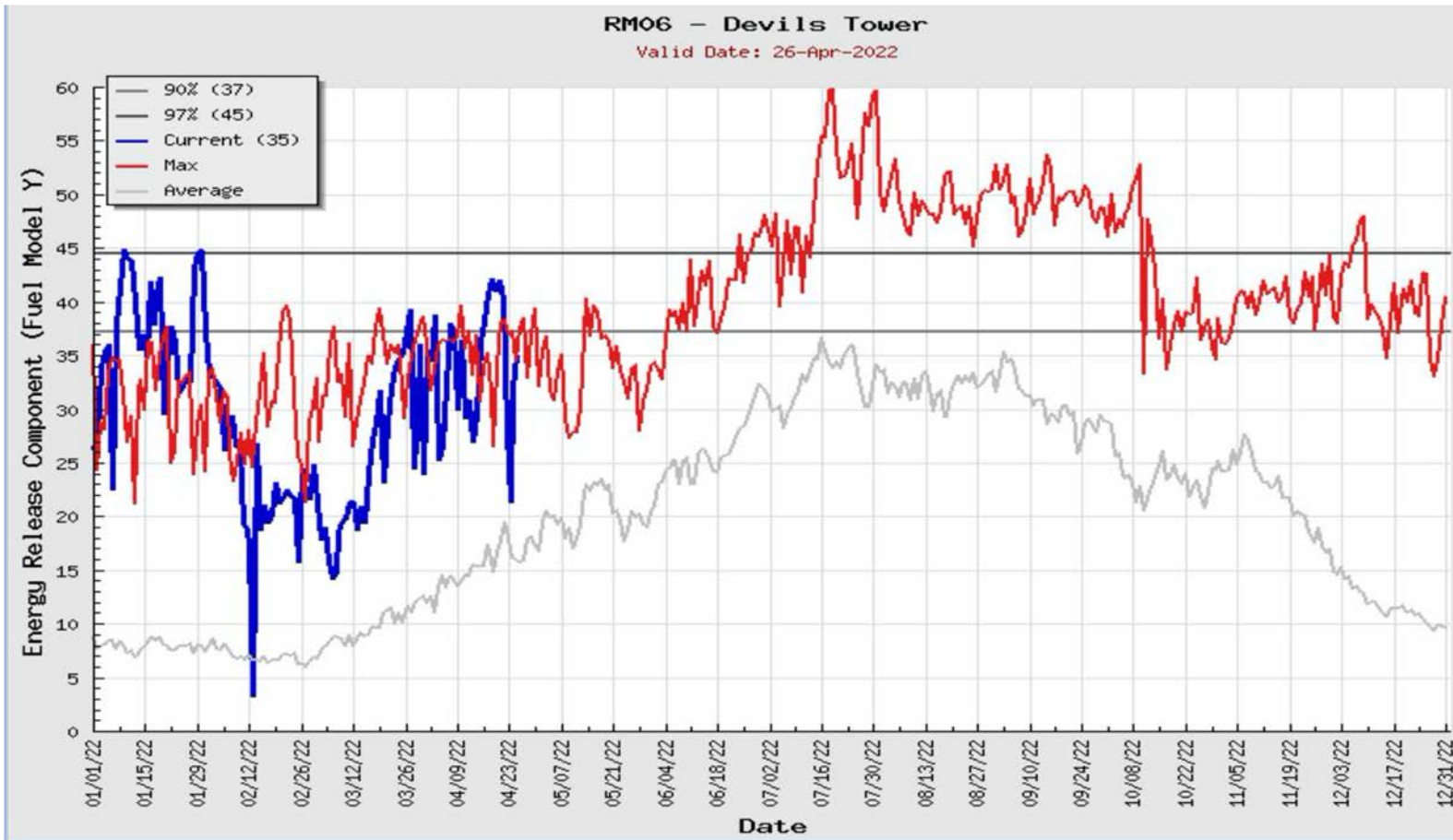
Current Status: Big Horn Mountains (valid 04/26/22)





Energy Release Component

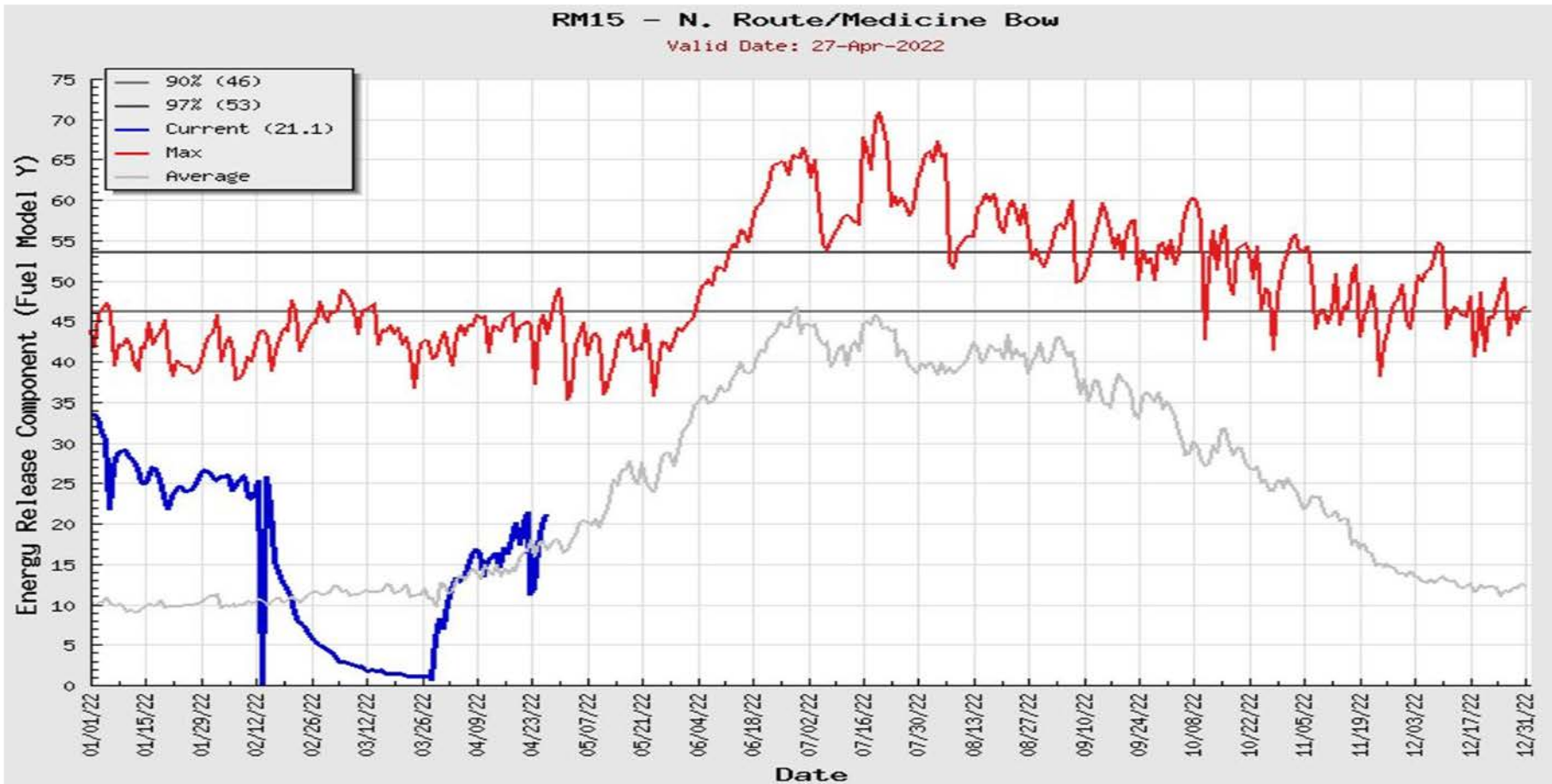
Current Status: Devils Tower (valid 04/26/22)





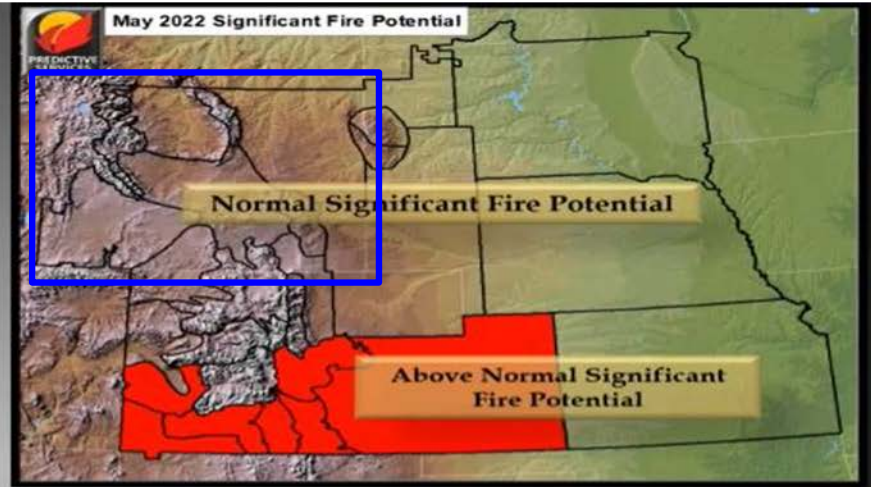
Energy Release Component

Current Status: N. Route / Medicine Bow (valid 04/27/22)





Seasonal Outlooks





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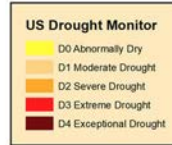
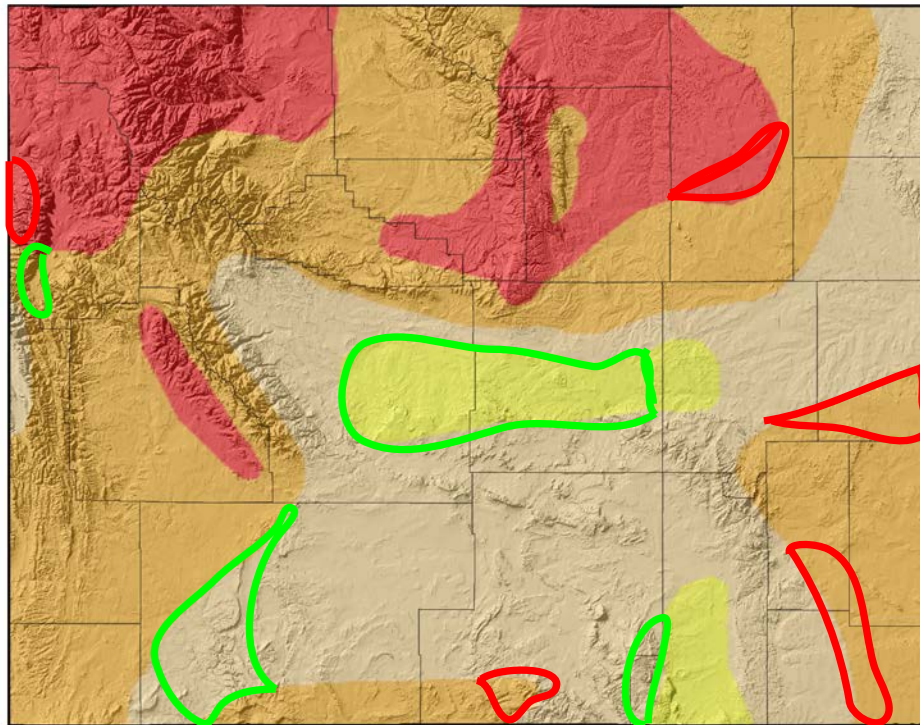
How to get involved ...

US Drought Monitor for April 26, 2022

(Released Thursday, April 28, 2022)

Valid 8 a.m. EDT

US Drought Monitor for 26 Apr 2022



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



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

Improvements and **degradations** in the last month. Recent precipitation is starting to erode some of the areas but longer term dryness is filling in others.

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 28 Apr 2022 <http://www.wrds.uwyo.edu>

<https://droughtmonitor.unl.edu>

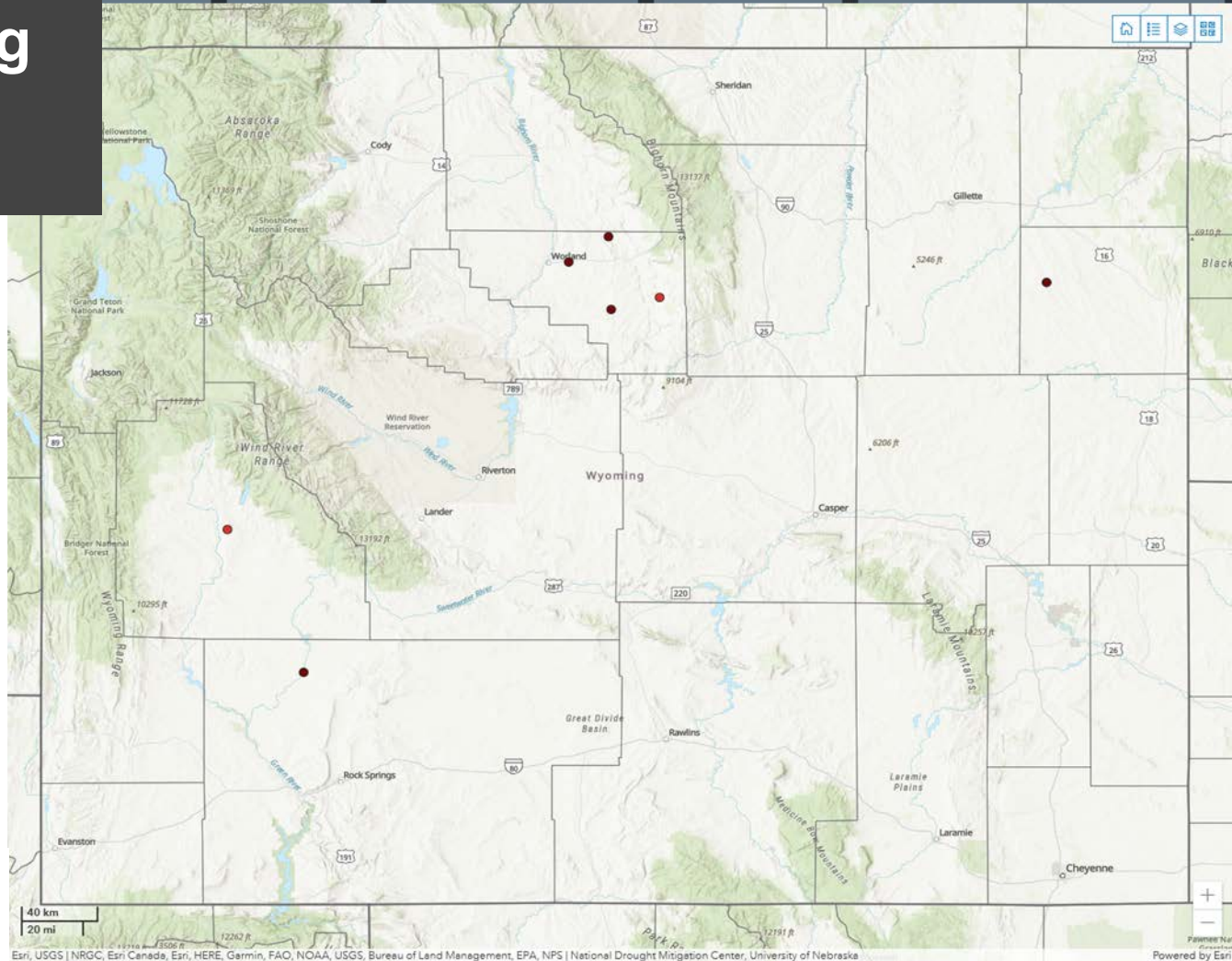


droughtmonitor.unl.edu

Condition Monitoring Observer Reports

<https://bit.ly/CMOReports>

- Severely Dry
- Moderately Dry
- Mildly Dry
- Near Normal
- Mildly Wet
- Moderately Wet
- Severely Wet



Overview

Crops

Livestock

Fire

Surface Water

Wildlife

Freshwater Fish

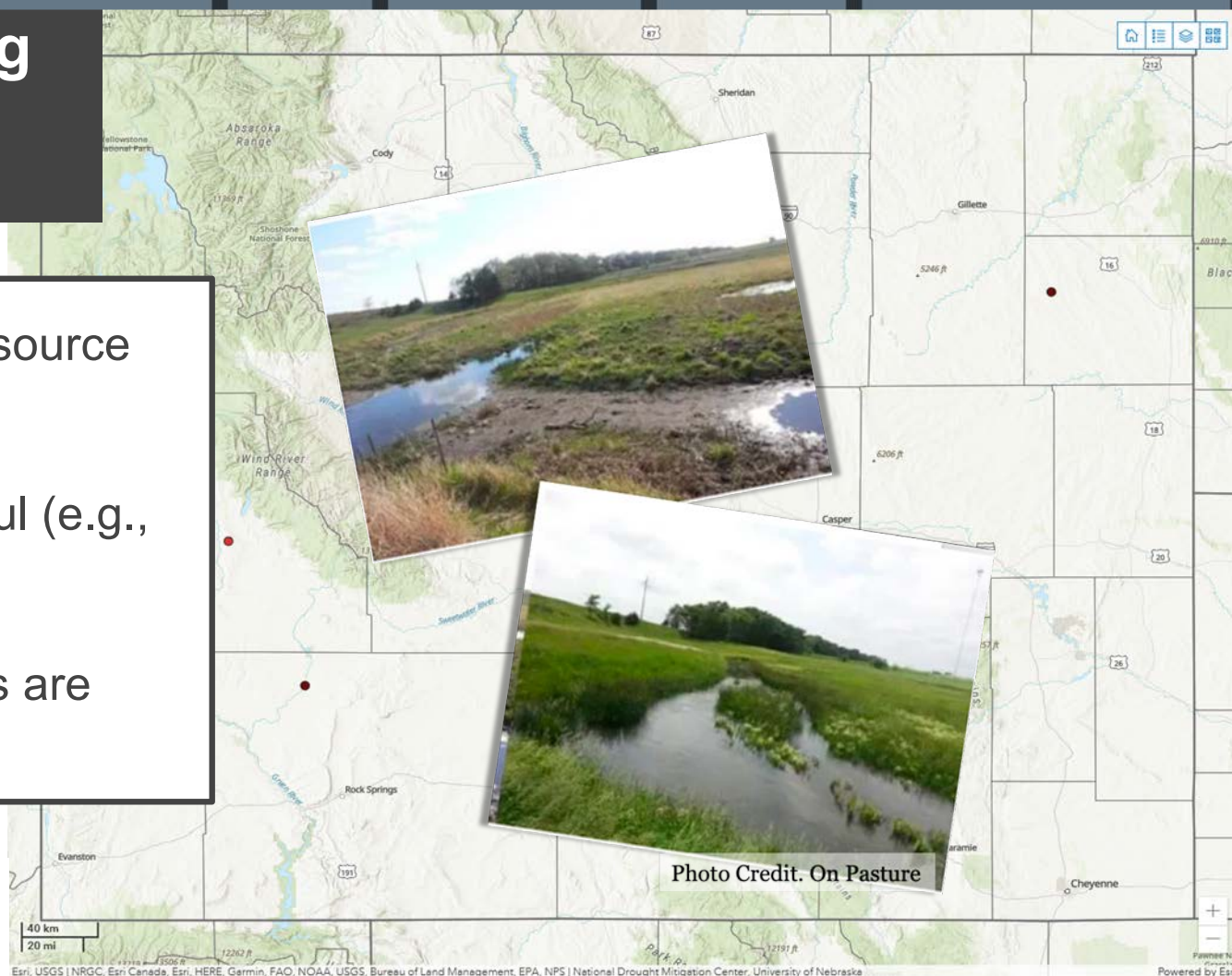
Household

Community Hydropower

Condition Monitoring Observer Reports

<https://bit.ly/CMOReports>

- Comparison photos → resource conditions
- Regular reporting is helpful (e.g., monthly)
- **Note:** Reports and photos are available to the public.



Northern Plains Climate Hub
U.S. DEPARTMENT OF AGRICULTURE



Extension

Esri, USGS | NRG, Esri Canada, Esri, HERE, Garmin, FAO, NOAA, USGS, Bureau of Land Management, EPA, NPS | National Drought Mitigation Center, University of Nebraska

Powered by Esri



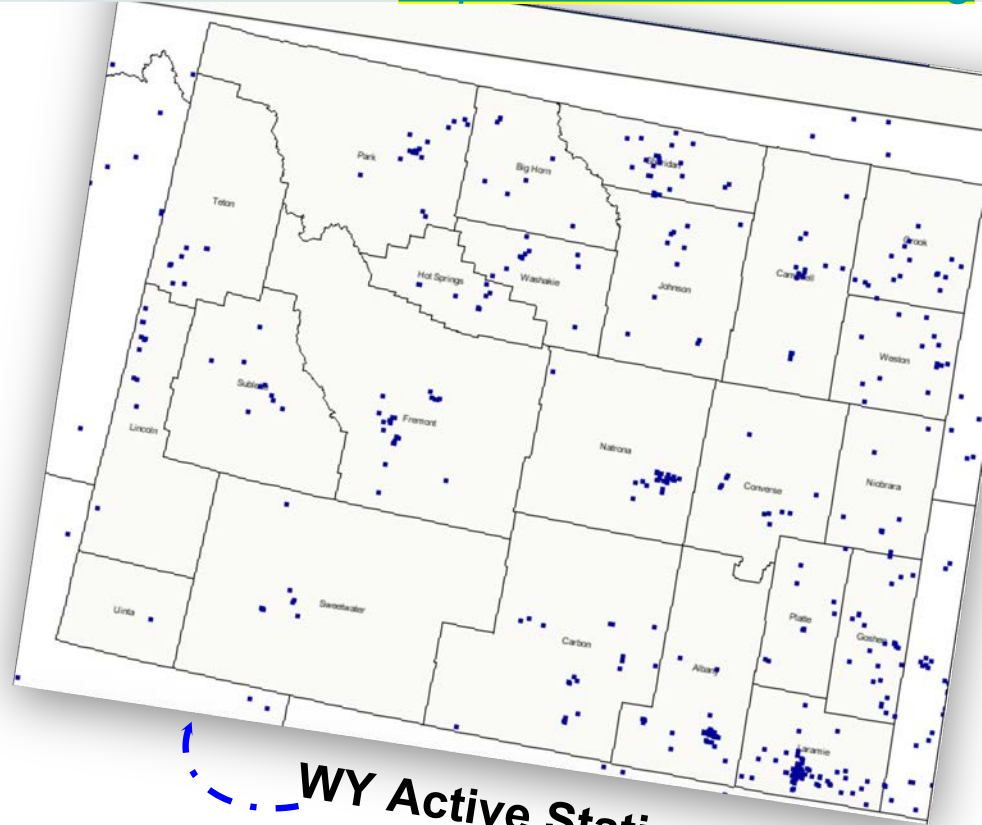
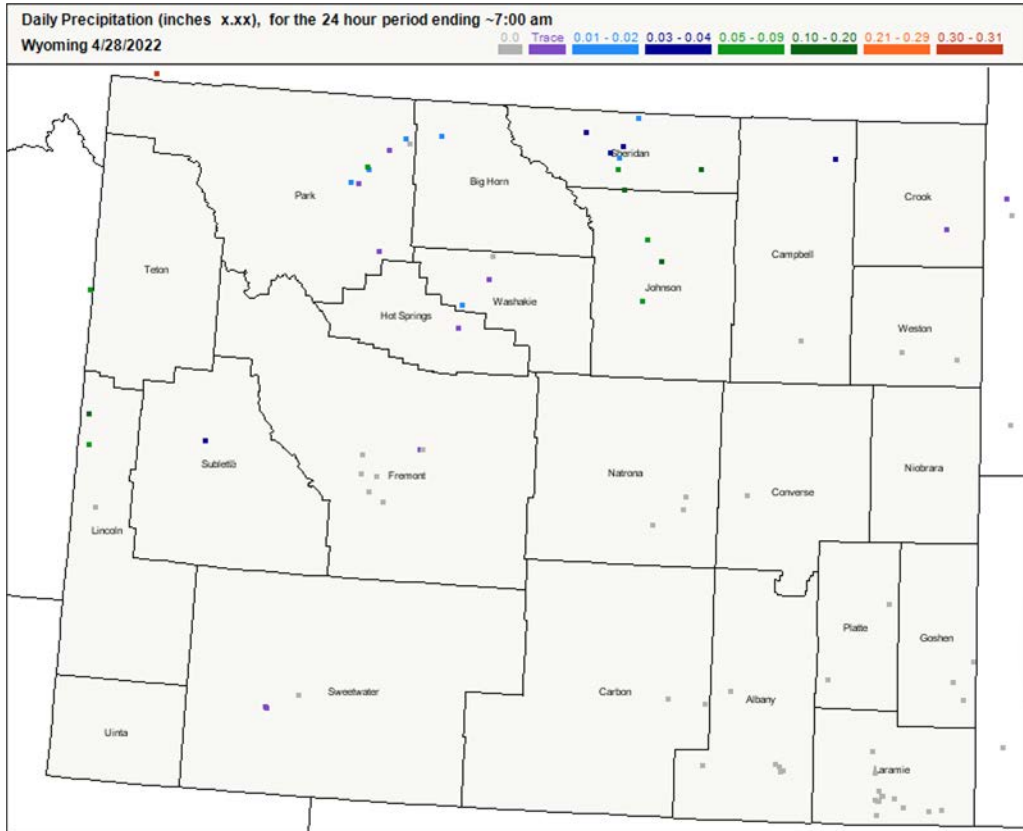
April 28, 2022:

24-hour precip as of ~ 7 am



CoCoRaHS Mapping System

<https://www.cocorahs.org>

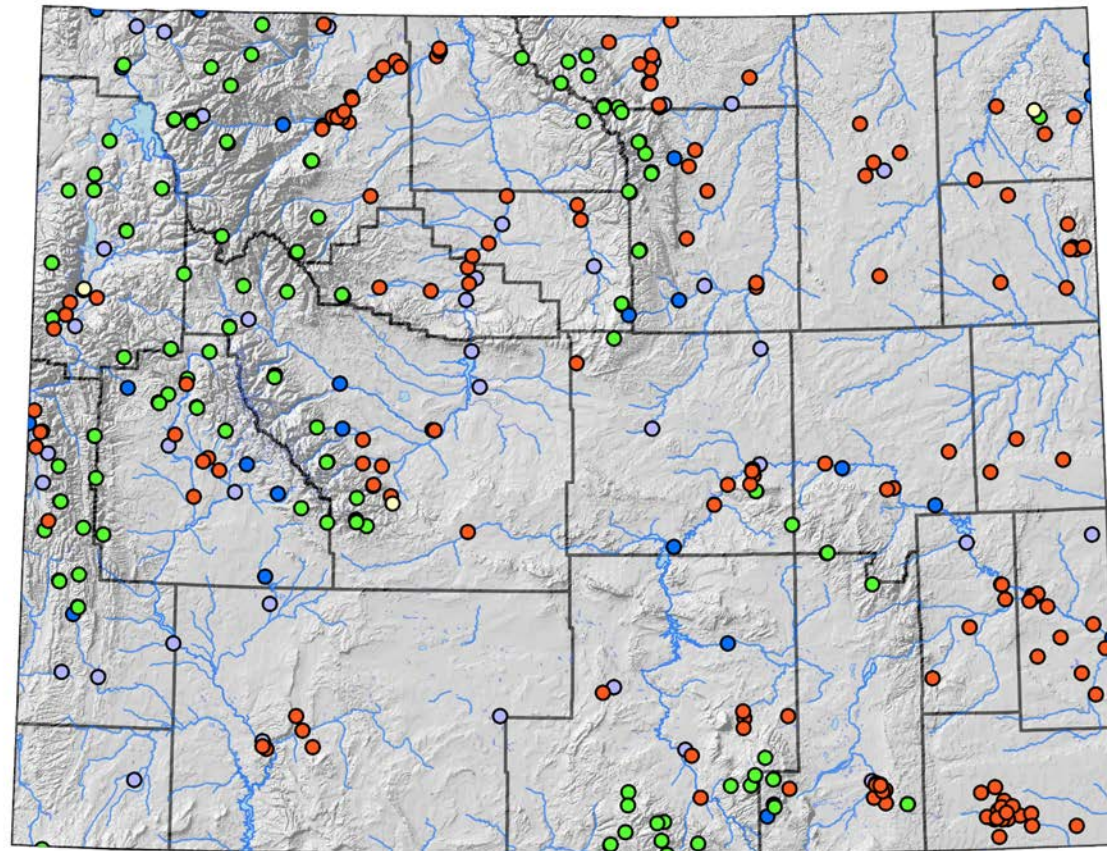


WY Active Station Locations





Stations used for Precipitation Grids 12 Apr 2022



Network

- COCORAHS
- COOP
- HYD
- MADIS
- SNOTEL
- USCRN

Precipitation Data
PRISM Climate Group
<http://prism.oregonstate.edu>



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



Provisional data, subject to revision

Stations used by PRISM Climate Group for Precipitation Grids of 12 Apr 2022, Copyright ©2022, PRISM Climate Group, Oregon State University,
<http://prism.oregonstate.edu>
Map created 25 Apr 2022



— BUREAU OF RECLAMATION



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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! Questions?