



Utah Water Assessment & Conditions Monitoring (Drought Webinar)

The meeting will begin shortly



Thank you to our contributors



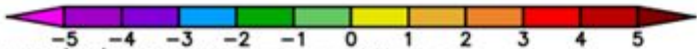
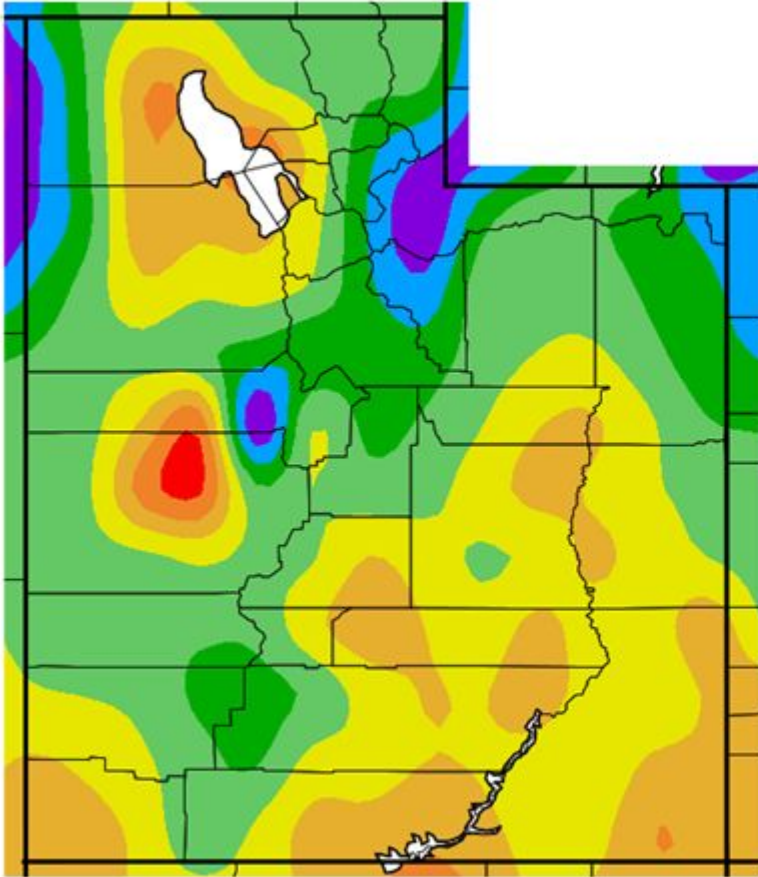


Utah Water Assessment & Conditions Monitoring Webinar

July 11, 2023

Temperature Overview

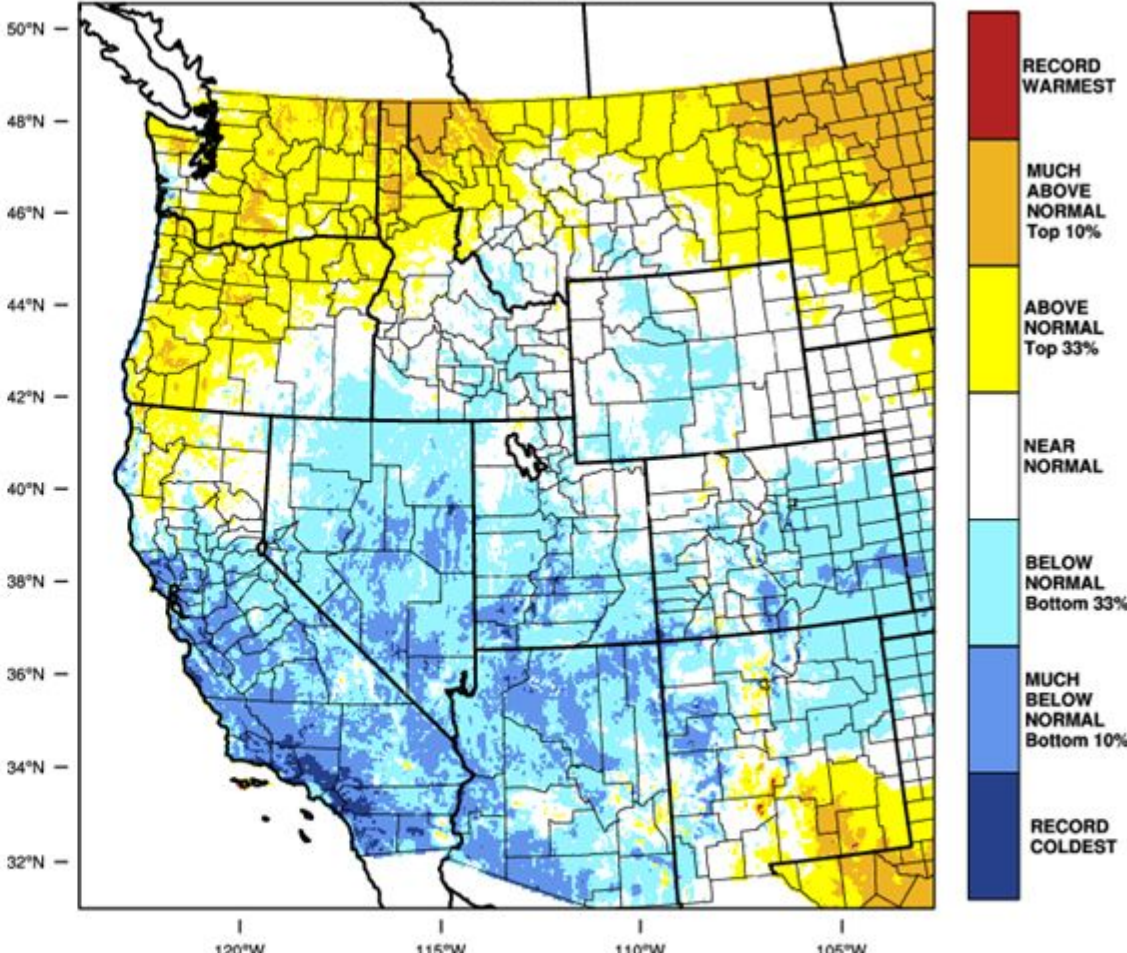
Av. Max. Temperature dep from Ave (deg F)
6/27/2023 - 7/10/2023



Generated 7/11/2023 at WRCC using provisional data.
NOAA Regional Climate Centers

Western United States - Mean Temperature

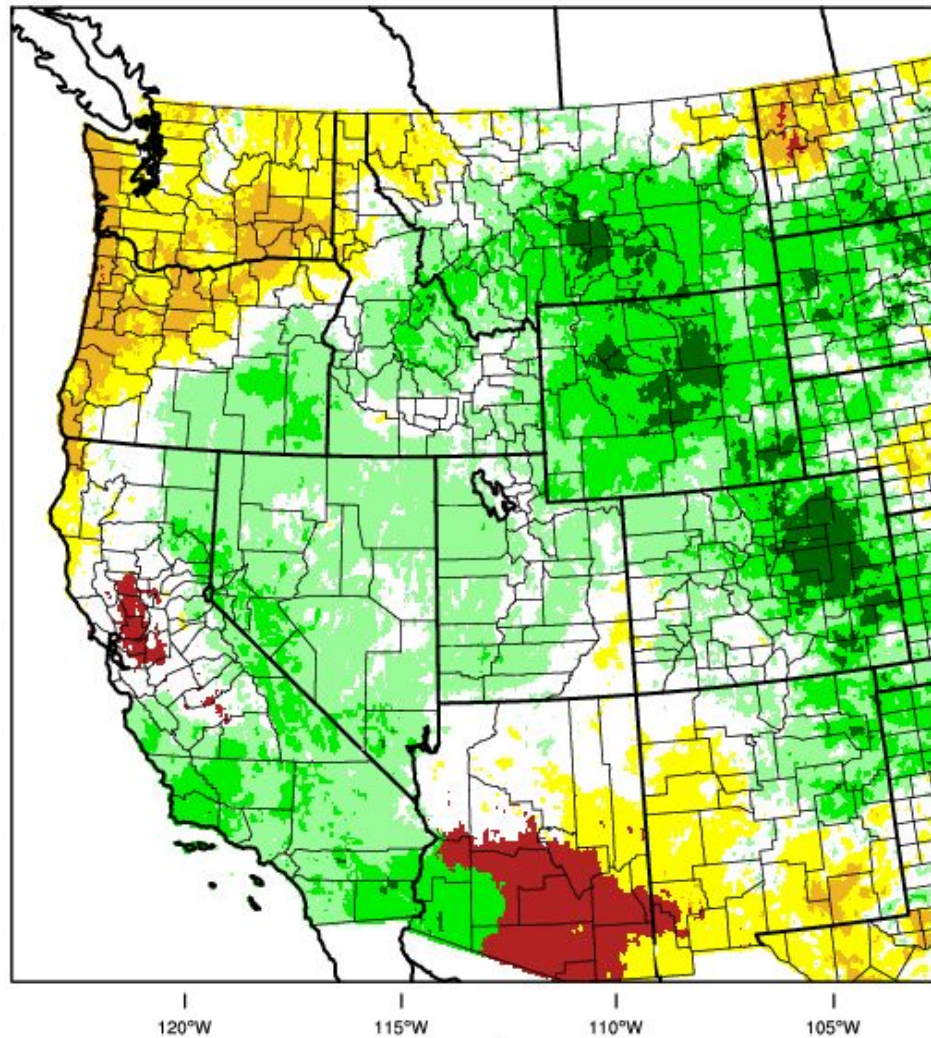
June 2023 Percentile



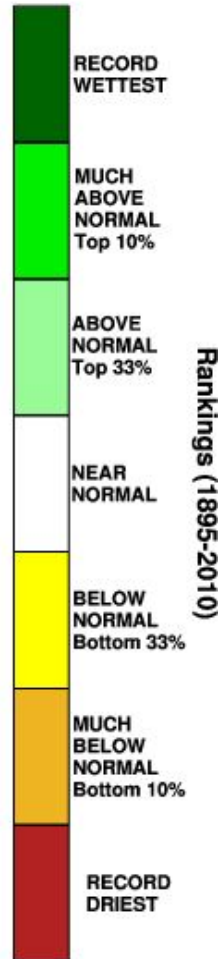
WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 11 JUL 2023

Precipitation

Western United States - Precipitation
June 2023 Percentile

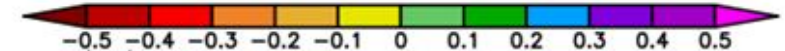
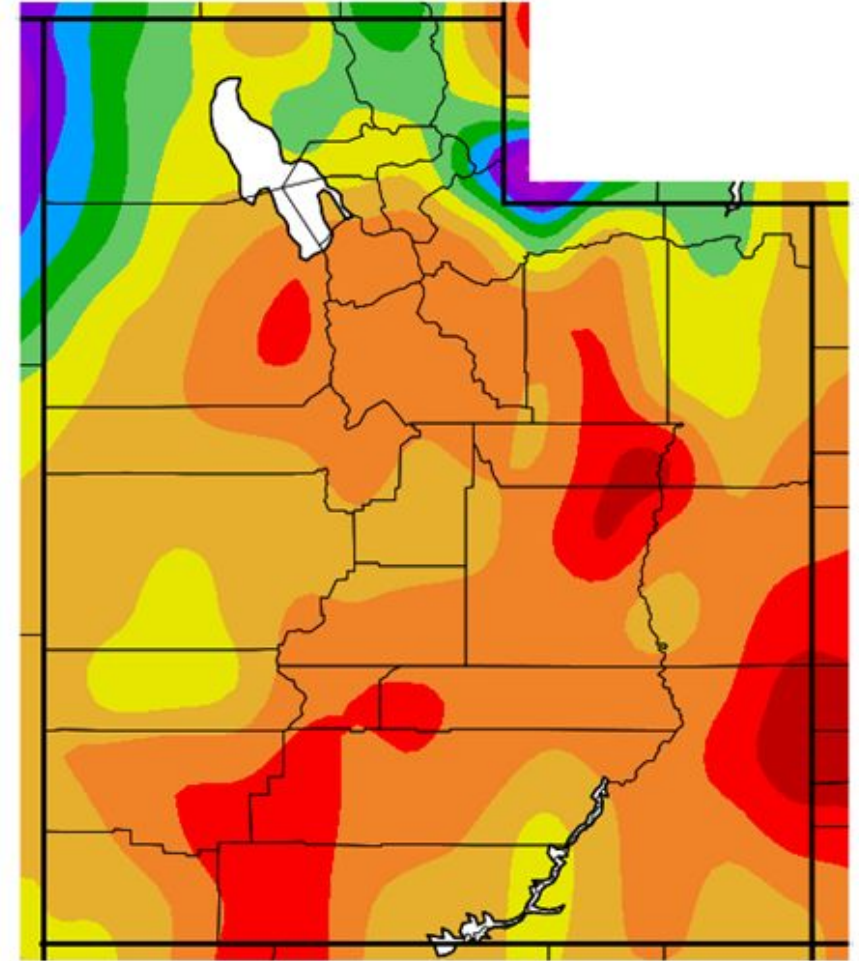


WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 11 JUL 2023



Rankings (1895-2010)

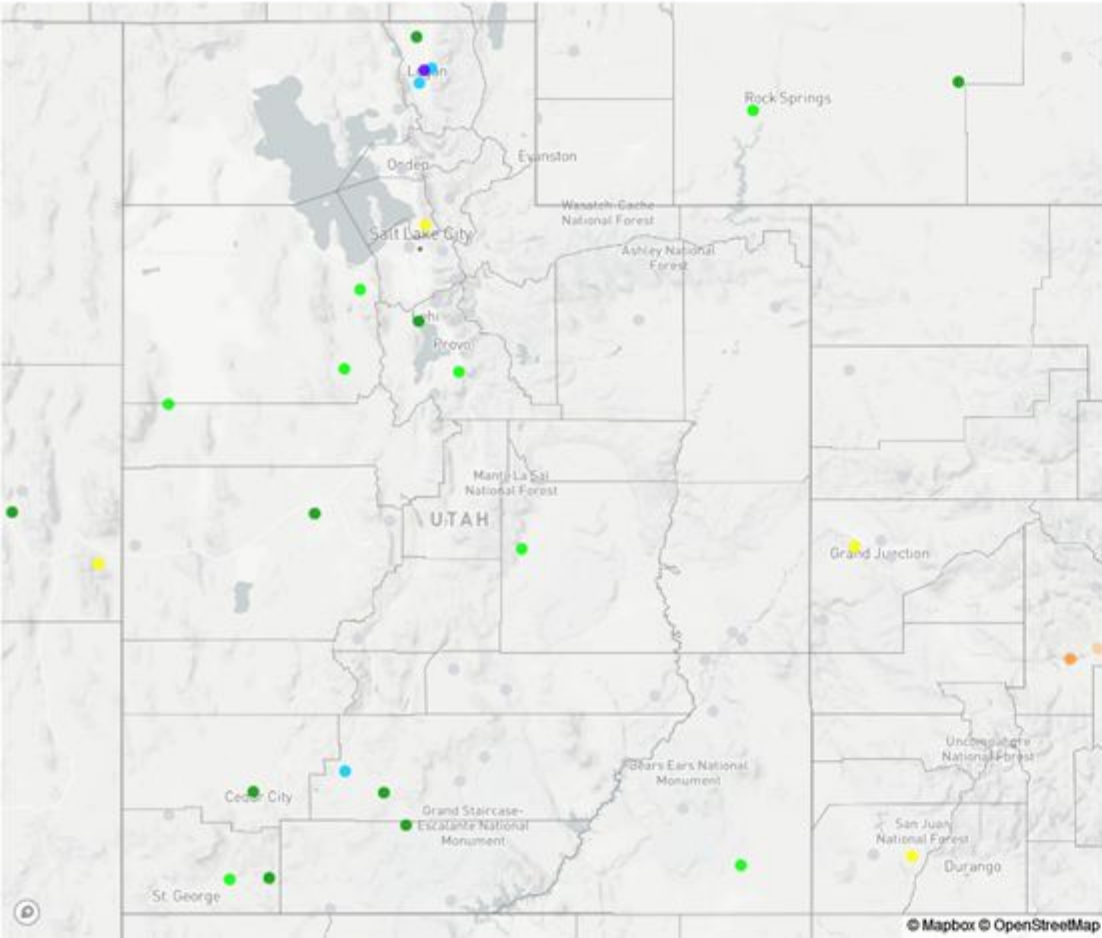
Precipitation Departure from Average (in.)
6/27/2023 – 7/10/2023



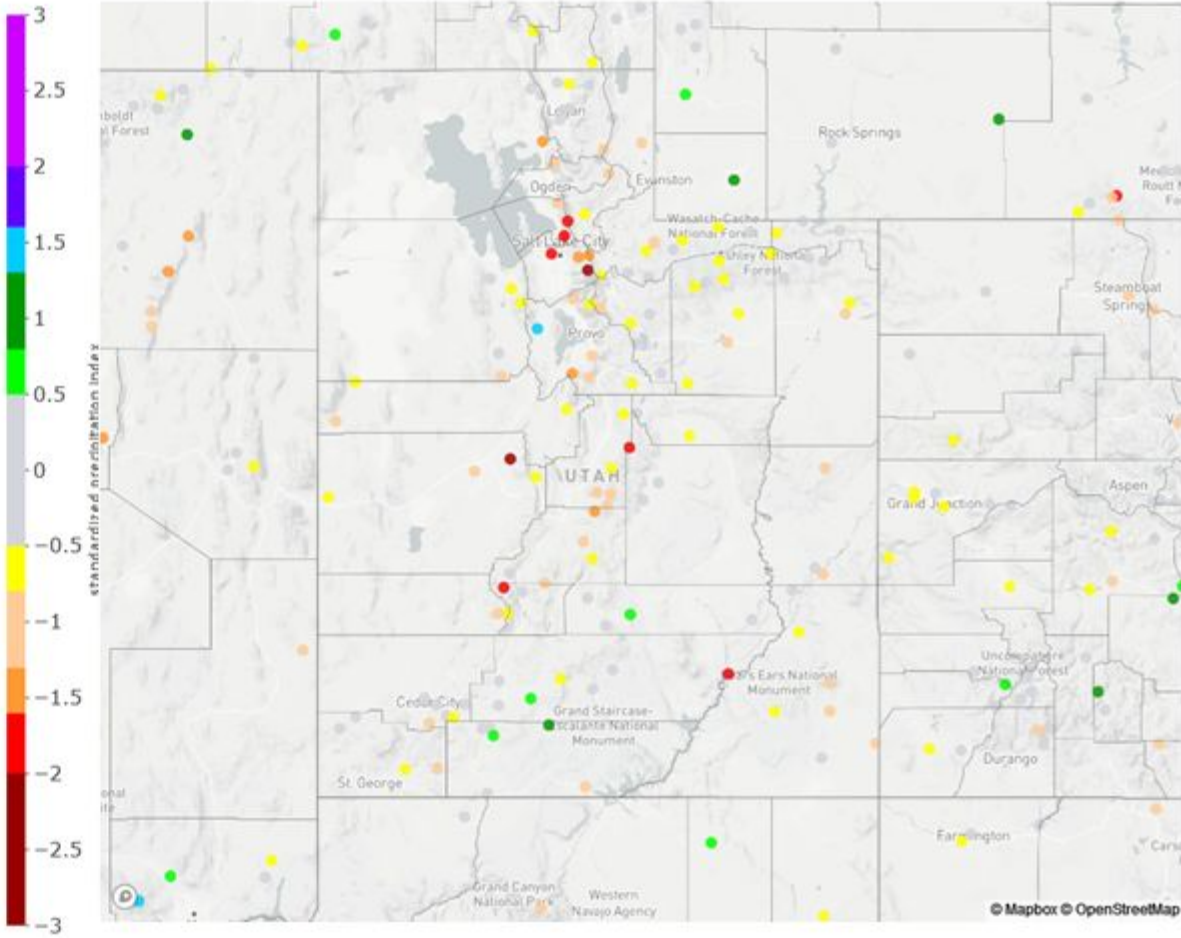
Generated 7/11/2023 at WRCC using provisional data.
NOAA Regional Climate Centers

Standardized Precipitation Index (SPI)

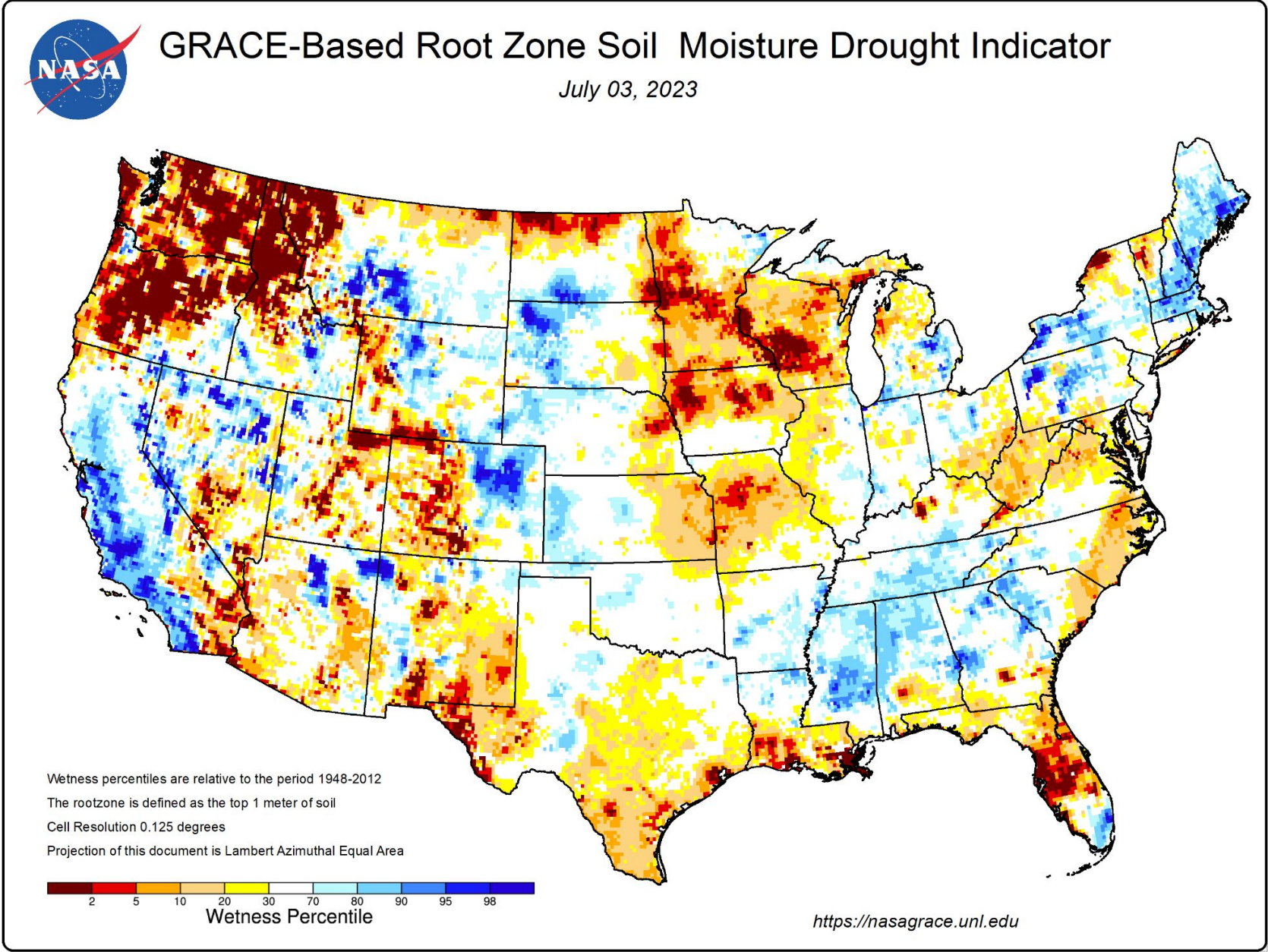
30-day Standardized Precipitation Index: 2023/06/10 - 2023/07/09



90-day Standardized Precipitation Index: 2023/04/11 - 2023/07/09

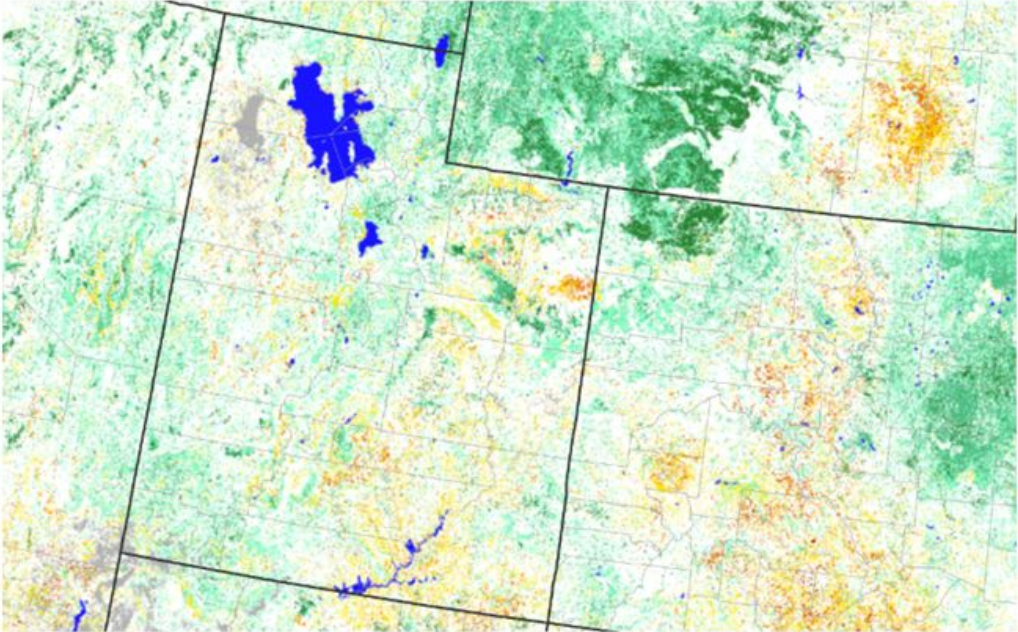


Soil Moisture



Drought Indices

Vegetation Drought Response Index (VegDRI)



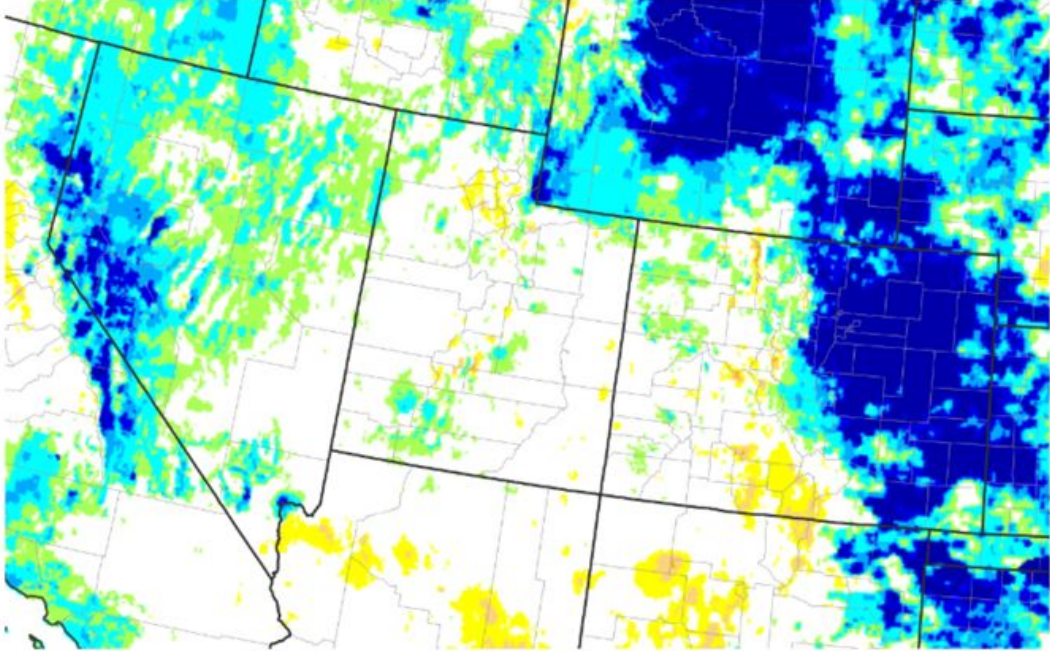
Vegetation Conditions



Source(s): NDMC, USGS, HPRCC
 Updates Weekly: 07/09/23

Drought.gov

Short-Term Multi-Indicator Drought Index (MIDI)



Dry Conditions



Wet Conditions



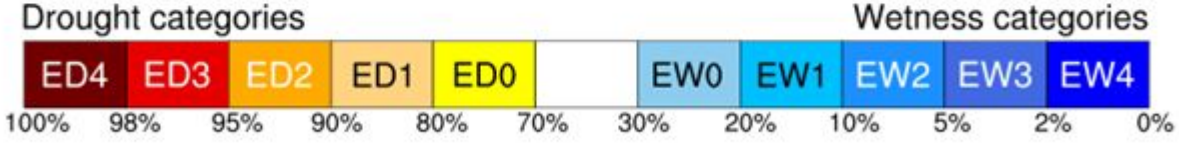
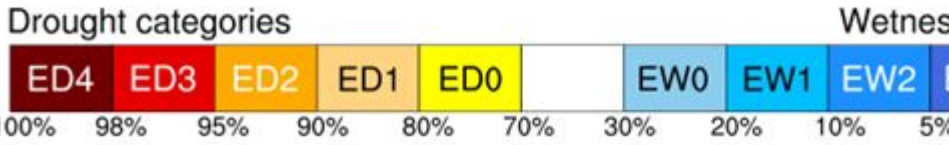
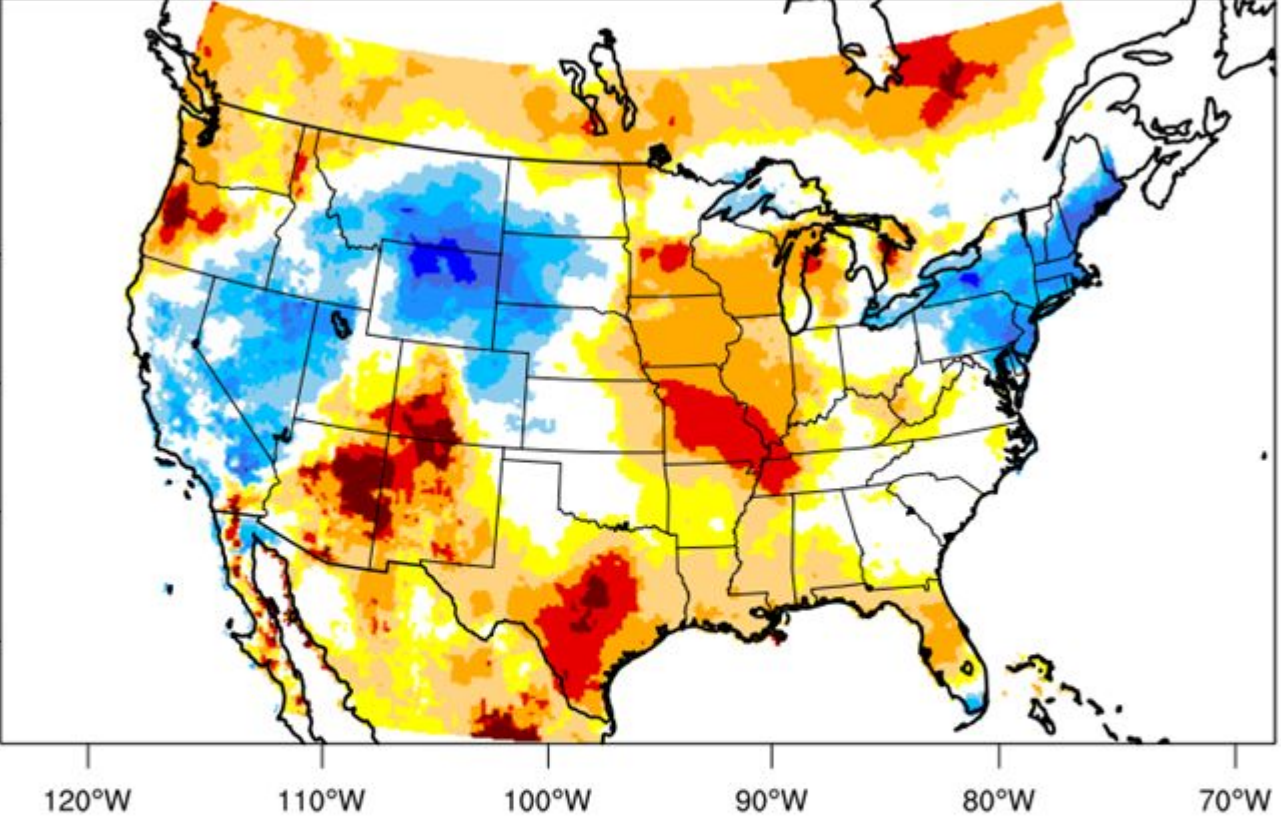
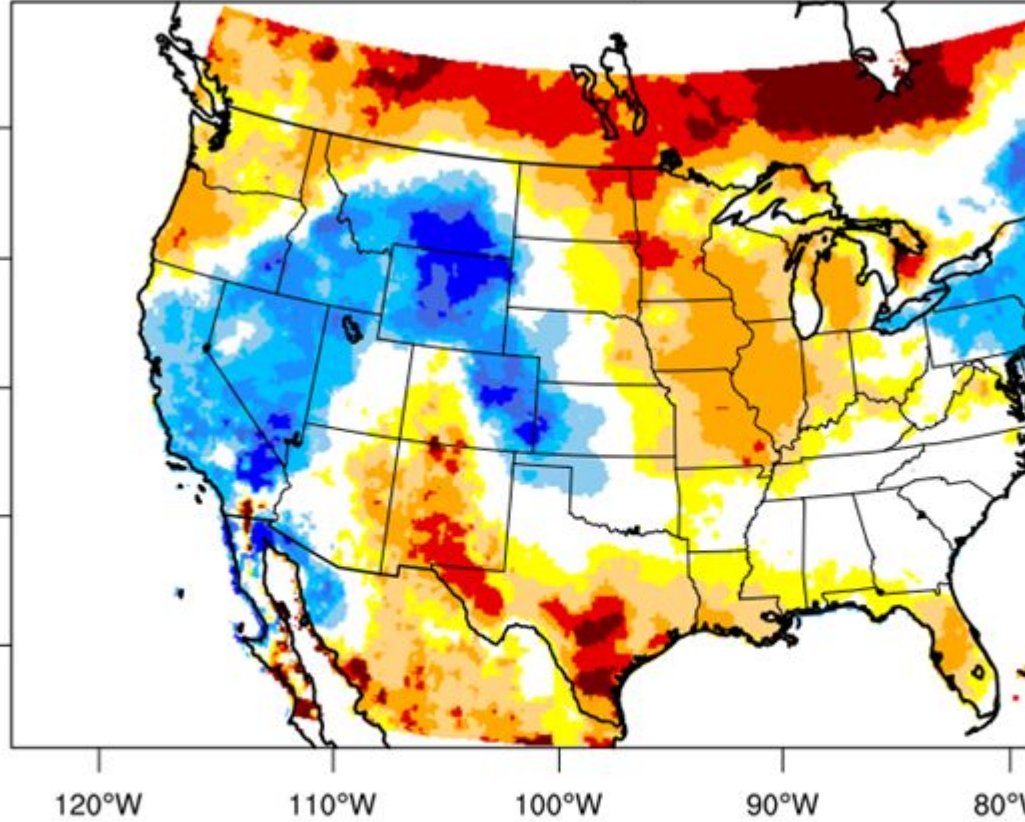
Source(s): UC Merced, via Climate Engine
 Data Valid: 07/04/23

Drought.gov

Evaporative Demand Drought Index

1-month EDDI categories for July 6, 2023

2-week EDDI categories for July 6, 2023



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

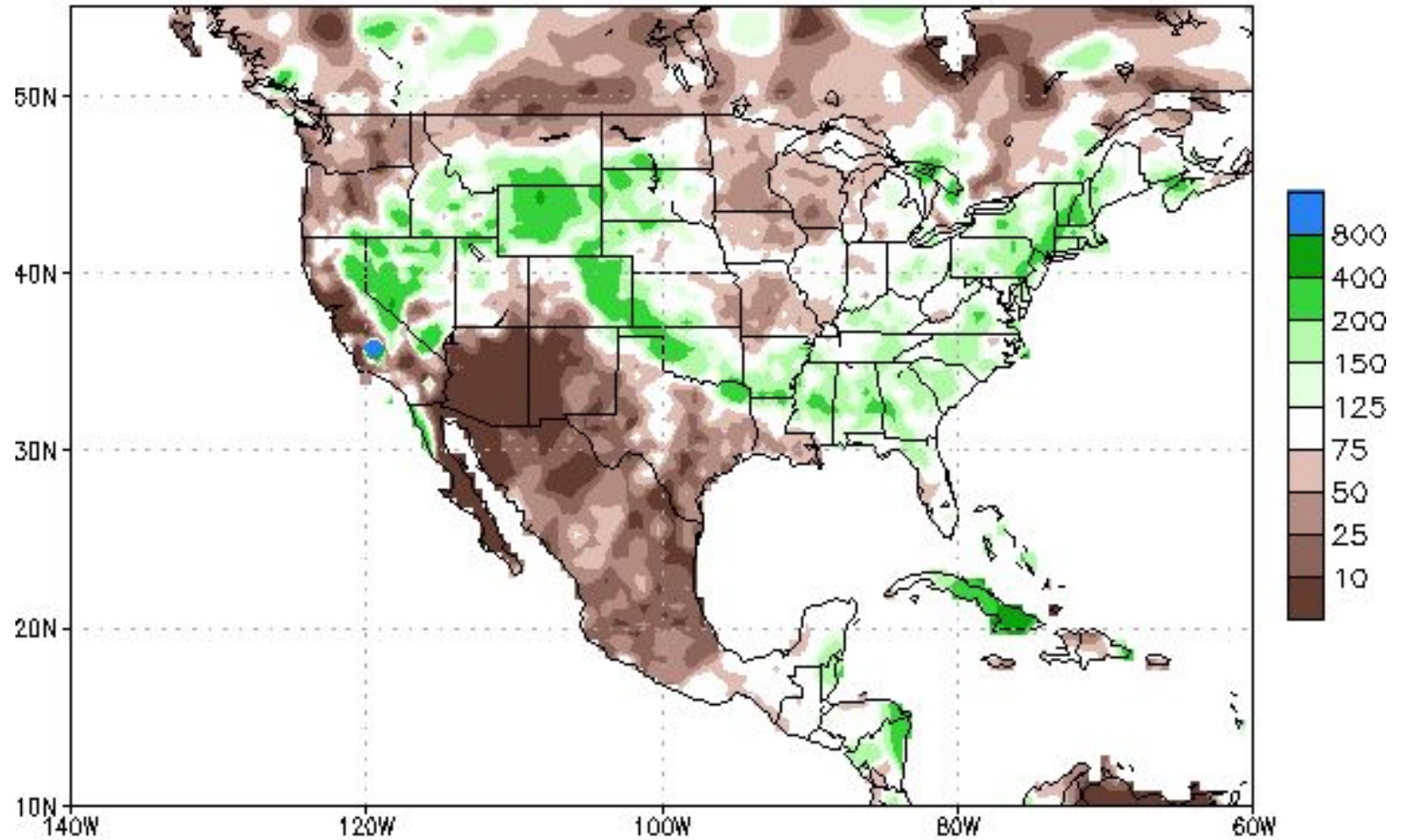
Monsoon Update

The expected delayed fuse for the monsoon has been the case. Even the core of the monsoon in western Mexico has experienced below normal precipitation.

Signs of the monsoon circulation organizing are on the horizon, but underwhelming southwest U.S. precipitation remains the July/August outlook.

Not expecting the string of wet seasons dating back to last summer to continue through this summer season, but late July push of moisture may help rebound the lack of a monsoon so far.

30-day Accumulated Prop % of Normal 11JUN2023-10JUL2023

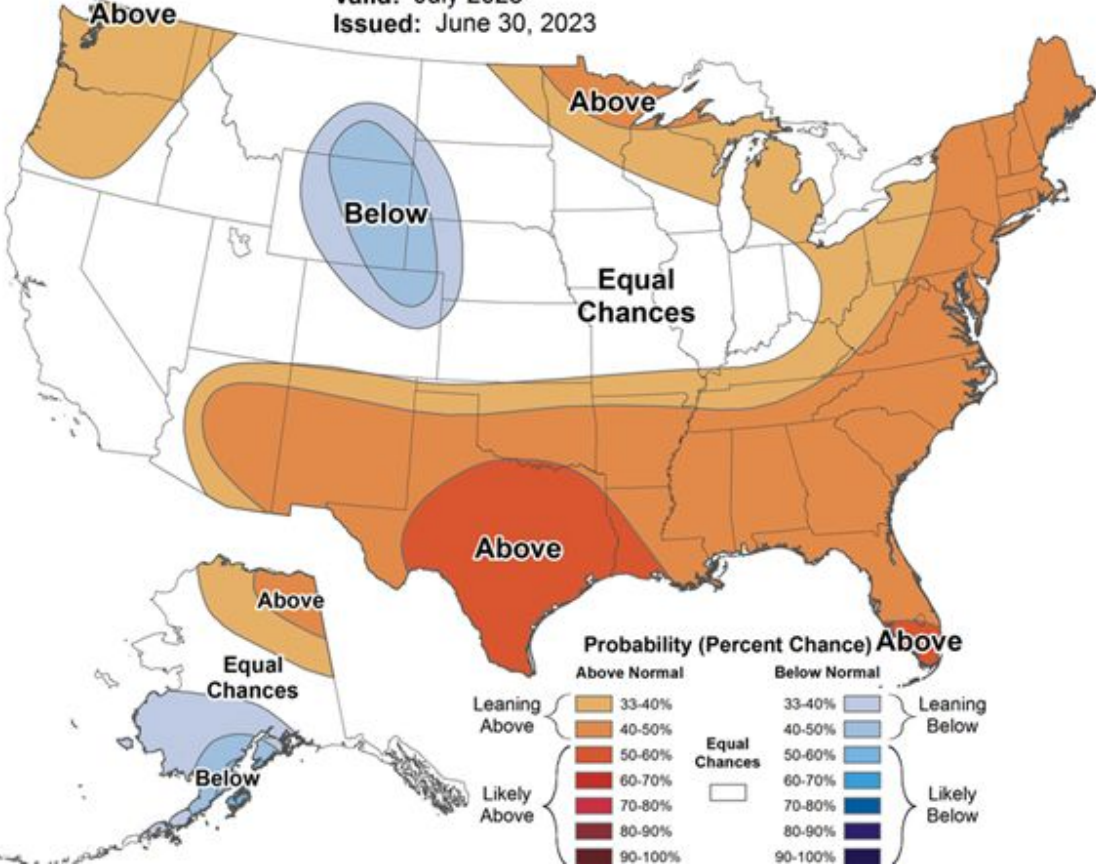


Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis Climatology (1991-2020)

CPC July Outlook

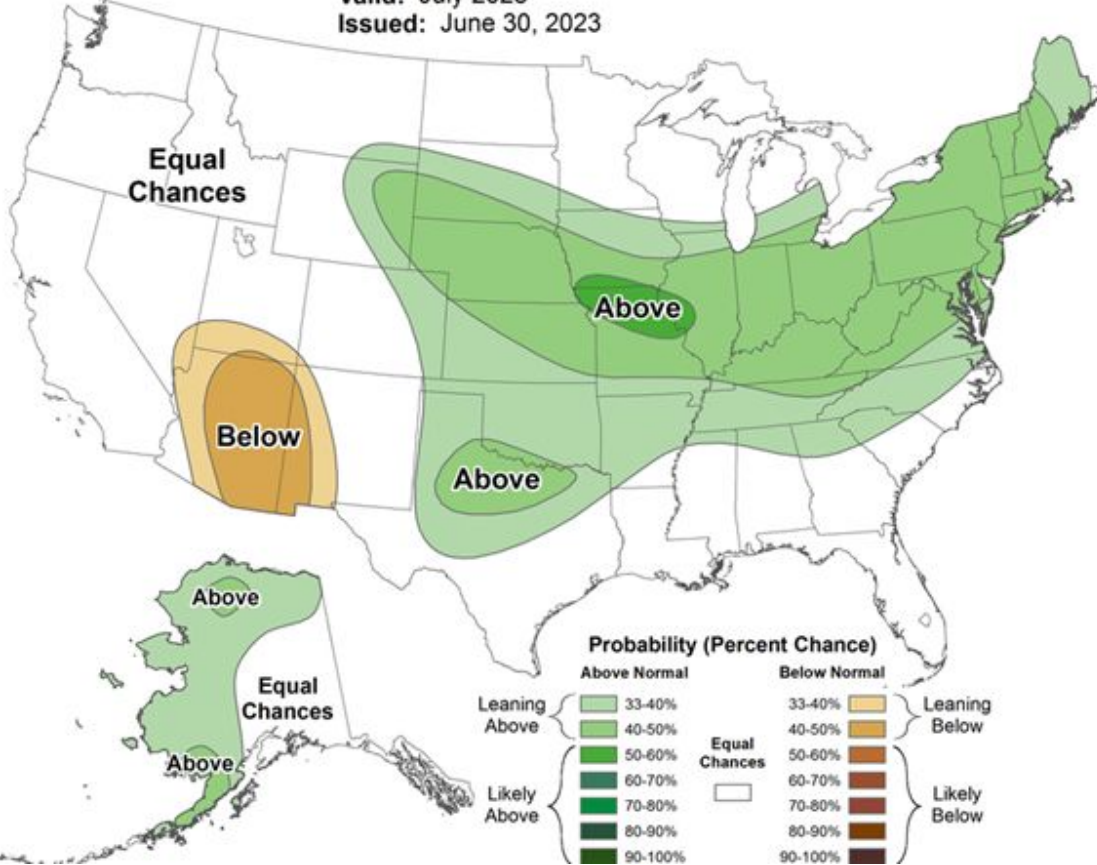
Monthly Temperature Outlook

Valid: July 2023
 Issued: June 30, 2023

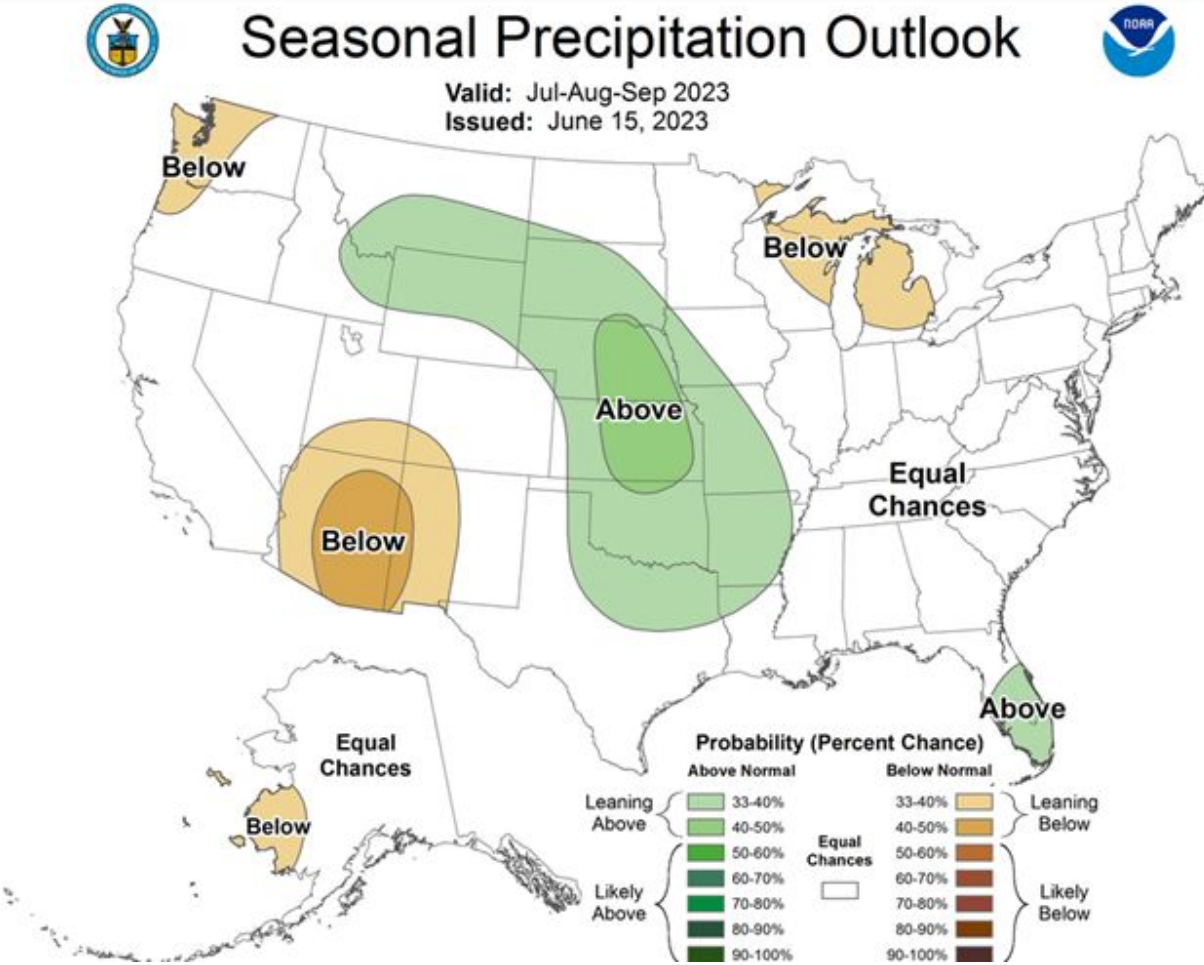
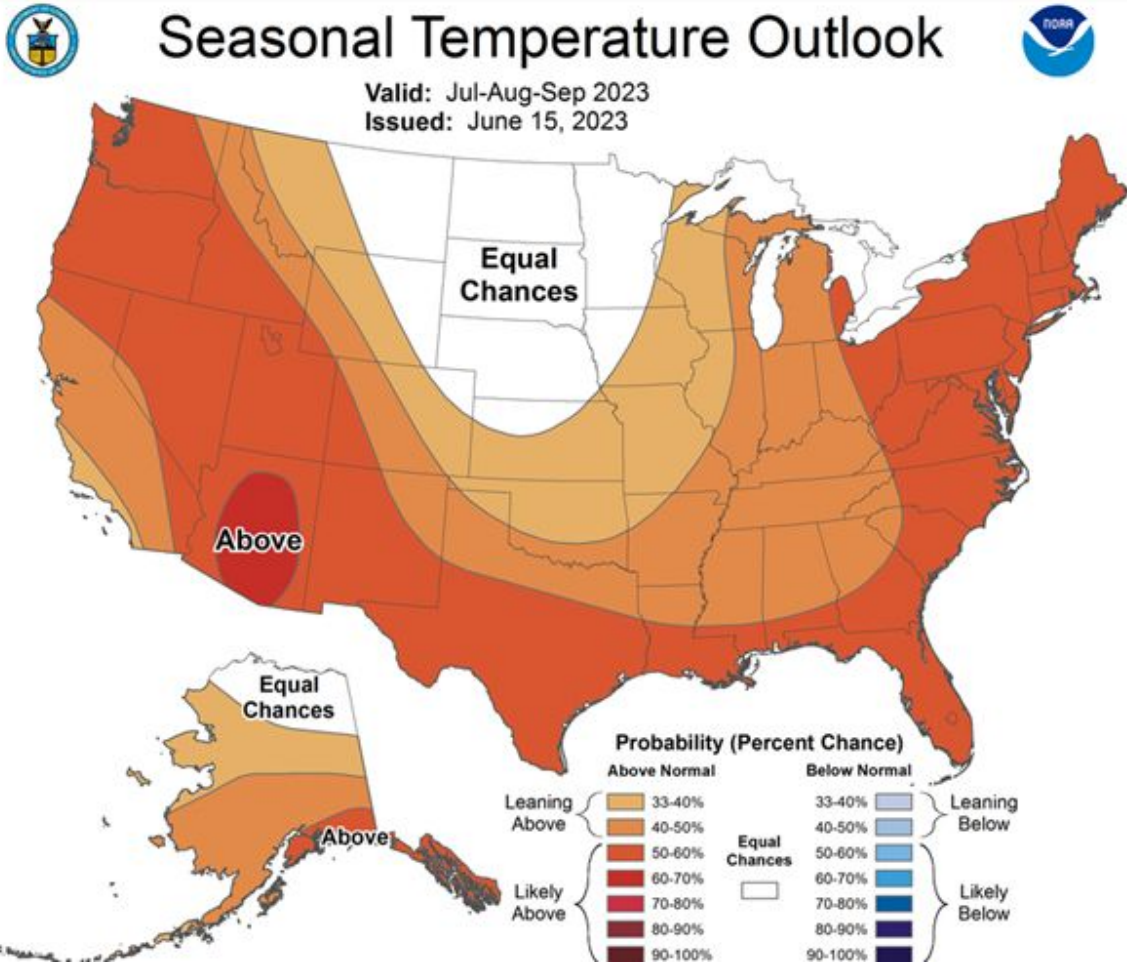


Monthly Precipitation Outlook

Valid: July 2023
 Issued: June 30, 2023



CPC July-August-Sept Outlook



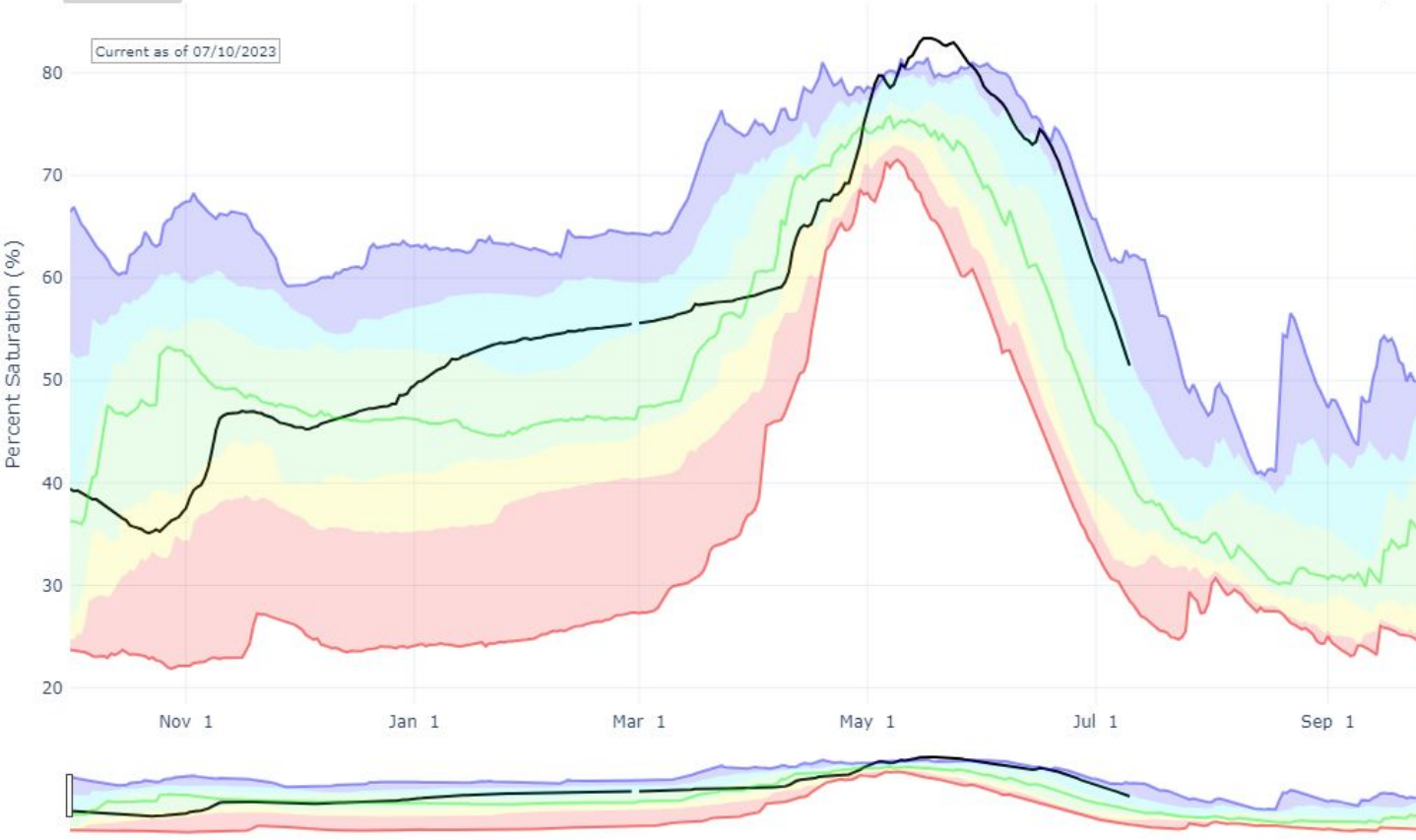
Soil Moisture

DEPTH AVERAGED SOIL SATURATION IN STATE OF UTAH

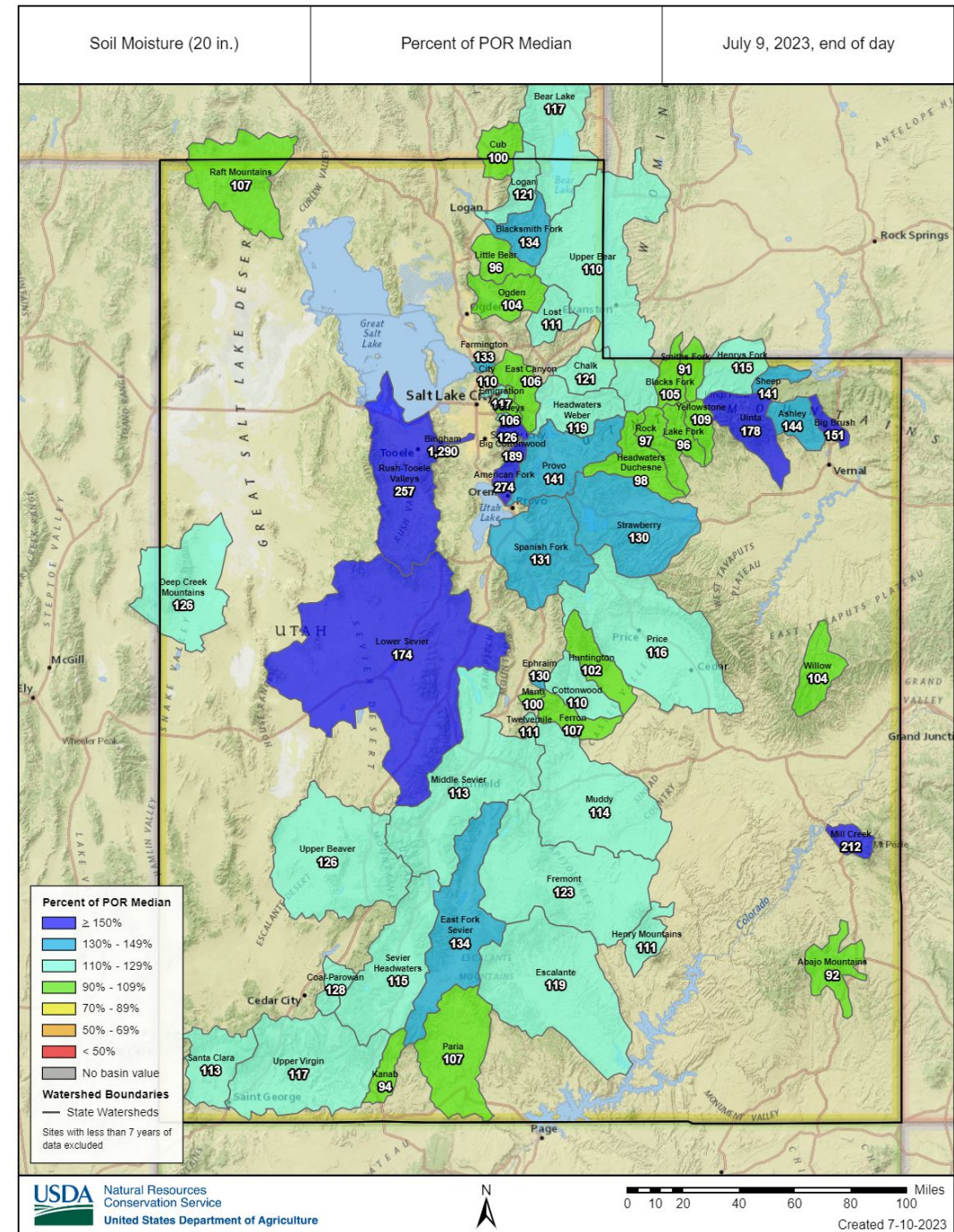
Reset Range

[Link to data: CSV / JSOI](#)

Current as of 07/10/2023

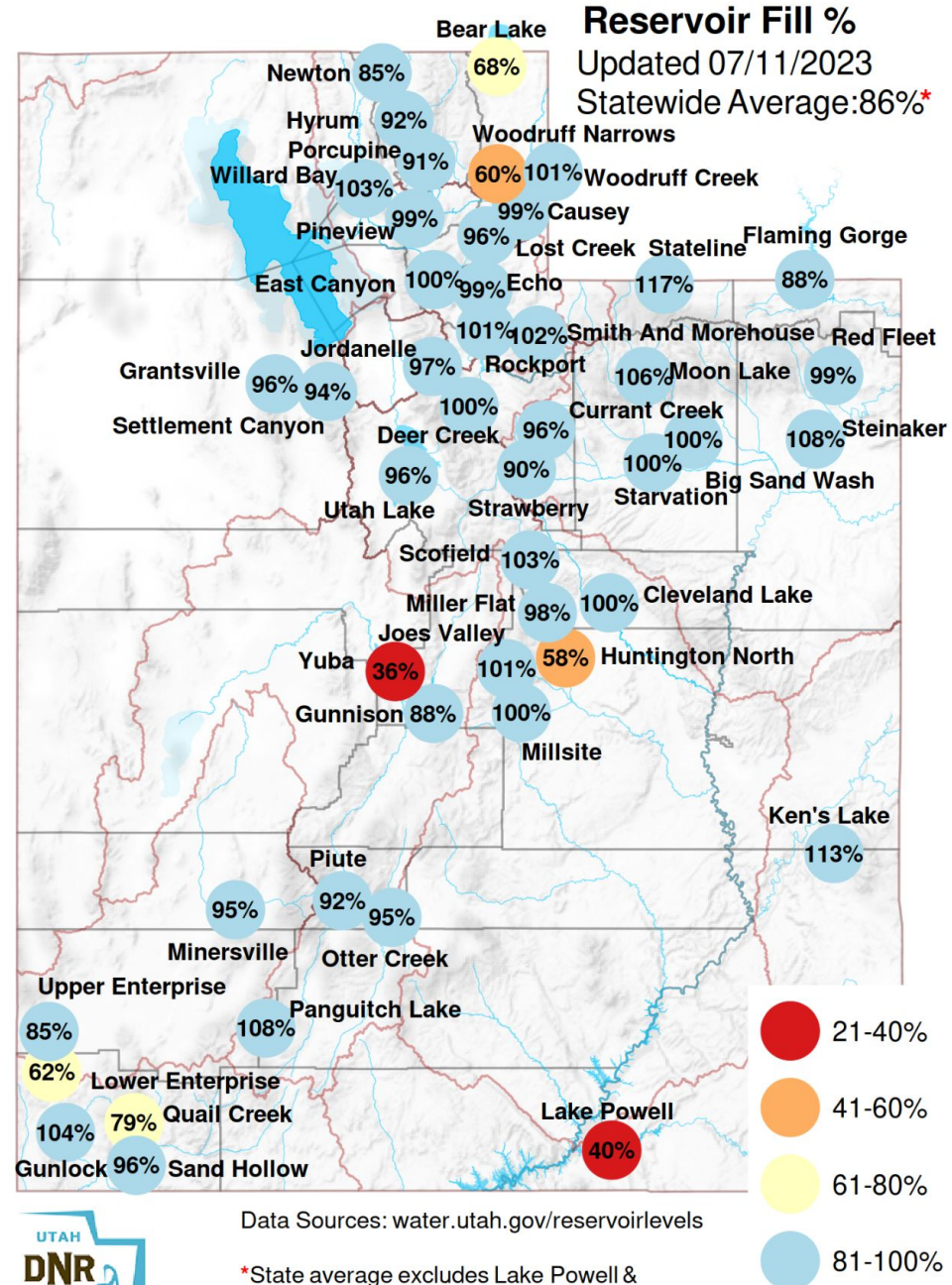


Agency - NRCS Snow Survey
 Presenter - Jordan Clayton



Reservoir Levels

Yuba Lake spillway under construction
 Lowest other reservoir at 58%
 Only four reservoirs below 80%



Data Sources: water.utah.gov/reservoirlevels

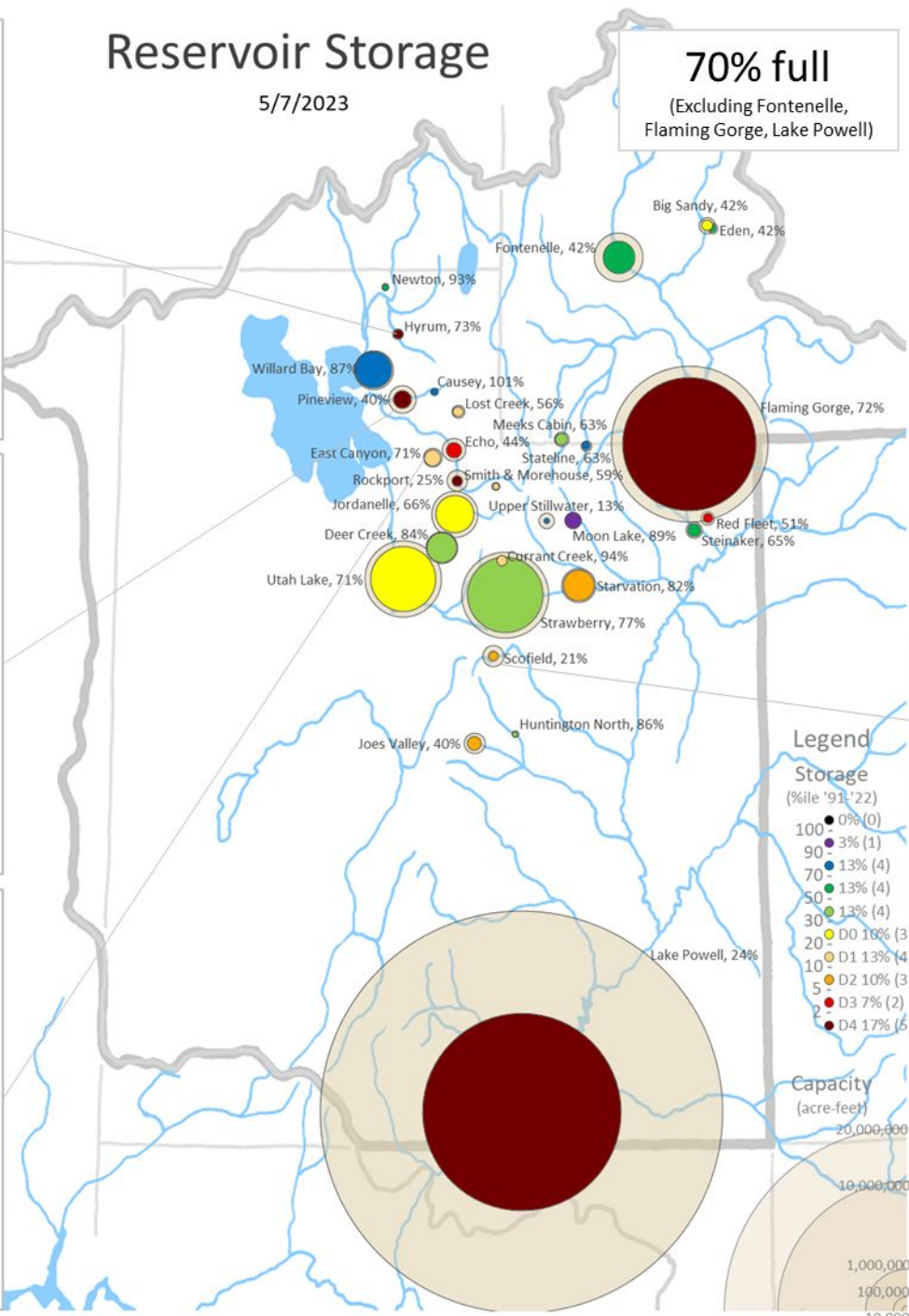
*State average excludes Lake Powell & Flaming Gorge to better represent the state's water supply.

Total capacity including these is 53%

Reservoir Storage

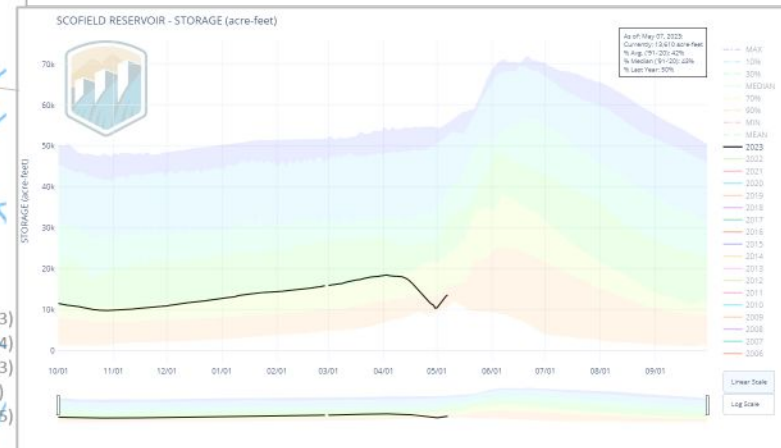
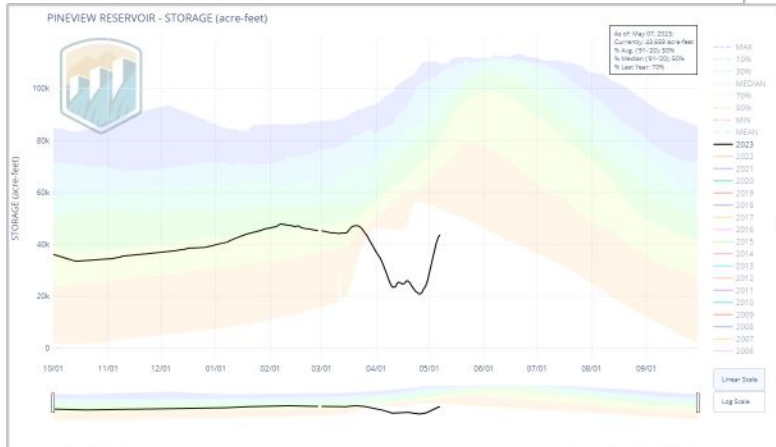
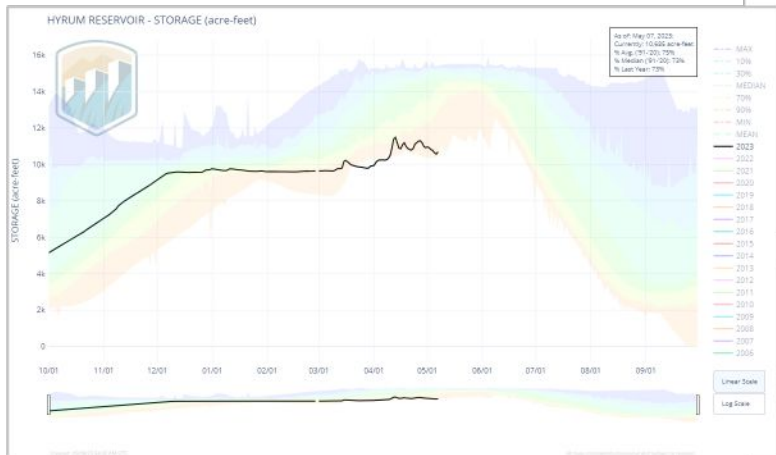
5/7/2023

70% full
(Excluding Fontenelle, Flaming Gorge, Lake Powell)



Since last meeting:

- 10's of thousands of acre-feet released from reservoirs.
- High runoff inflows into lower elevation reservoirs.
- Rain-on-snow concerns for low elevation reservoirs?



Legend

- Storage (%ile '91-'22)
- 0% (0)
 - 3% (1)
 - 13% (4)
 - 30% (4)
 - 50% (10)
 - 70% (20)
 - 100% (3)
- Capacity (acre-feet)
- D0 10% (3)
 - D1 13% (4)
 - D2 10% (3)
 - D3 7% (2)
 - D4 1.7% (5)

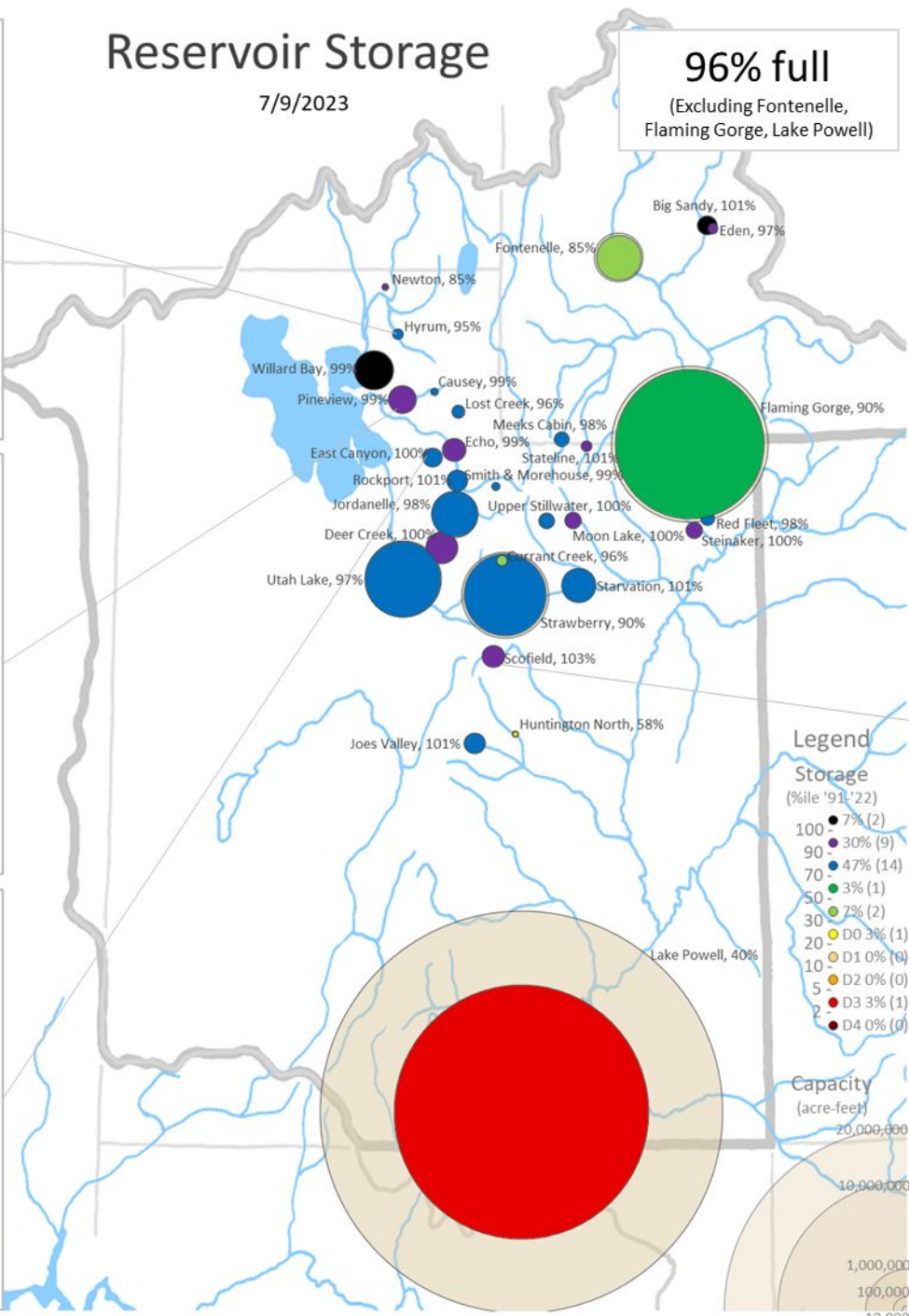


BUREAU OF RECLAMATION

Reservoir Storage

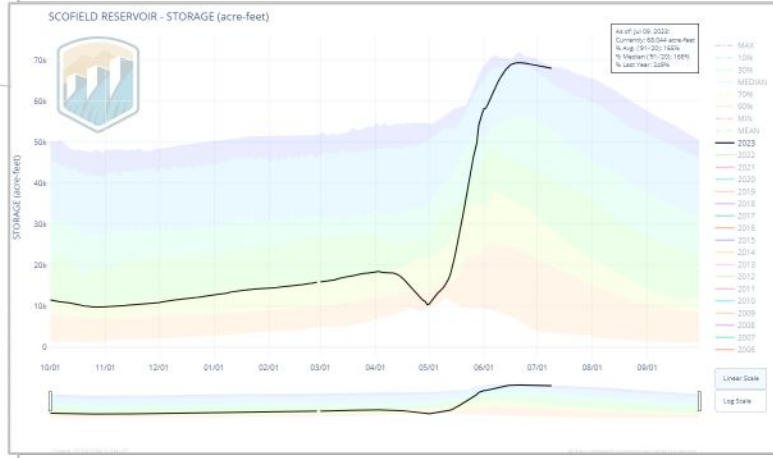
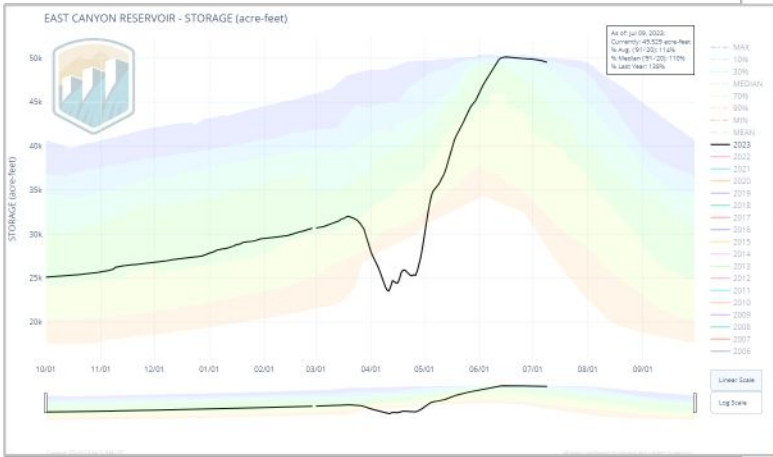
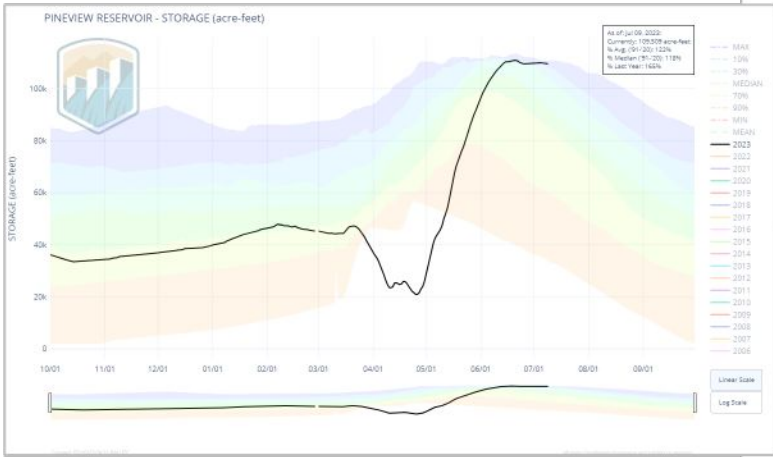
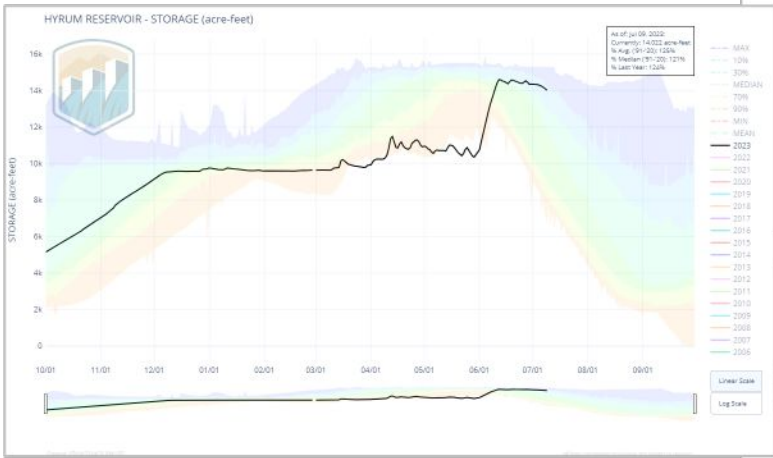
7/9/2023

96% full
(Excluding Fontenelle, Flaming Gorge, Lake Powell)

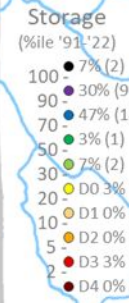


Since last meeting:

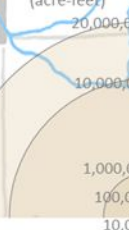
- Had to deal with high inflows in places through June
- All reservoir up to ~300,000 acre-feet filled.
- We are now in good shape.



Legend

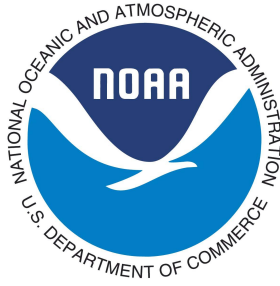


Capacity (acre-feet)



BUREAU OF RECLAMATION

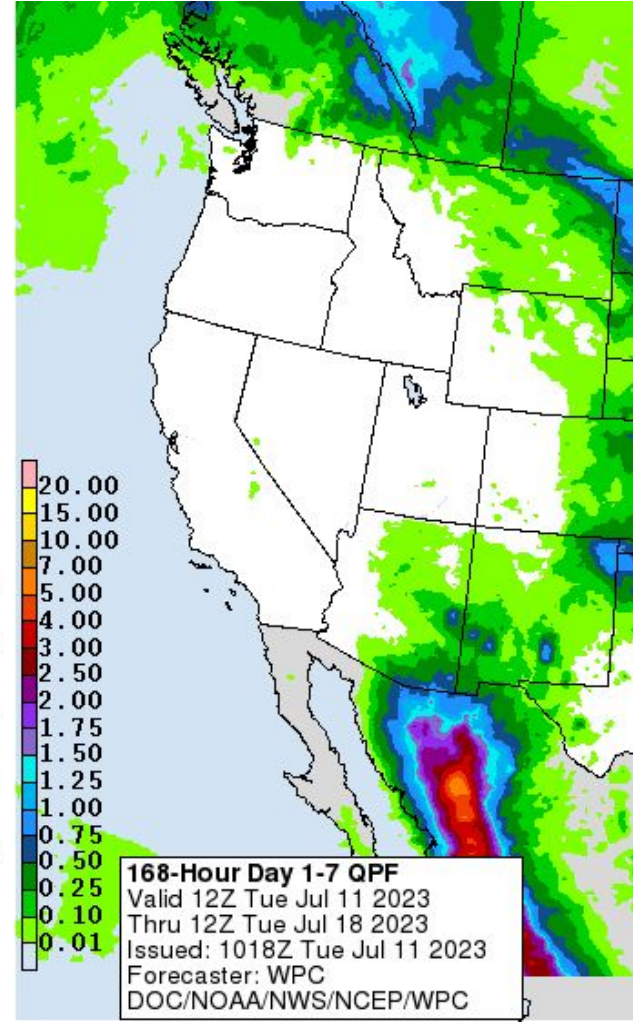
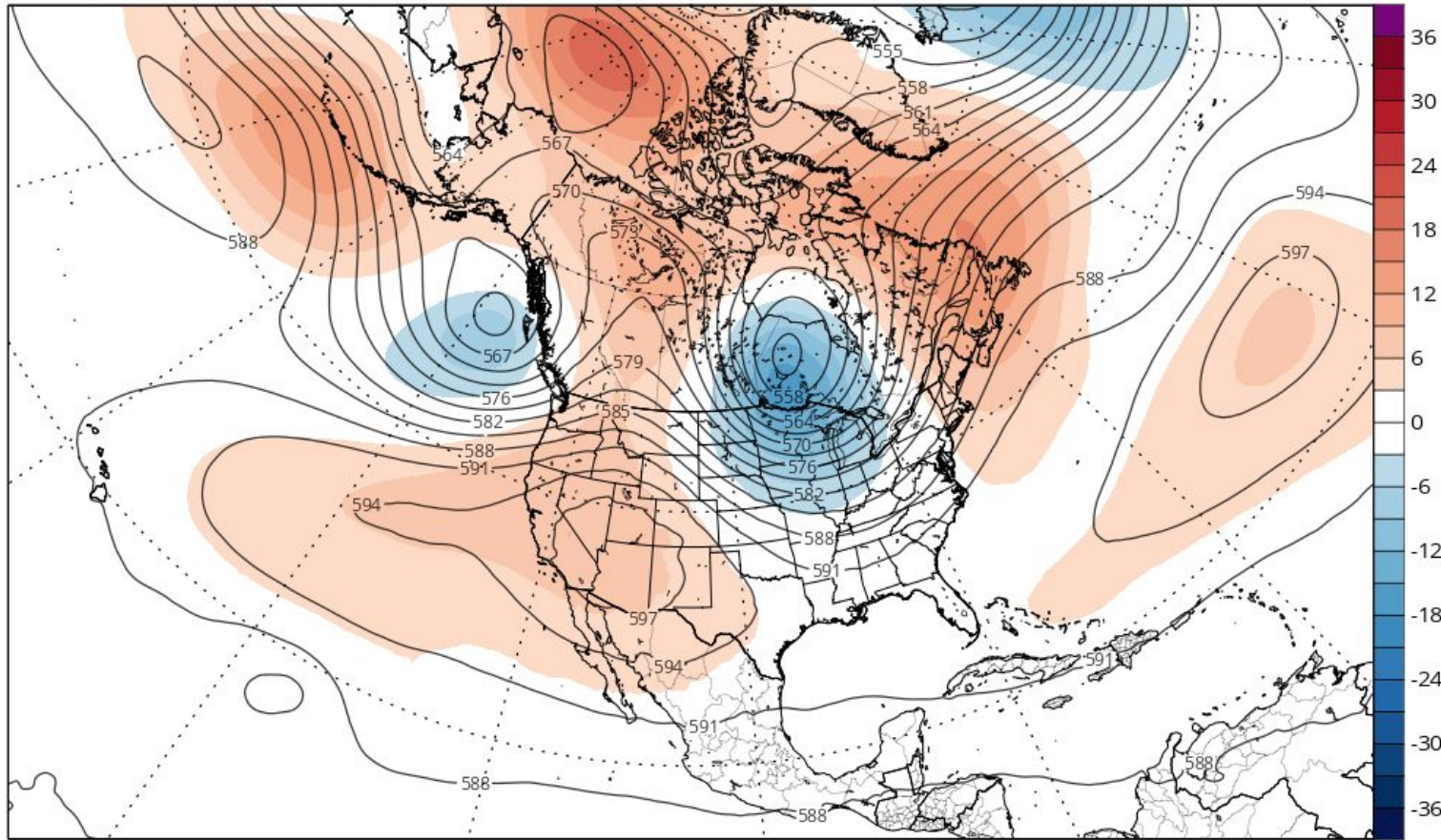
Weather Forecast Office Utah Day 1-7 Outlook



GEFS 500mb Geopotential Height & Anomaly (dam) (based on CFSR 1981-2010 Climatology)

Init: 06z Jul 11 2023 Forecast Hour: [138] valid at 00z Mon, Jul 17 2023

TROPICALTIDBITS.COM

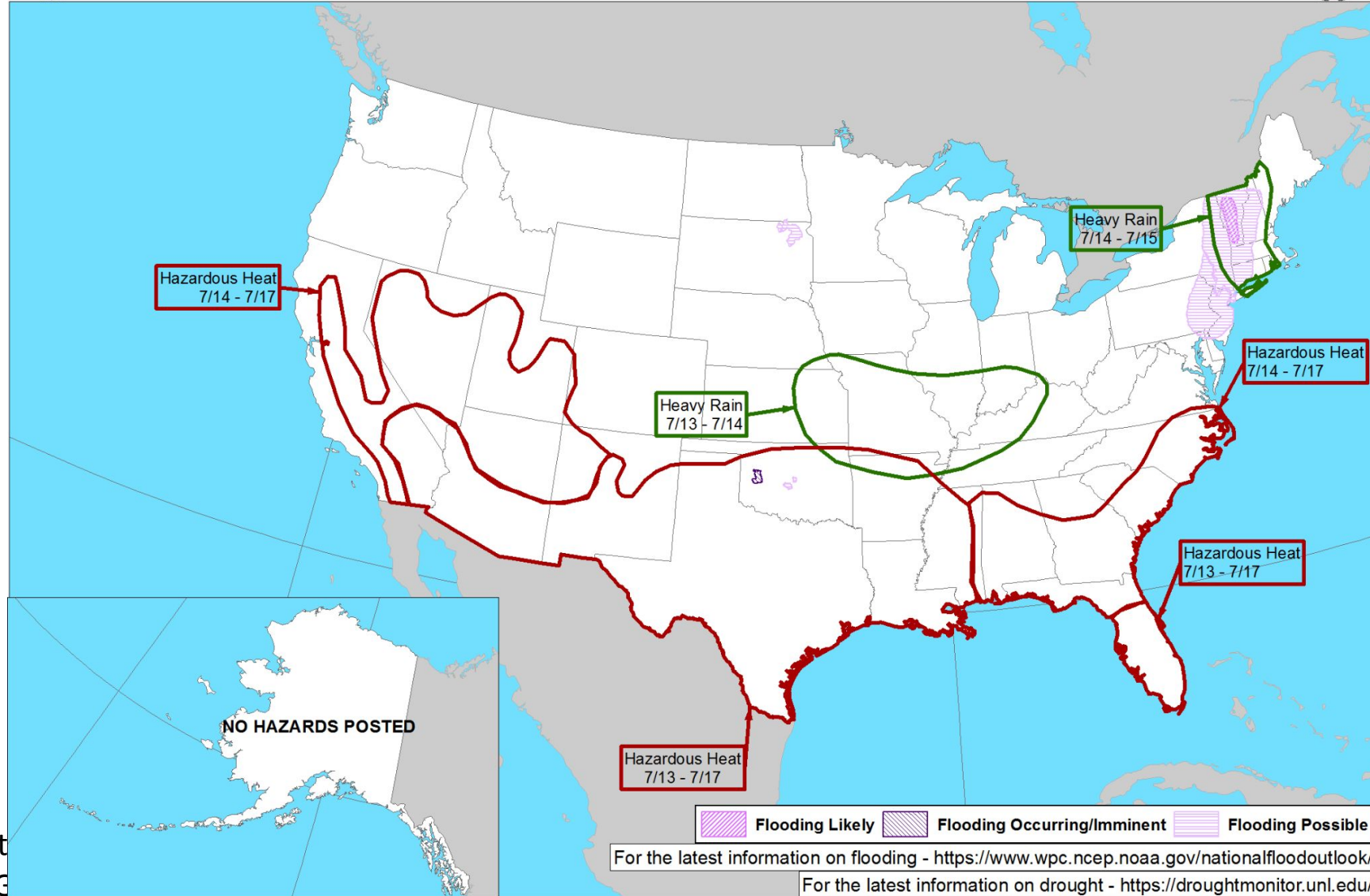


Agency - National Weather Service Weather Forecast Office
Presenter - Glen Merrill

Weather Prediction Center U.S. Day 3-7 Hazards Outlook



Day 3-7 U.S. Hazards Outlook
Valid: 07/13/2023-07/17/2023



Agency - Nat
Presenter - G

Weather Prediction Center

Follow us:

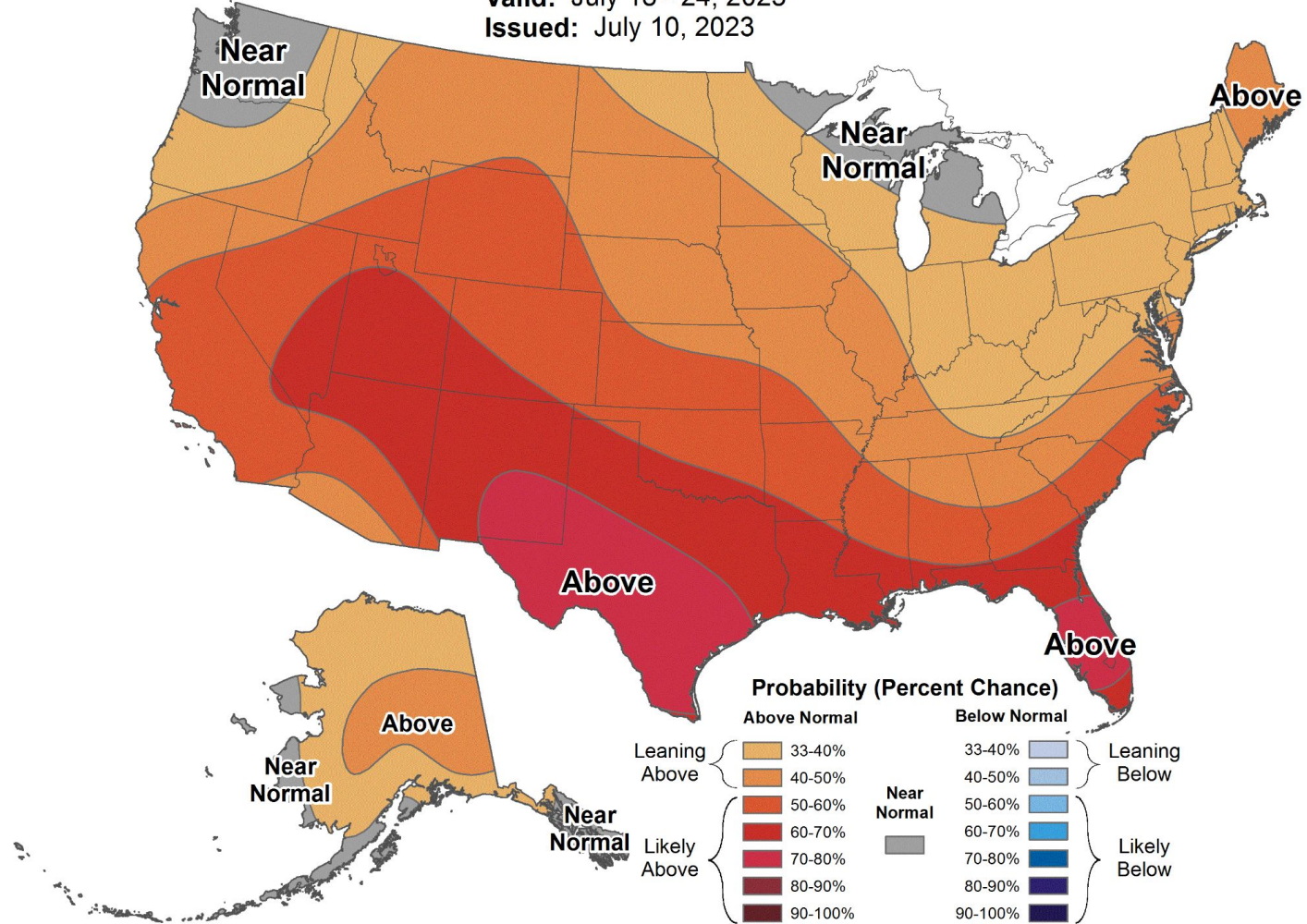
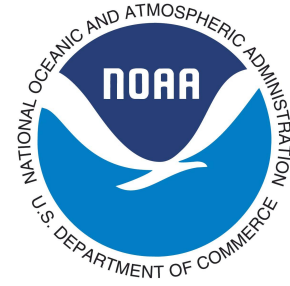
Climate Prediction Center 8 to 14 Day Outlooks - Temperature



8-14 Day Temperature Outlook



Valid: July 18 - 24, 2023
Issued: July 10, 2023



Agency - National Weather Service Weather Forecast Office

Presenter - Glen Merrill

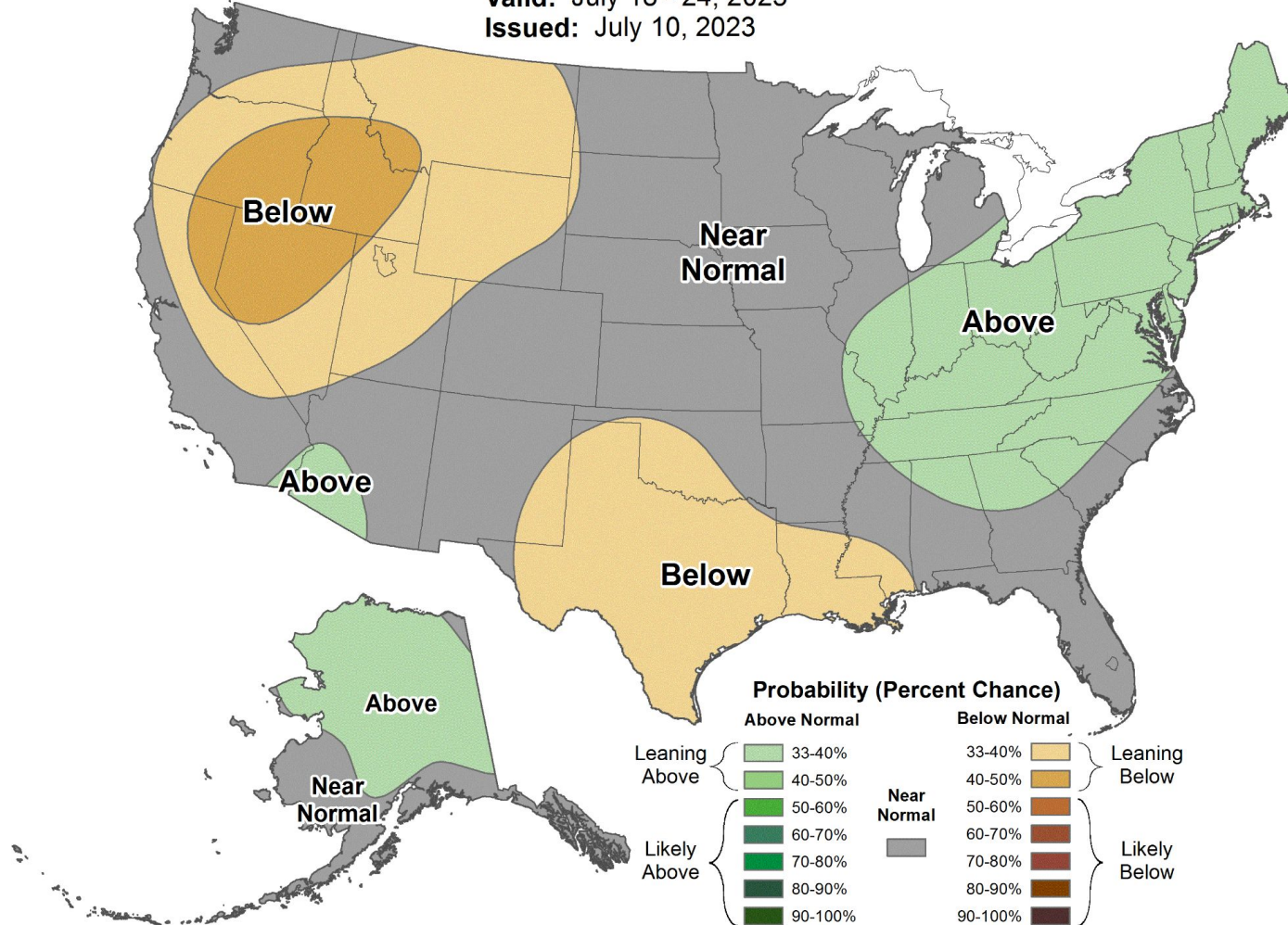
Climate Prediction Center 8 to 14 Day Outlooks - Precipitation



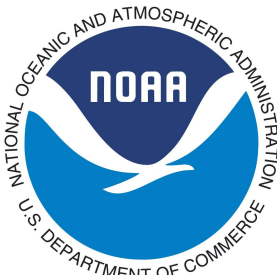
8-14 Day Precipitation Outlook



Valid: July 18 - 24, 2023
Issued: July 10, 2023



Climate Prediction Center U.S. Week-2 Hazards Outlook



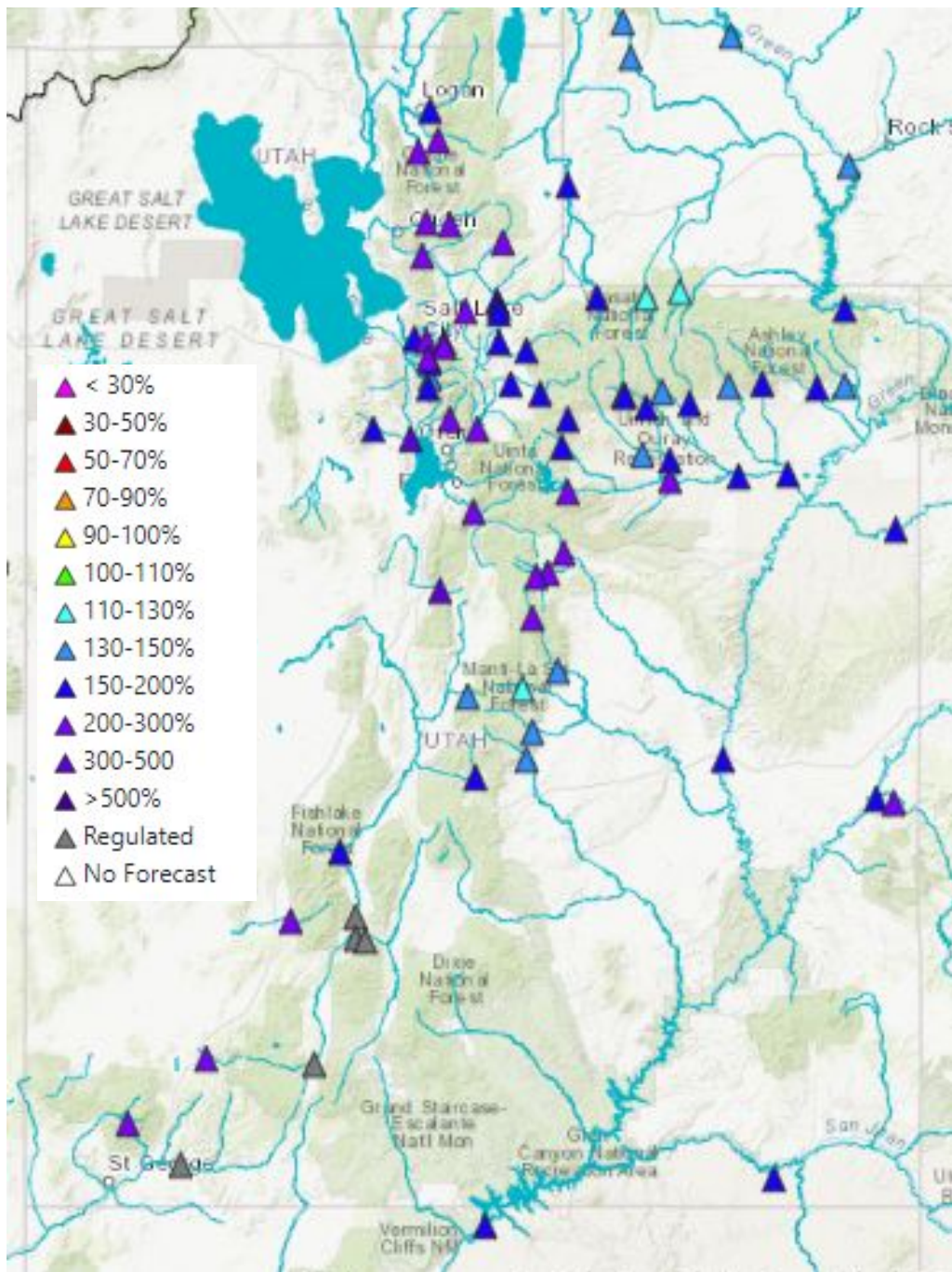
Day 8-14 U.S. Hazards Outlook
Valid: 07/18/2023-07/24/2023



Climate Prediction Center
Made: 07/10/2023 3PM EDT

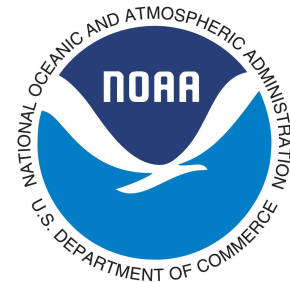
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www.cpc.ncep.noaa.gov

Agency - National Weather Service Weather Forecast Office
Presenter - Glen Merrill



As the runoff season concludes, forecasted values are very close to provisional observed values. Most points saw flows in excess of 150% of average.

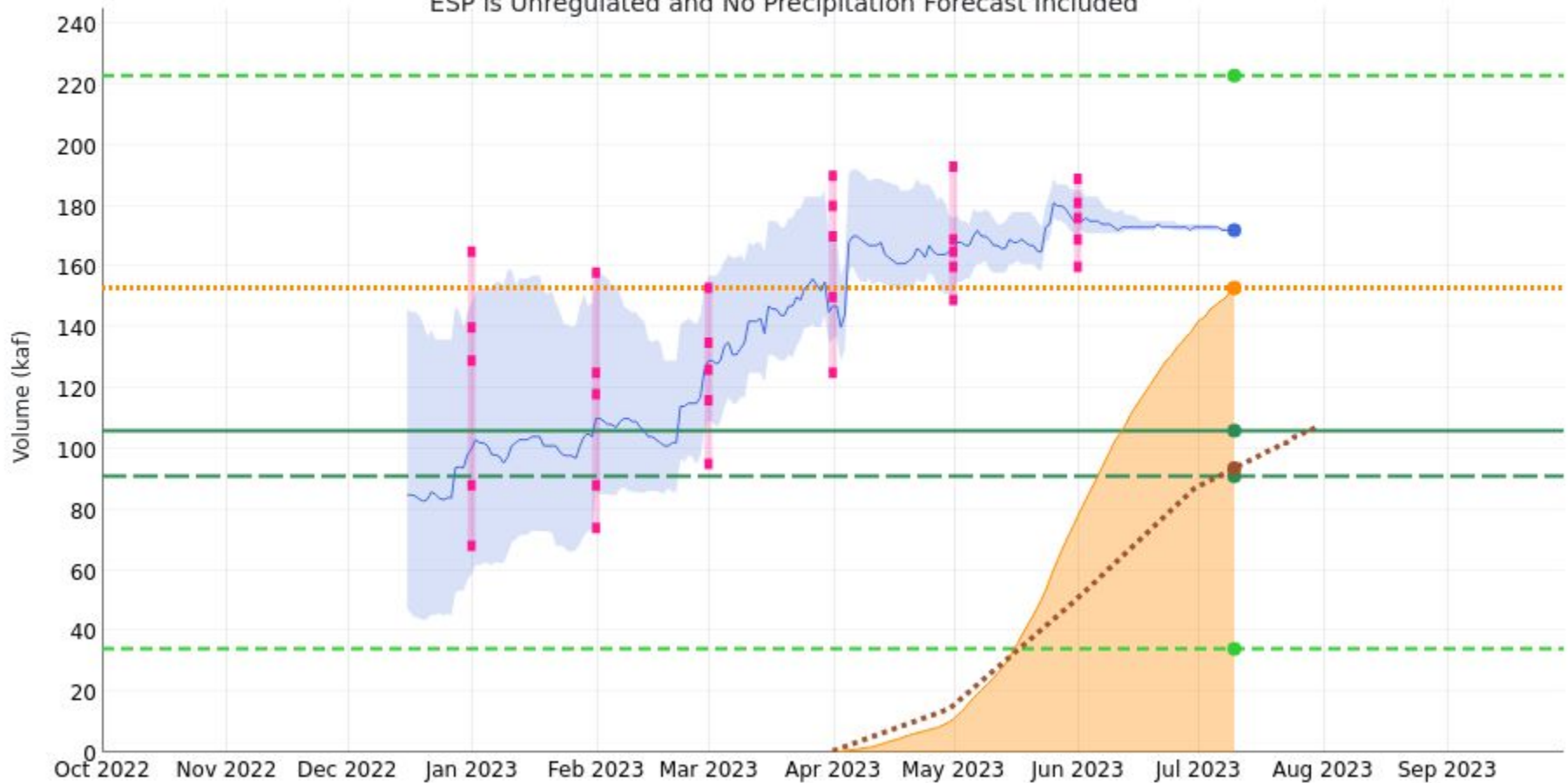
Additionally, over the past weeks, many flows have been receding as snowpack amounts diminished and uses increased.



Logan - Logan, Nr, State Dam, Abv (LGNU1)

Period: Apr-Jul, Official 50% Forecast (2023-06-01): 176 kaf (166% Average, 193% Median)

ESP is Unregulated and No Precipitation Forecast Included



2023/07/10:

Max 1986: 222.92

Min 1977: 34.12

Average: 106

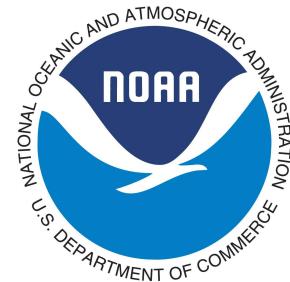
Median: 91

Observed Accumulation: 153

Observed Total: 153

Normal Accumulation: 93.6

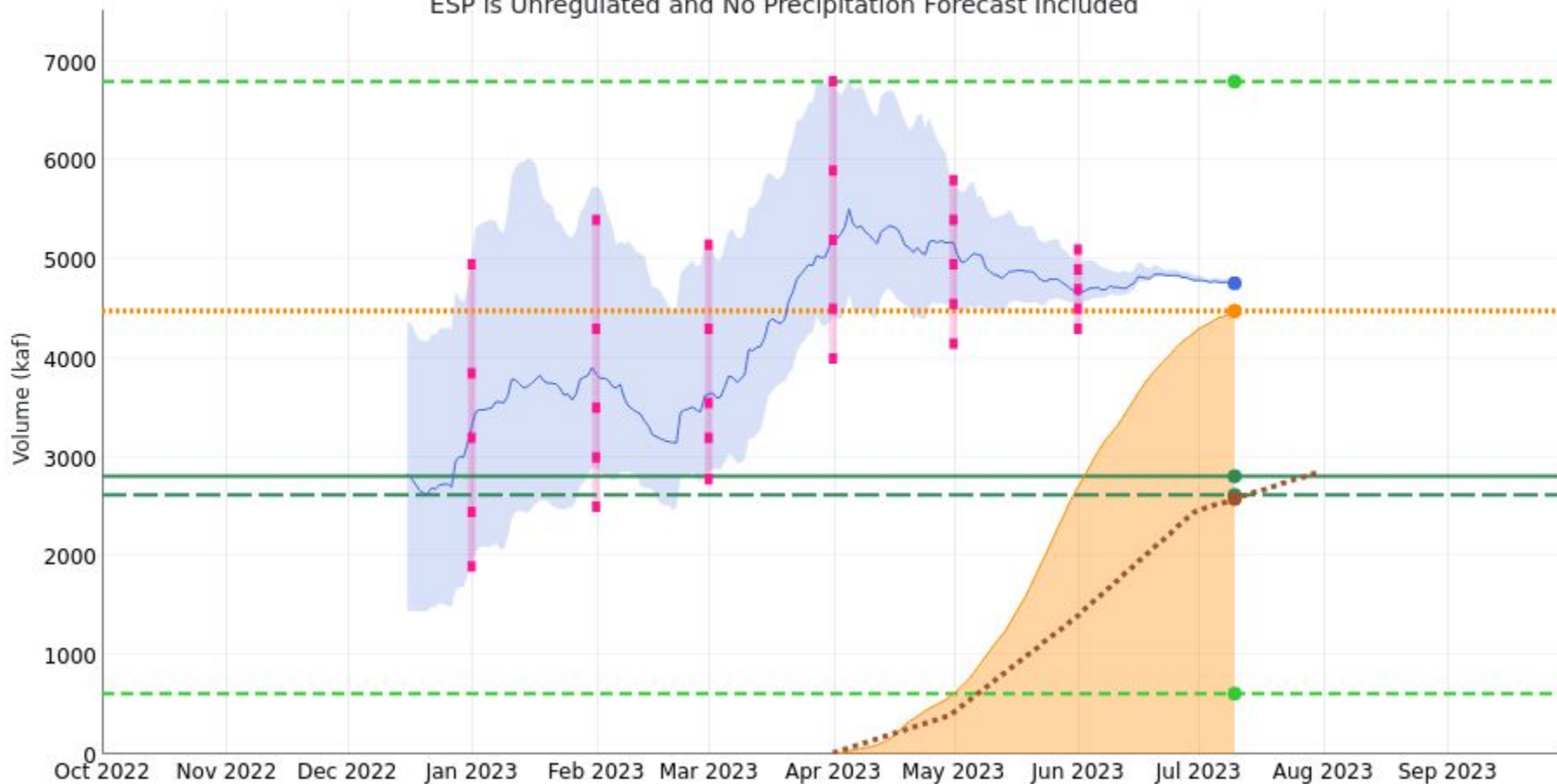
ESP: 172



Green - Green River, Ut (GRVU1)

Period: Apr-Jul, Official 50% Forecast (2023-06-01): 4700 kaf (167% Average, 179% Median)

ESP is Unregulated and No Precipitation Forecast Included



2023/07/10:

Max 1917: 6798.76

Min 1934: 613.7

Average: 2810

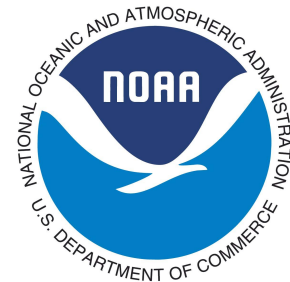
Median: 2620

Observed Accumulation: 4480

Observed Total: 4480

Normal Accumulation: 2580

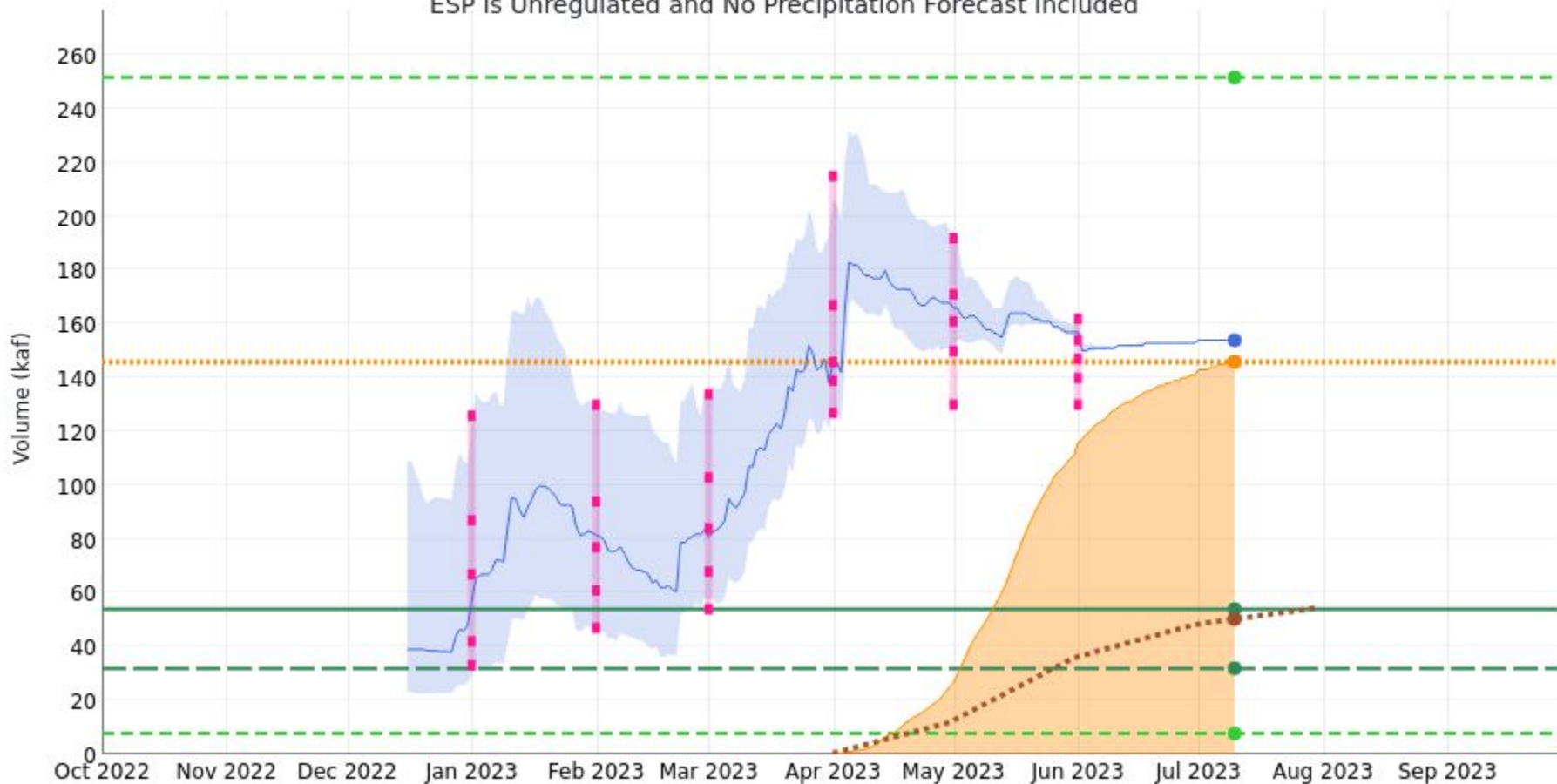
ESP: 4760



Spanish Fork - Castilla, Nr (CASU1)

Period: Apr-Jul, Official 50% Forecast (2023-06-01): 147 kaf (272% Average, 459% Median)

ESP is Unregulated and No Precipitation Forecast Included



2023/07/10:

Max 1984: 251.76

Min 2002: 7.72

Average: 54

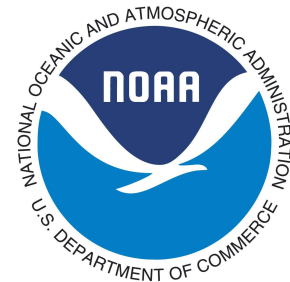
Median: 32

Observed Accumulation: 146

Observed Total: 146

Normal Accumulation: 50.3

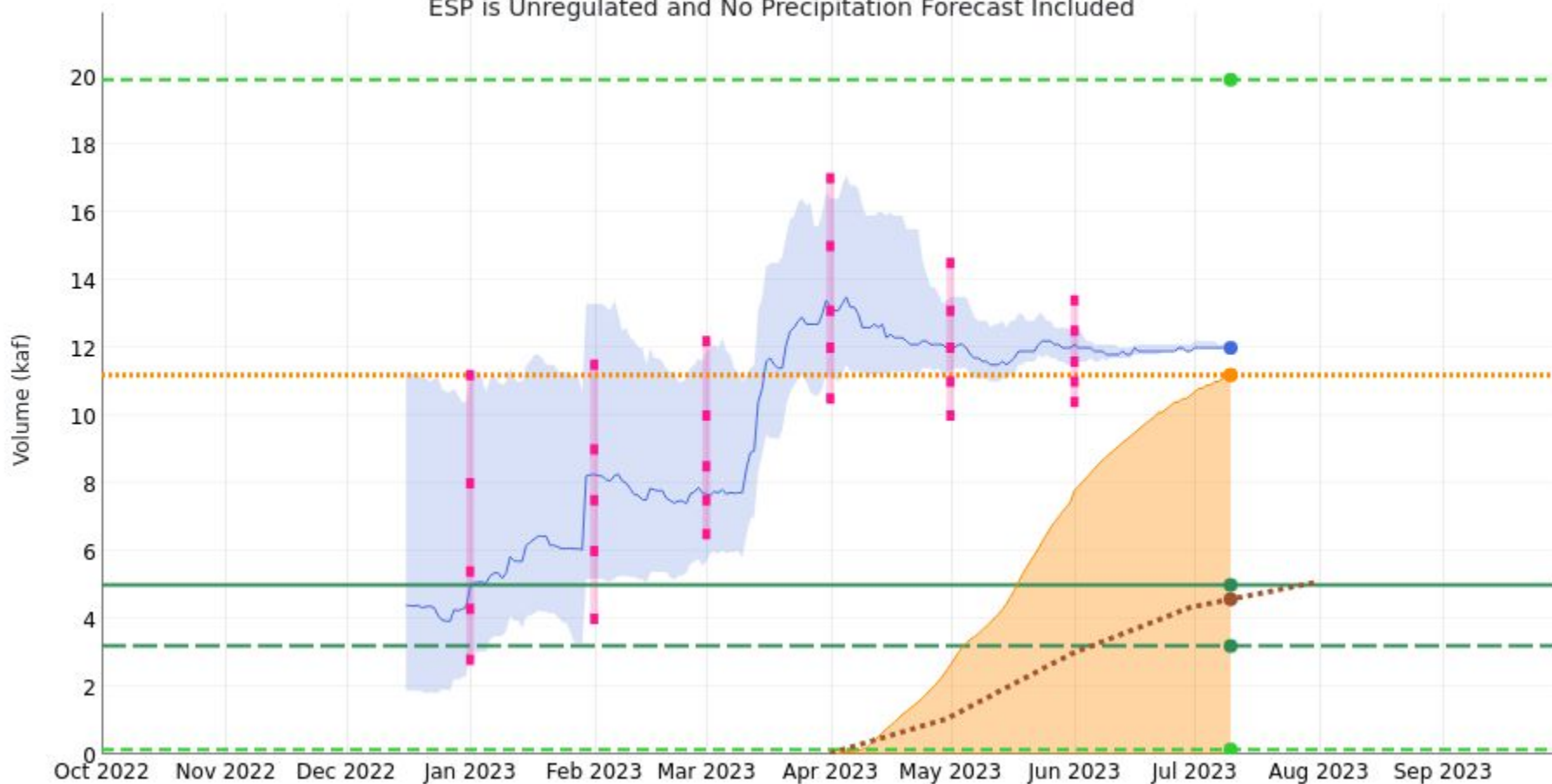
ESP: 154



Santa Clara - Pine Valley, Nr (STCU1)

Period: Apr-Jul, Official 50% Forecast (2023-06-01): 11.6 kaf (232% Average, 362% Median)

ESP is Unregulated and No Precipitation Forecast Included



2023/07/10:

Max 2005: 19.91

Min 2002: 0.15

Average: 5

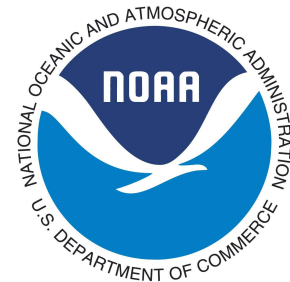
Median: 3.2

Observed Accumulation: 11.2

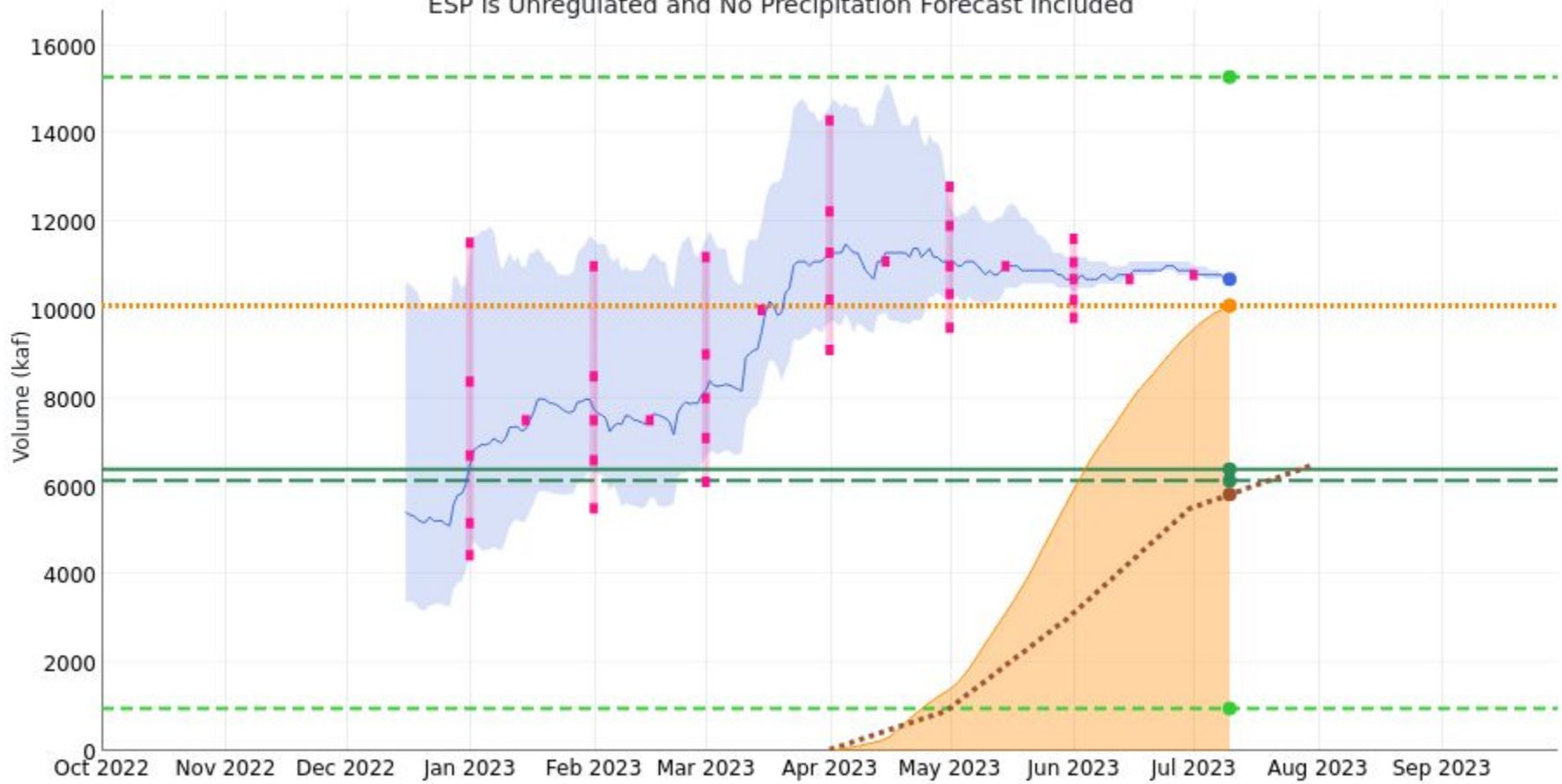
Observed Total: 11.2

Normal Accumulation: 4.58

ESP: 12



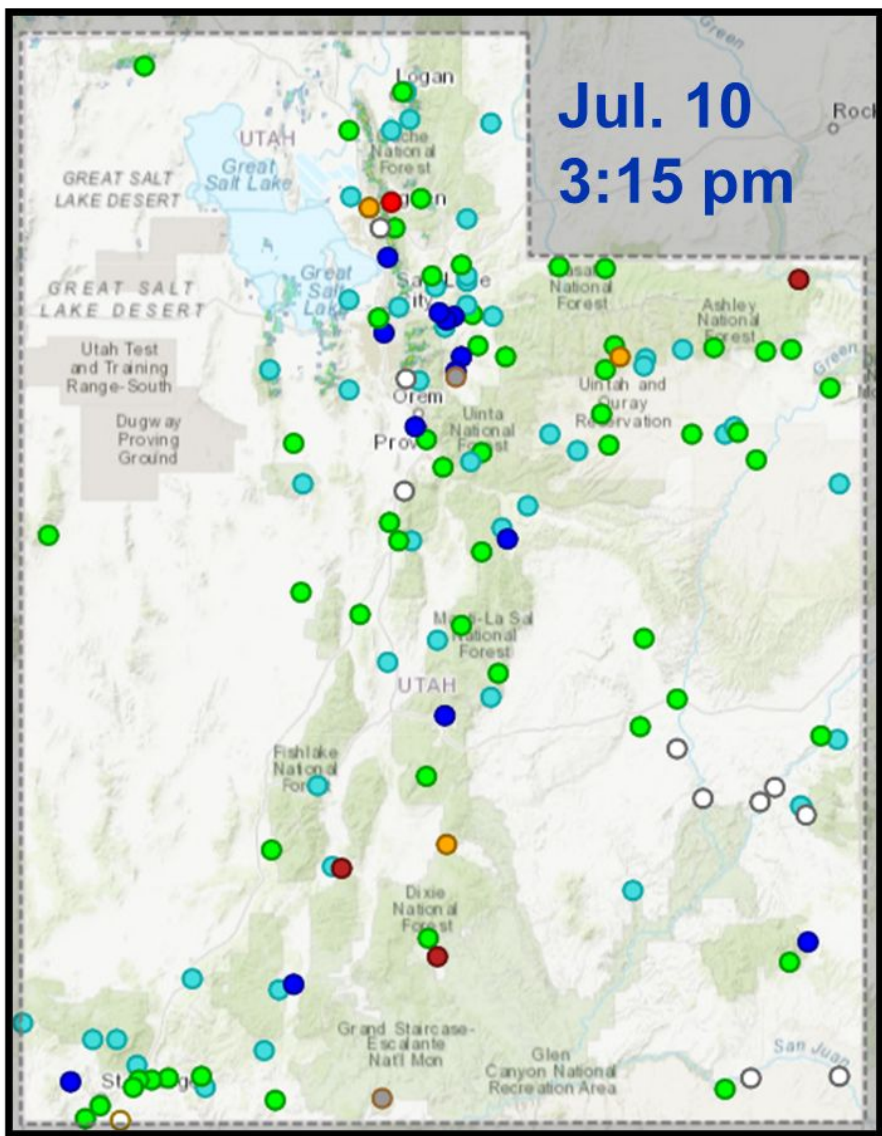
Colorado - Lake Powell, Glen Cyn Dam, At (GLDA3)
Period: Apr-Jul, Official 50% Forecast (2023-07-01): 10800 kaf (169% Average, 176% Median)
ESP is Unregulated and No Precipitation Forecast Included



2023/07/10:
Max 1984: 15285.64
Min 2002: 963.96
Average: 6390
Median: 6130
Observed Accumulation: 10100
Observed Total: 10100
Normal Accumulation: 5820
ESP: 10700

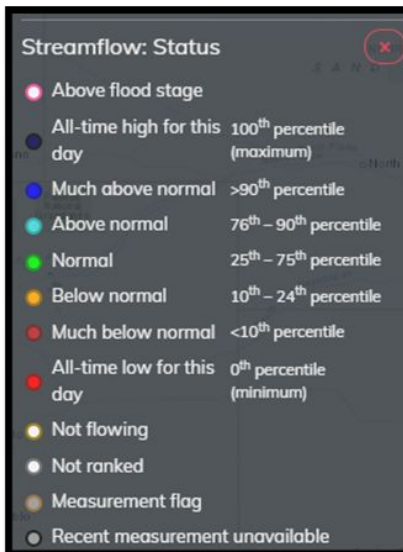
Current Streamflow Conditions

Jun. 6 Jul. 10



*Sites must have at least 10 years of streamflow record to be ranked on this graphic

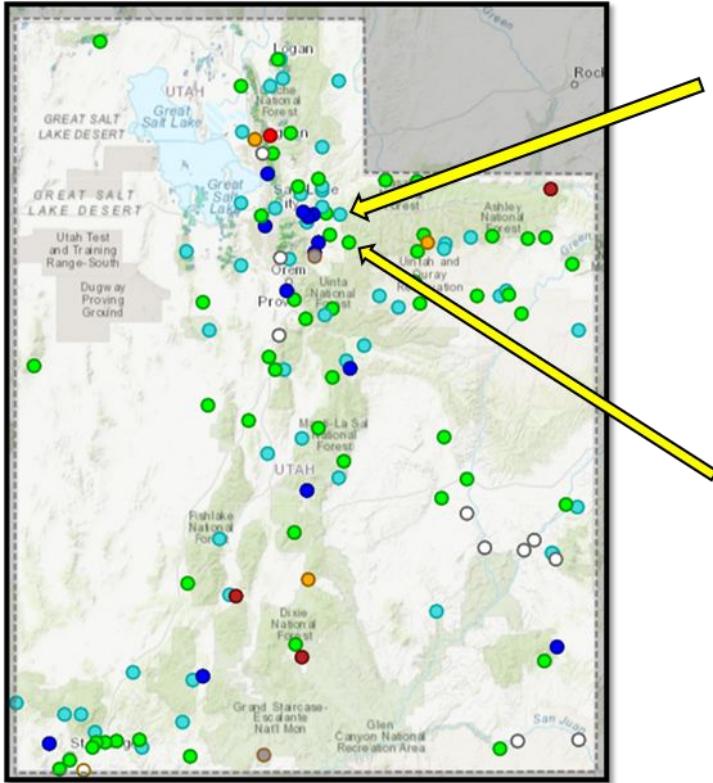
Day-of-Year Status	% Gages	% Gages
All-time high for this day-of-year	1.5%	0.7%
Much above normal for this day-of-year	21.2% █	9.5% █
Above normal for this day-of-year	39.4% █	36.5% █
Normal for this day-of-year	27.7% █	38.7% █
Below normal for this day-of-year	0.7%	2.2%
Much below normal for this day-of-year	0.7%	2.2%
All-time low for this day-of-year	0.0%	0.7%
Not ranked - insufficient record	7.3% █	7.3% █
Not ranked - no measurement	0.7%	1.5%
Not ranked - stream not flowing	0.7%	0.7%



Provisional data, subject to revision.

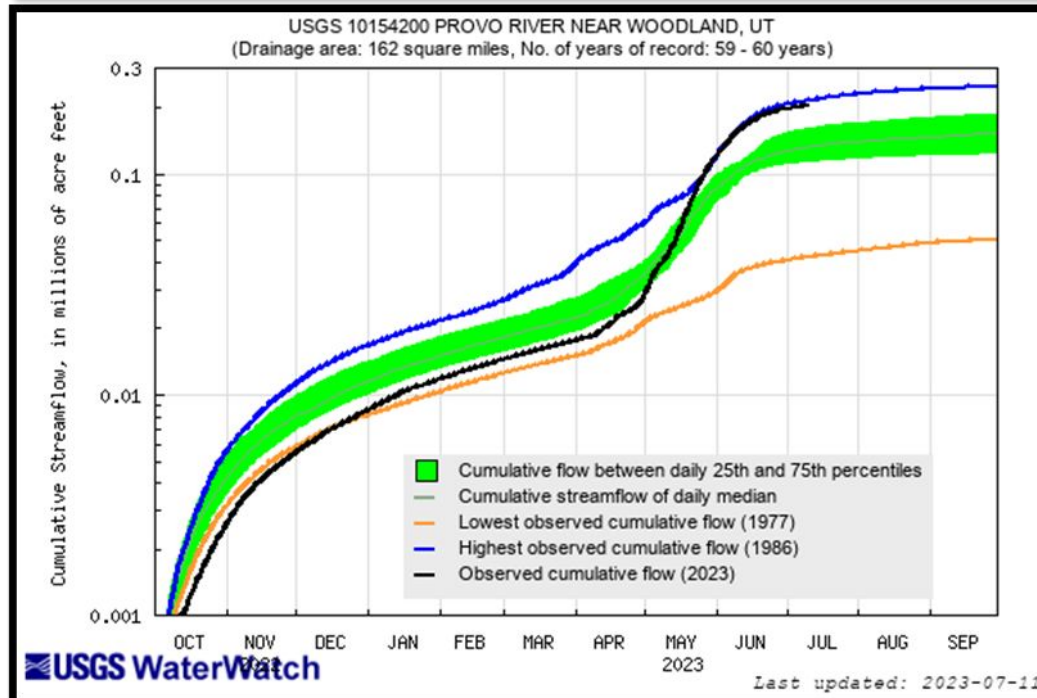
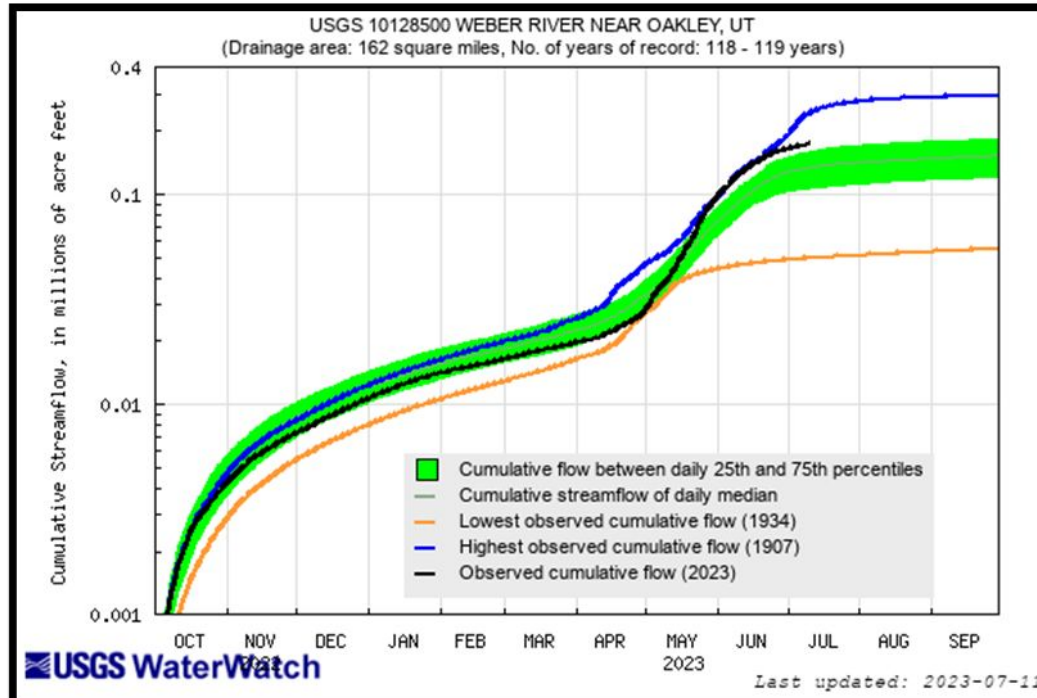
Agency - USGS Utah WSC
Presenter - Thank you Laura!

Cumulative Streamflow Hydrograph for Selected Gages



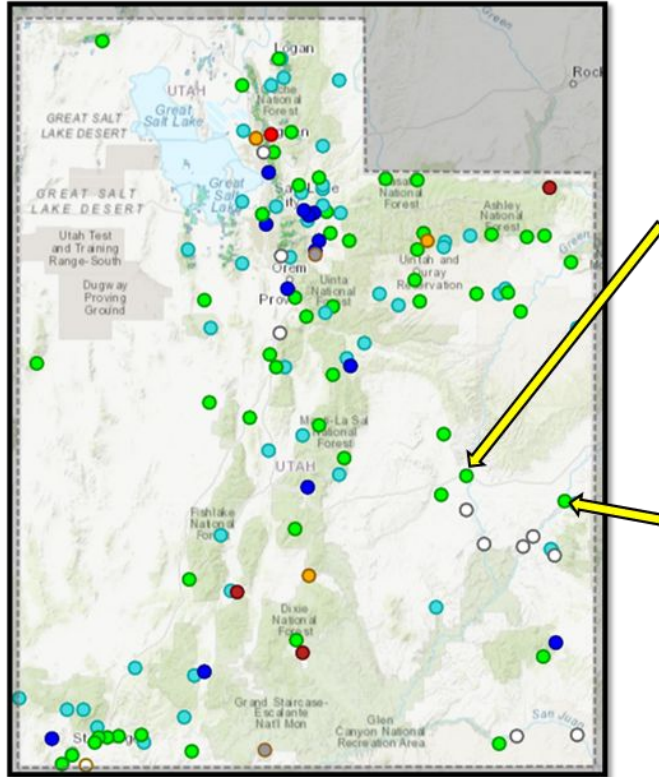
Explanation - Percentile classes

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

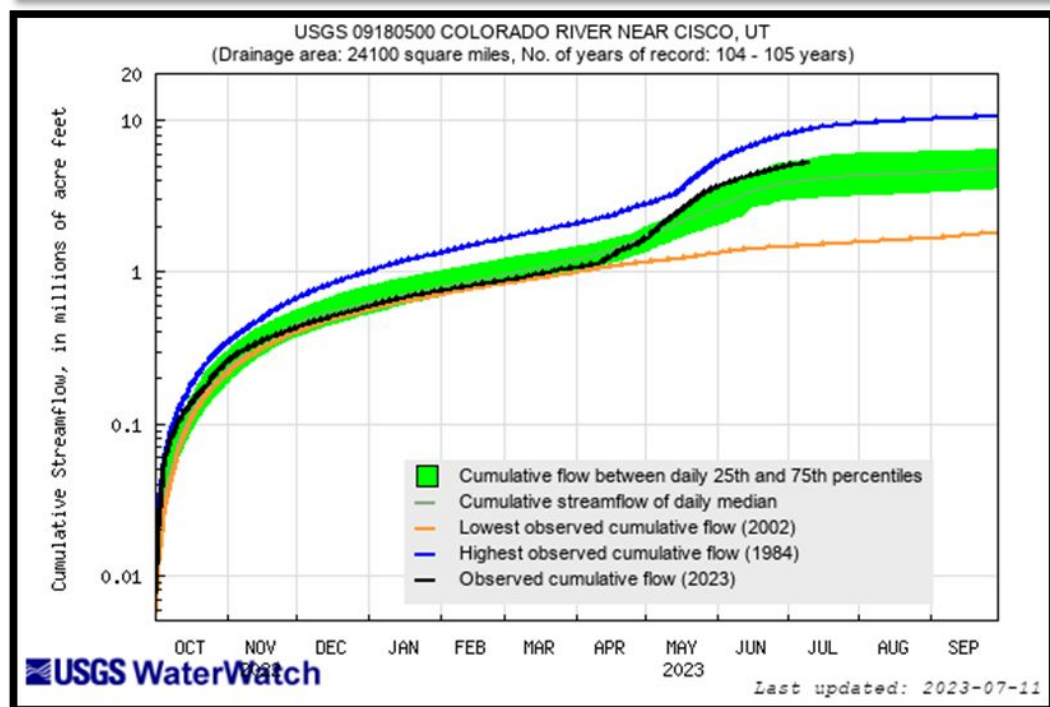
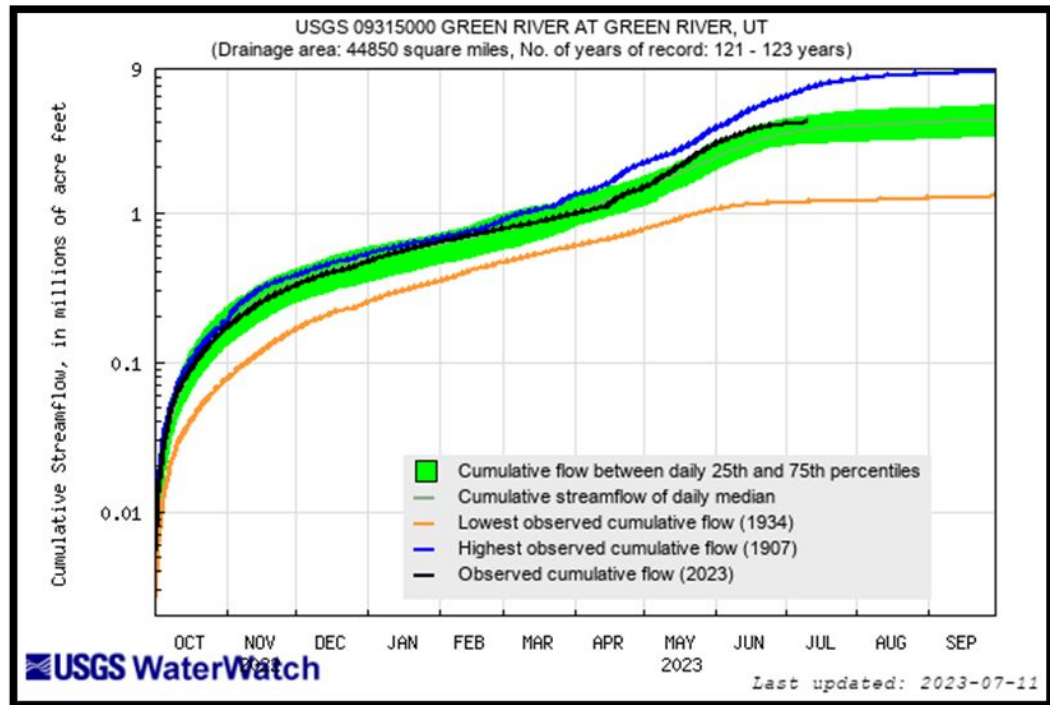


Provisional data, subject to revision.

Cumulative Streamflow Hydrograph for Selected Gages

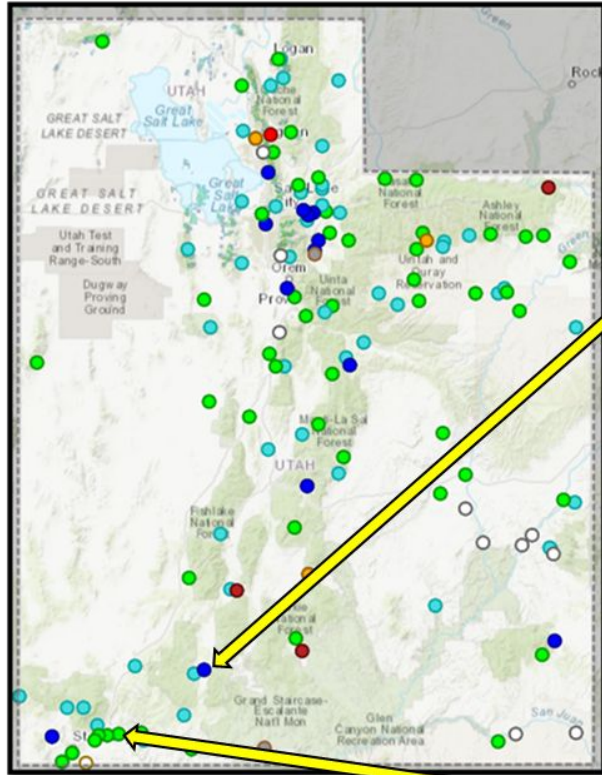


Explanation - Percentile classes							
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile-highest	Runoff
Much below normal	Below normal	Normal	Above normal	Much above normal			



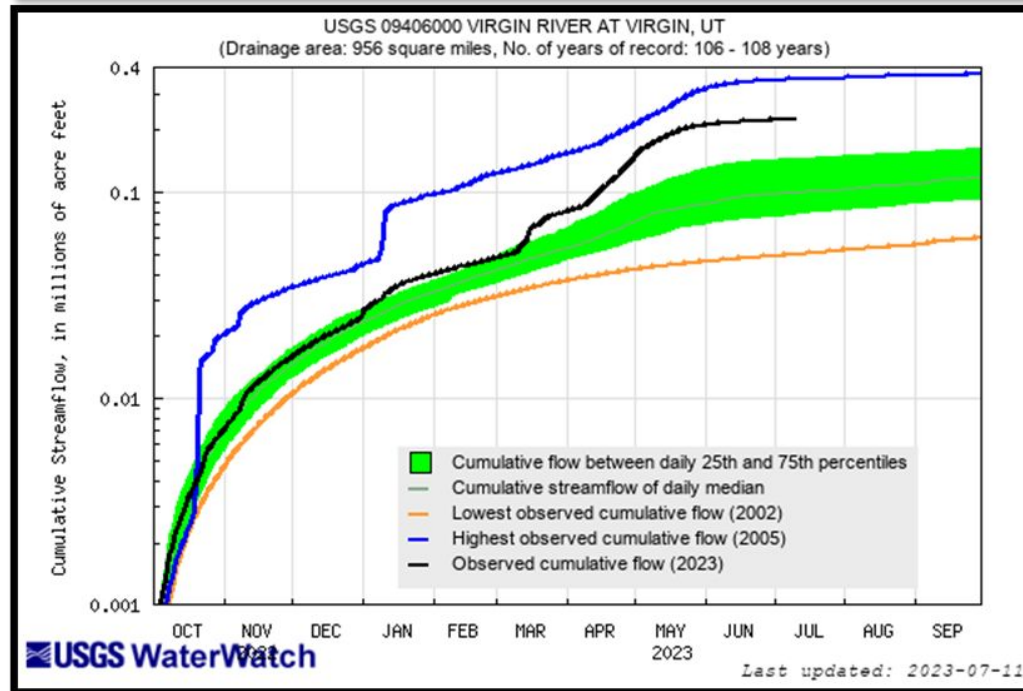
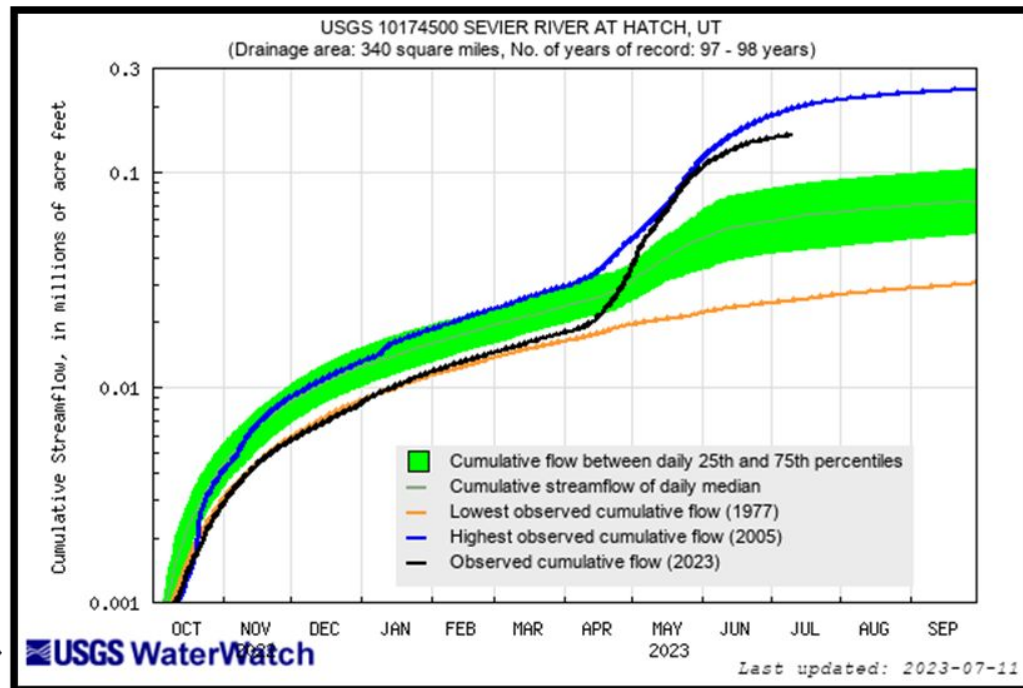
Provisional data, subject to revision.

Cumulative Streamflow Hydrograph for Selected Gages



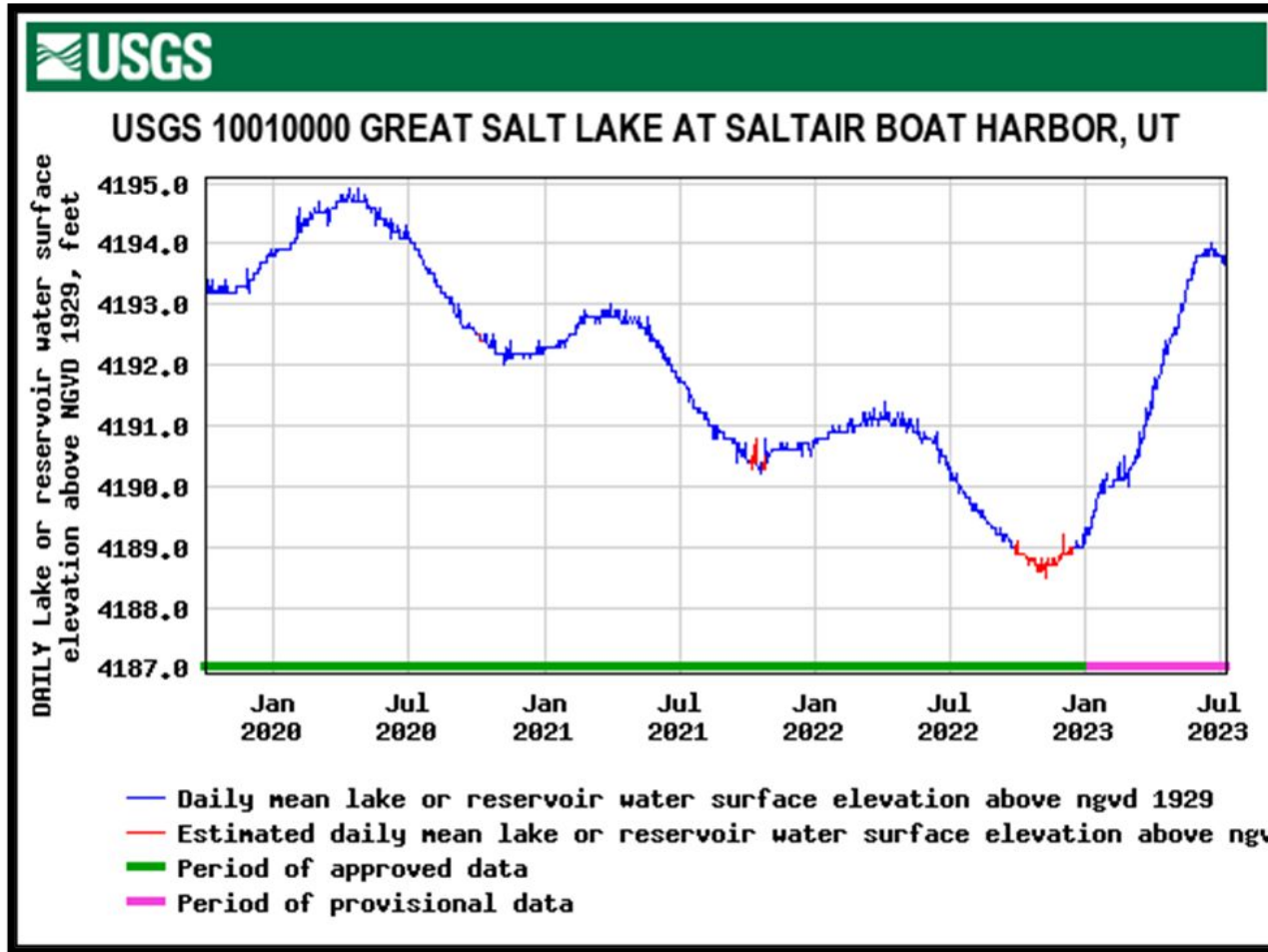
Explanation - Percentile classes

Percentile Class	Color	Runoff
lowest-10th percentile	Dark Blue	Much below Normal
5	Light Blue	Below normal
10-24	Light Green	Normal
25-75	Green	Above normal
76-90	Dark Green	Much above normal
95	Black	Runoff
90th percentile-highest	Dark Blue	Much above normal



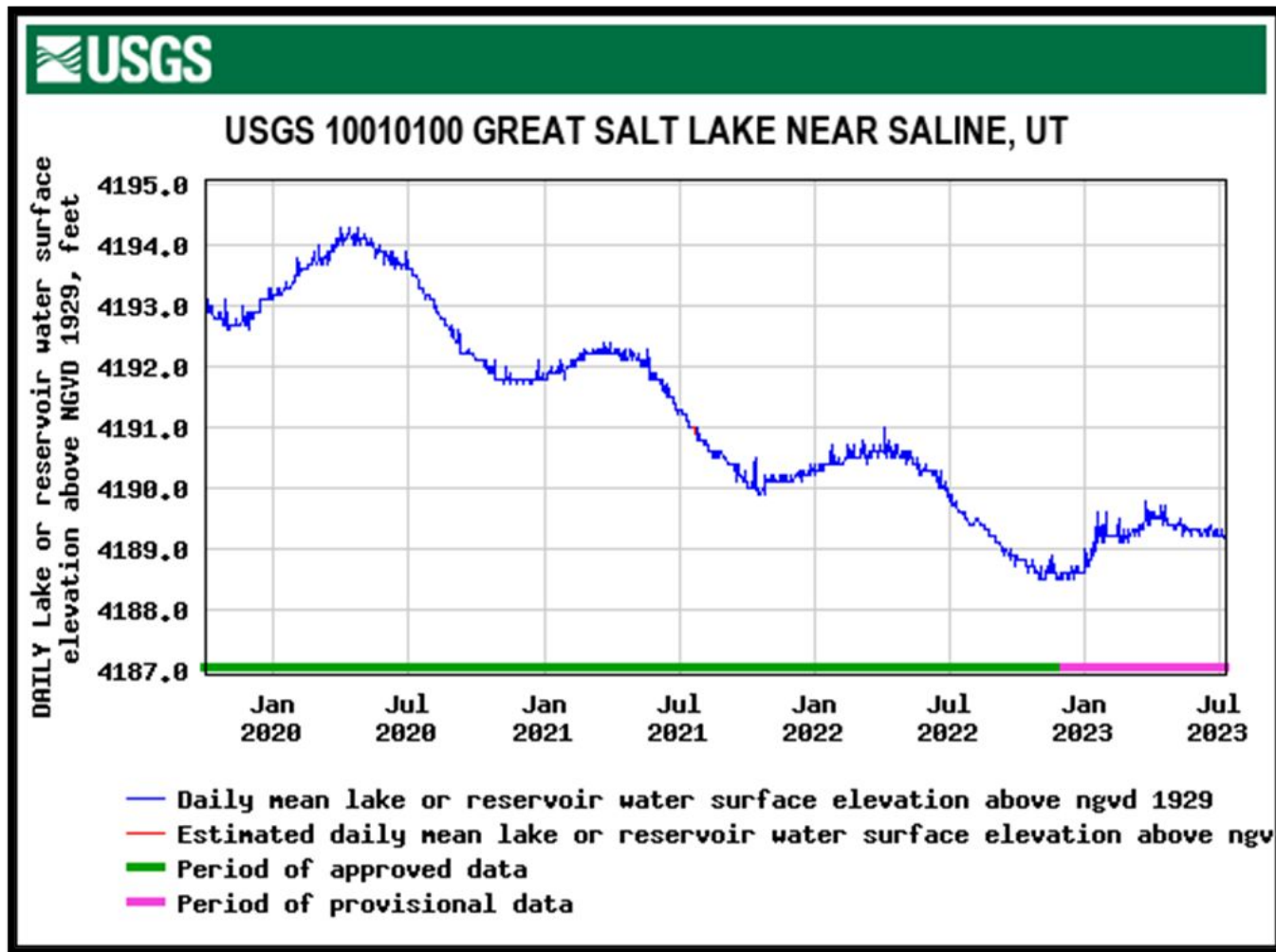
Provisional data, subject to revision.

Great Salt Lake Water Surface Elevation – South Arm



- ❑ Daily value 7/10/2023 = 4,193.6'
- ❑ Peaked at 4,194.0' on 6/19 and 6/20/2023
- ❑ Berm at causeway breach raised to 4,192' 2/9/2023

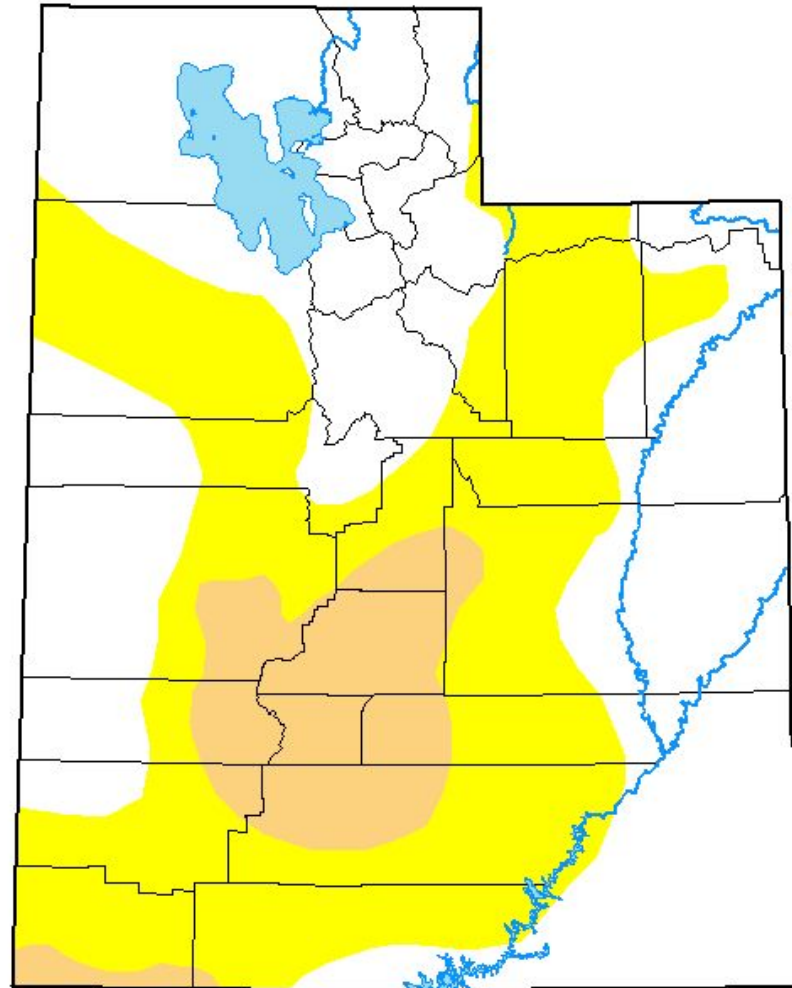
Great Salt Lake Water Surface Elevation – North Arm









- ❑ Daily value 7/10/2023 = 4,189.1'
- ❑ Peaked at 4,189.8' on 3/24/2023
- ❑ Berm at causeway breach raised to 4,192' 2/9/2023

U.S. Drought Monitor Utah

July 4, 2023
(Released Thursday, Jul. 6, 2023)
Valid 8 a.m. EDT



Intensity:

-  None
-  D0 Abnormally Dry
-  D1 Moderate Drought
-  D2 Severe Drought
-  D3 Extreme Drought
-  D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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droughtmonitor.unl.edu