Utah Water Conditions
(drought webinar)

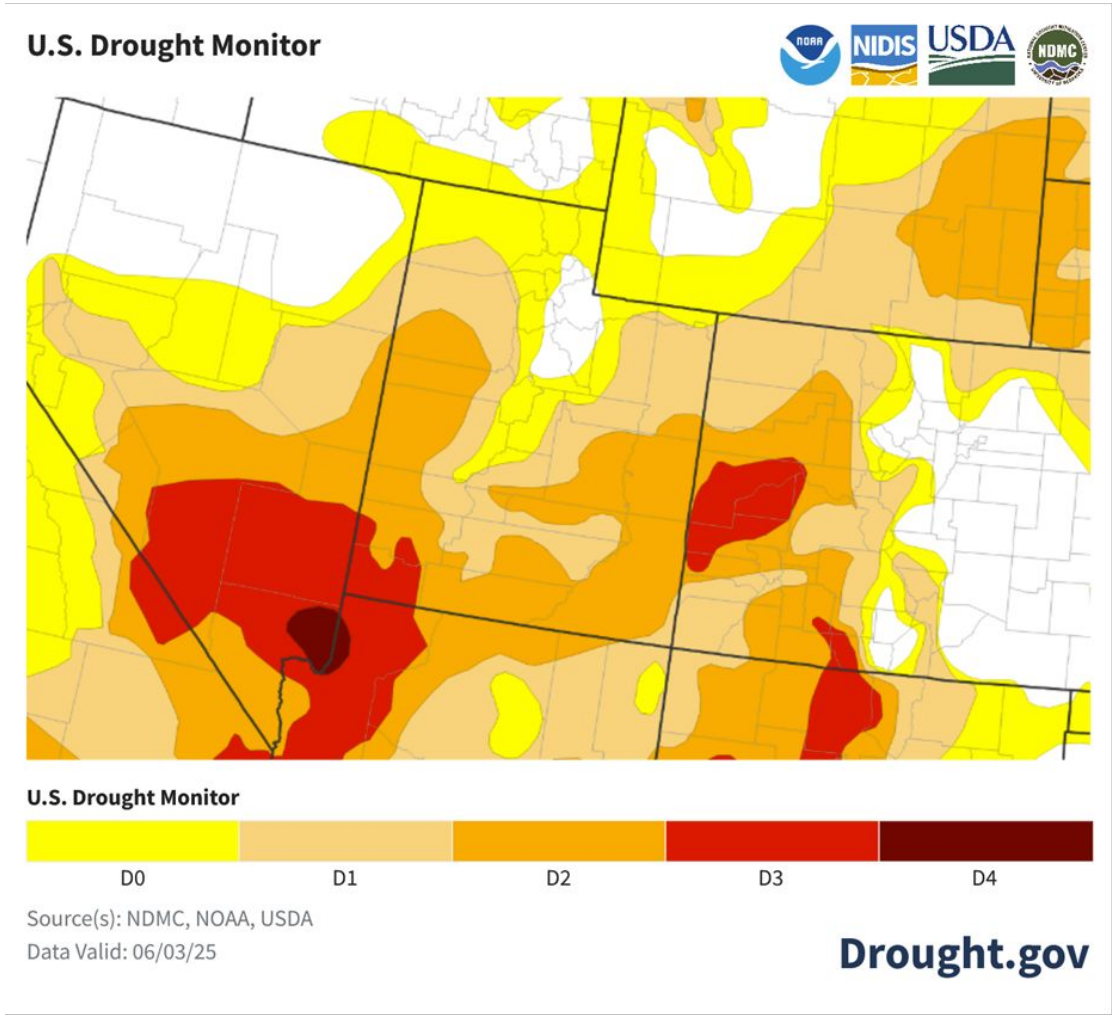
The meeting will begin shortly

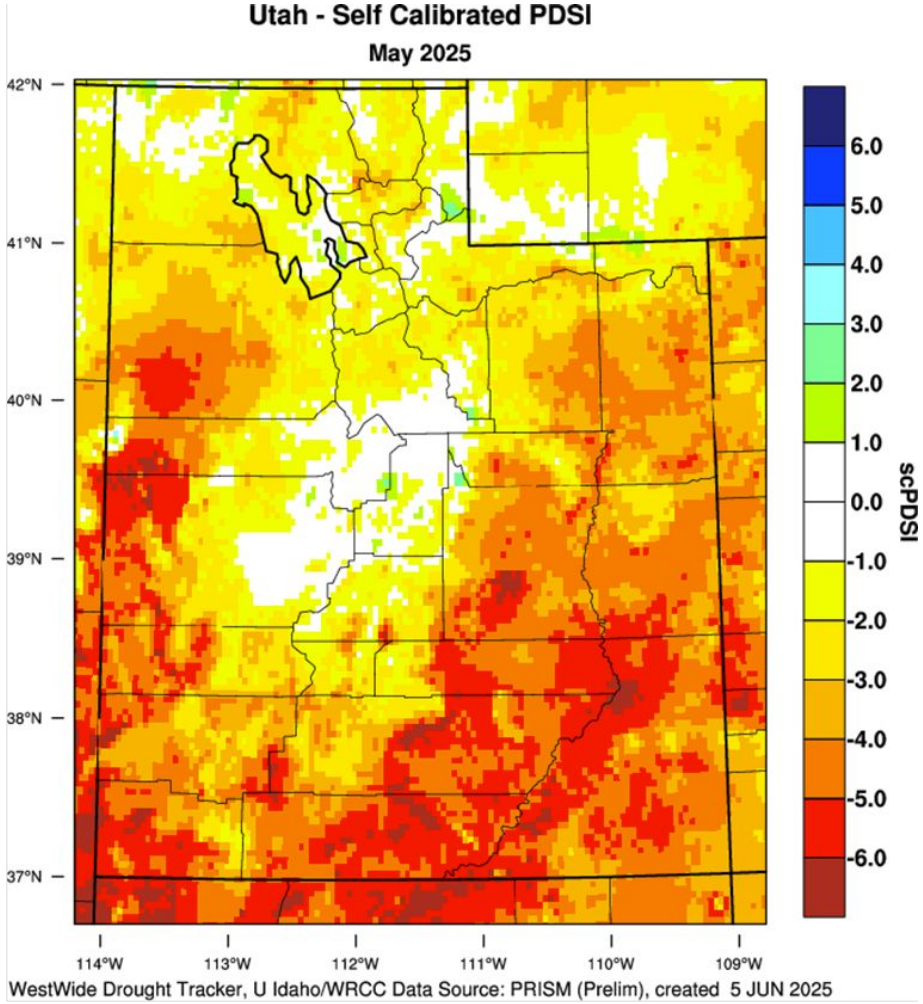
Thank you to our contributors

Utah Water Conditions Update

June 10, 2025

Current Drought Conditions





Palmer Drought Severity Index (PDSI)
*calibrated

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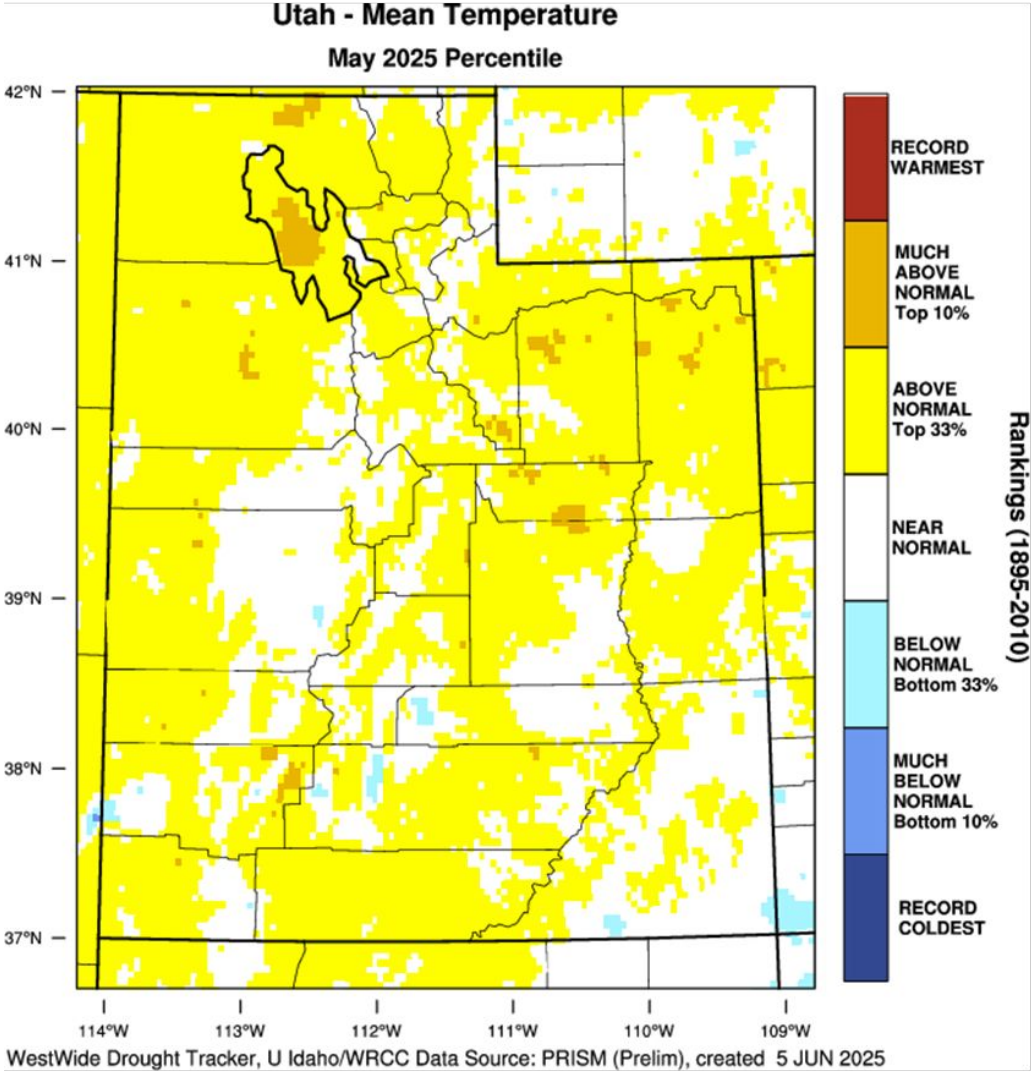
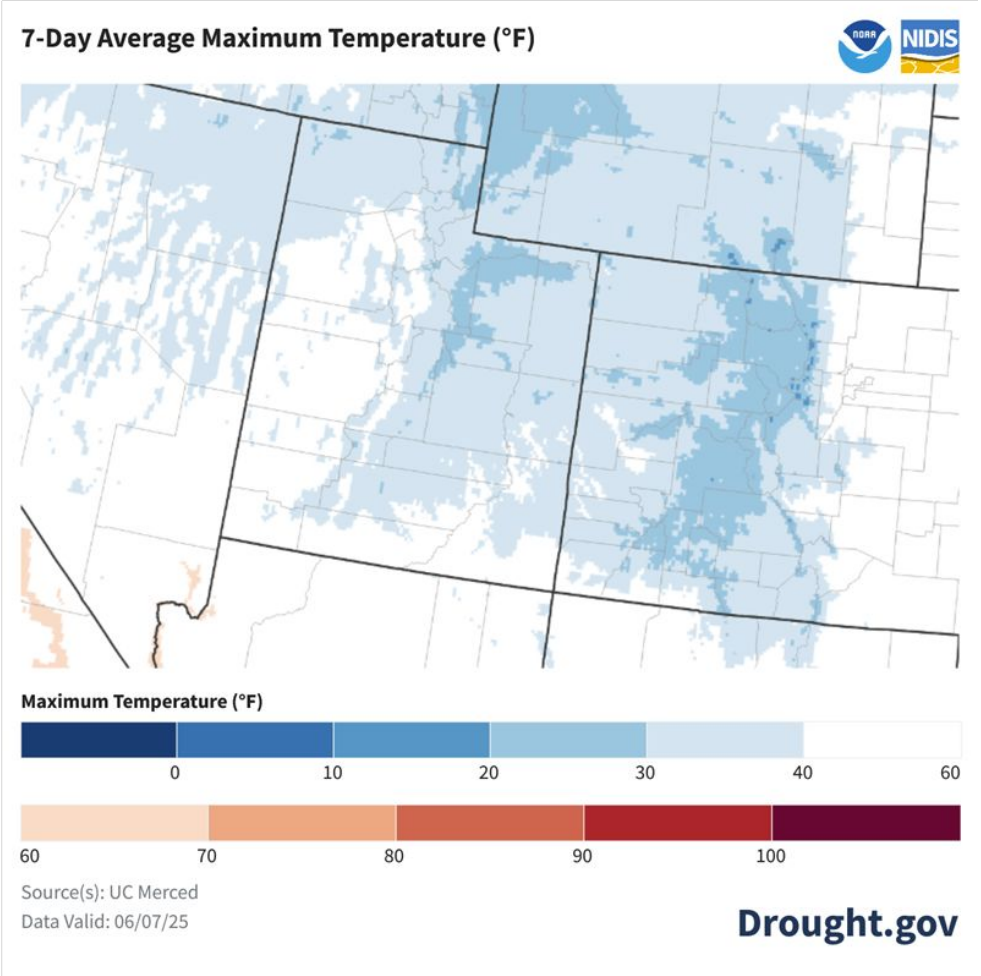
Presenter - Jon Meyer

Temperature Summary



May was 2-4 degrees warmer than normal, nothing significant but also not ideal for early evaporative stress. Recent weather pattern has been cooler, but not for long?



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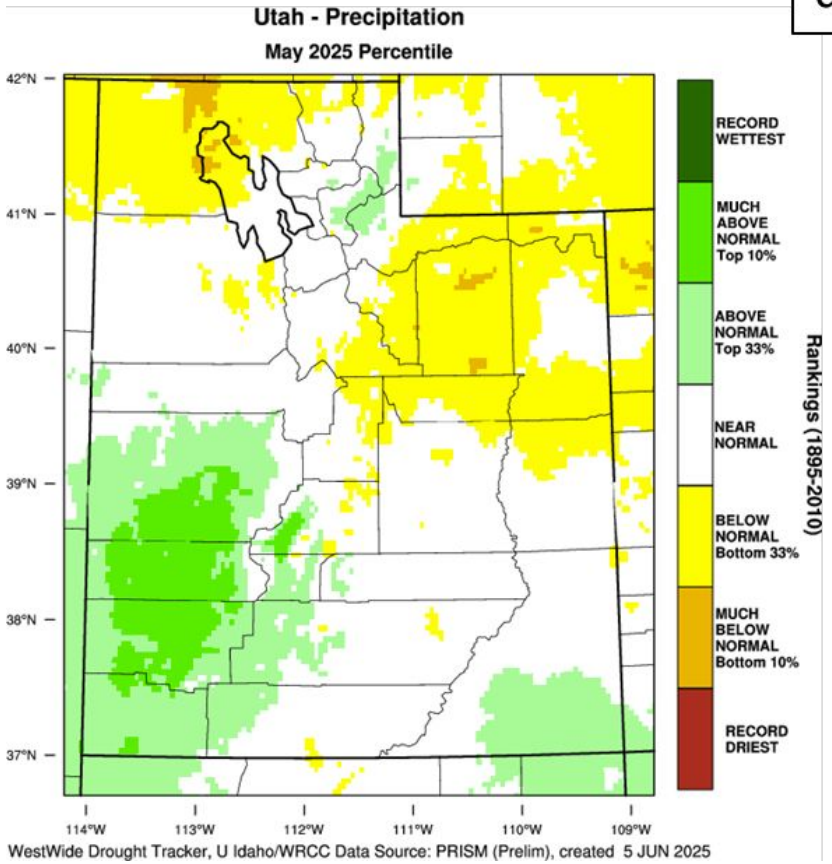
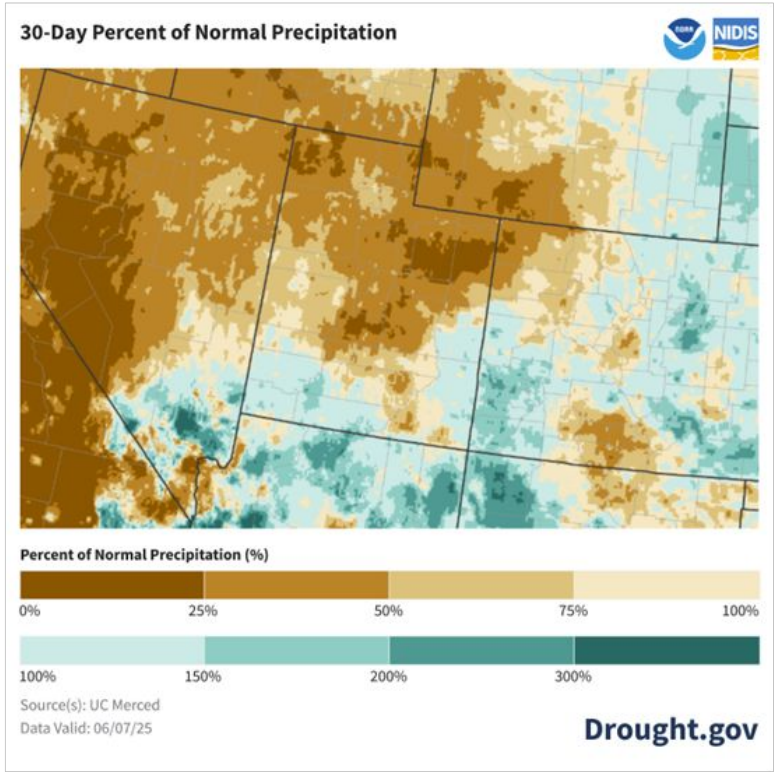
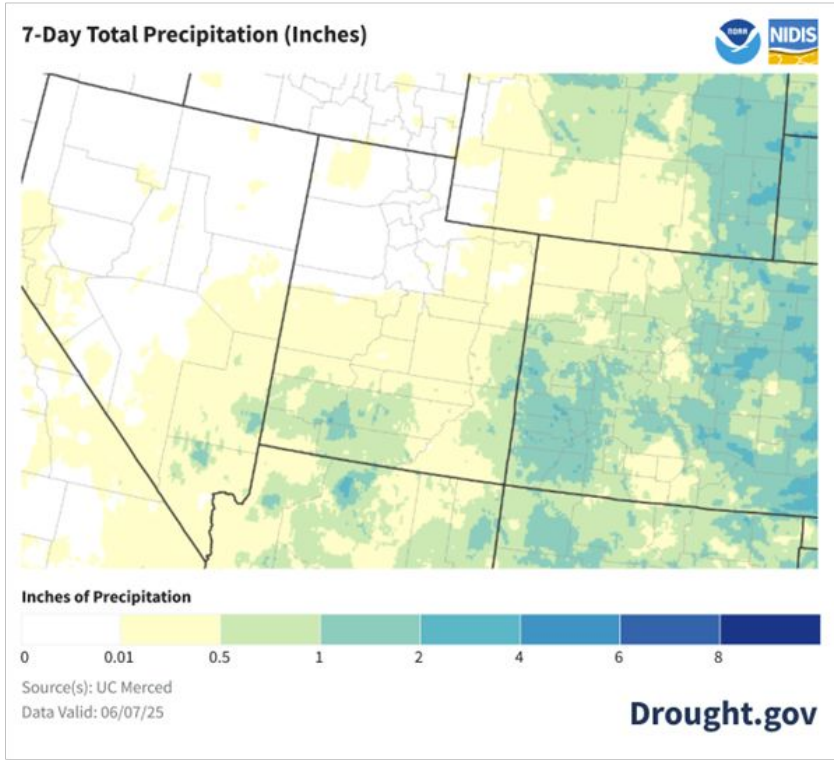
Presenter - Jon Meyer

Precipitation Summary

May's precipitation was underwhelming until the recent storm cycle. Beneficial rainfall between 0.5" – 1.0" occurred in southern Utah where drought is worst but much of the state saw little to no 30-day rainfall totals.







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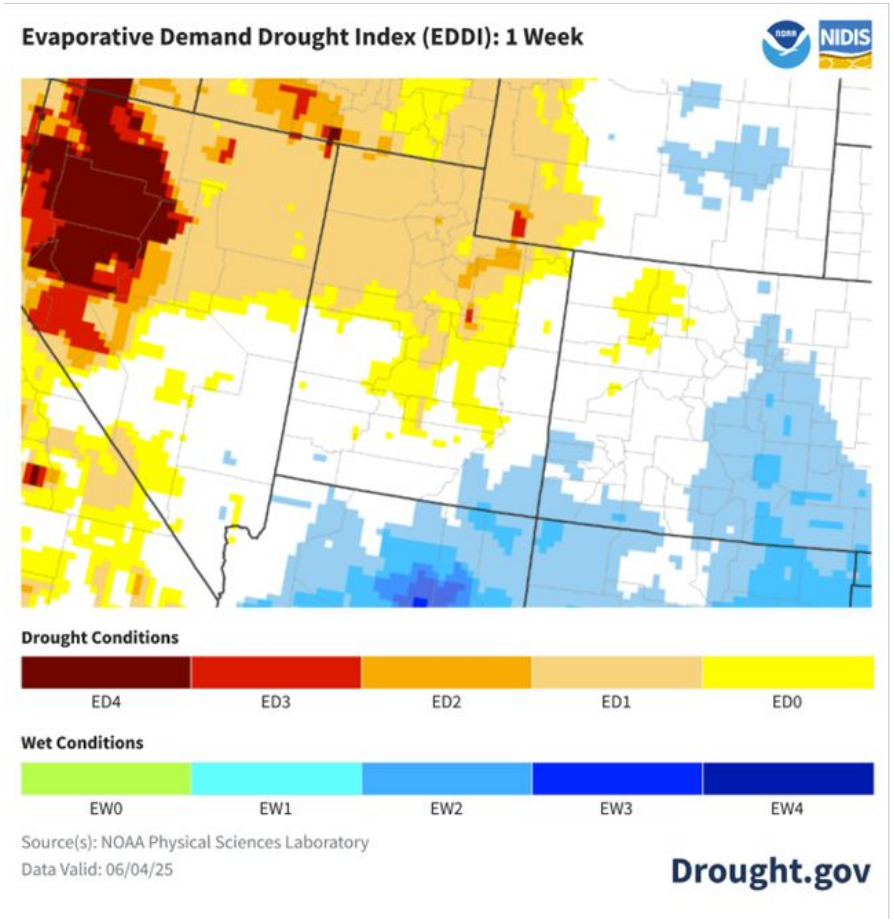
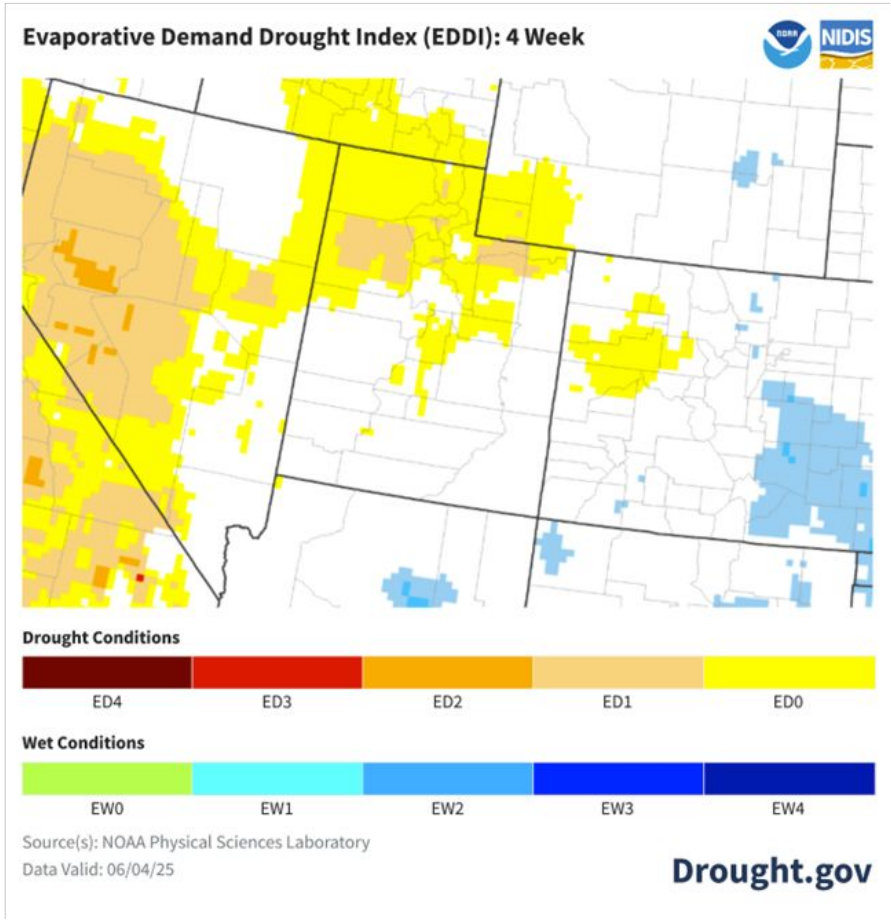
Evaporative Demand Summary

May's temperatures helped limit the 4-week evaporative demand in the areas of the state we are most concerned about. The recent wet and cloudy pattern in southern Utah has helped limit seasonally abnormal evaporative deman.





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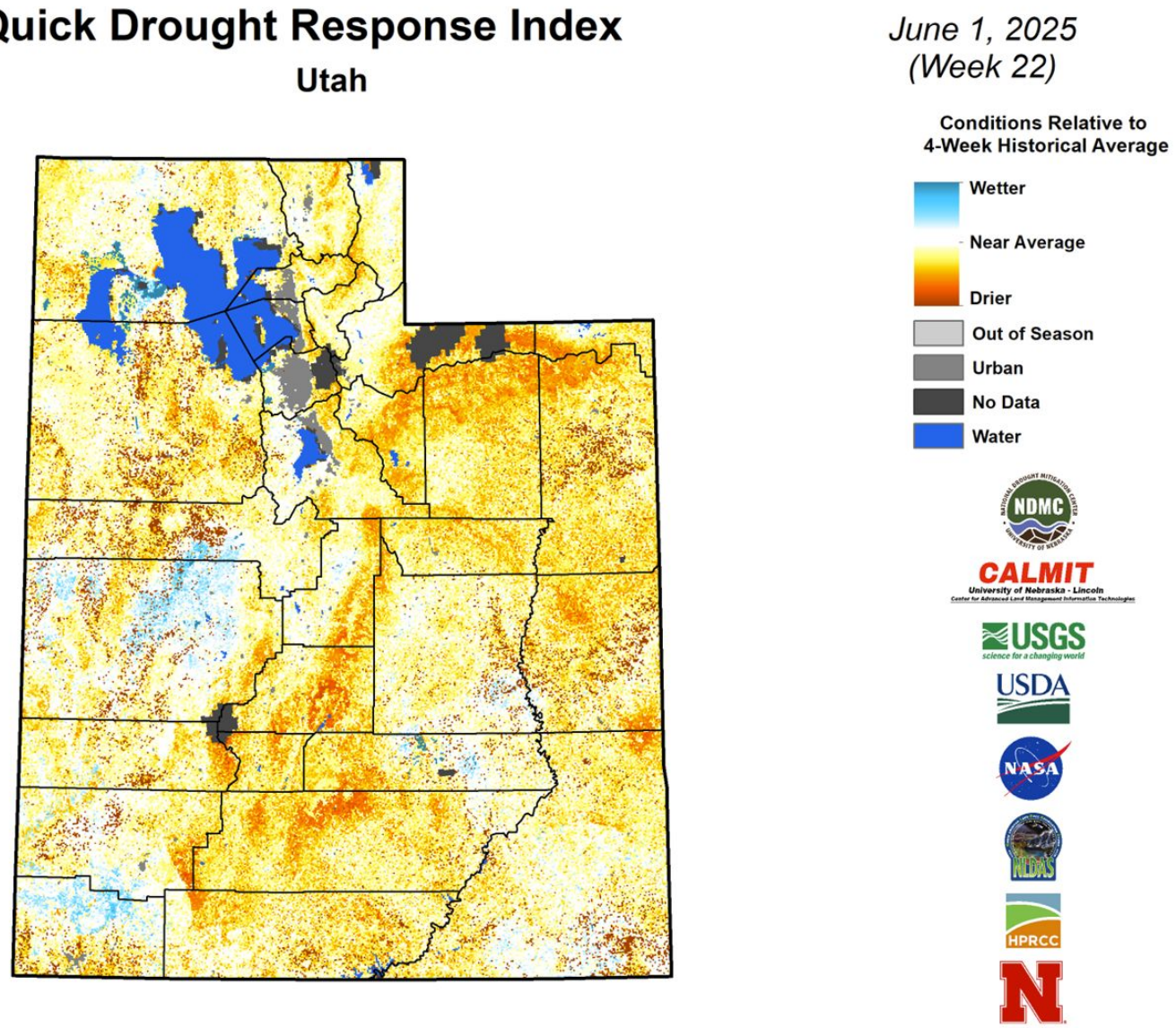
Recent Short-Term Drought Pressure

The state continues to feature short-term drought pressure, although small regions have seen the benefit of rainfall and cooler conditions.



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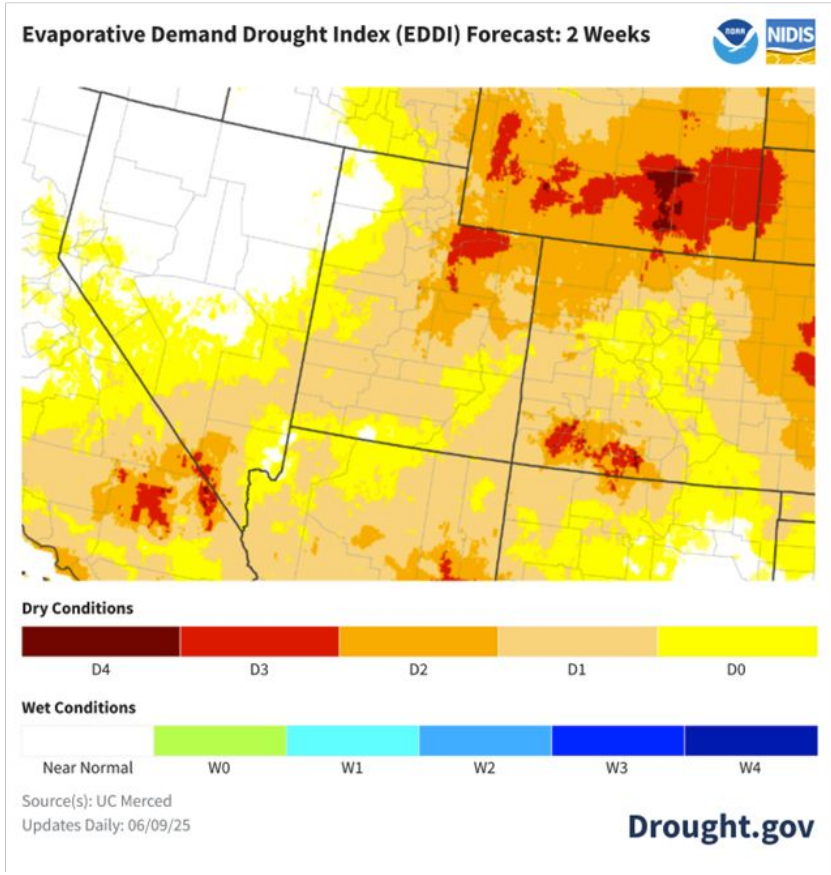
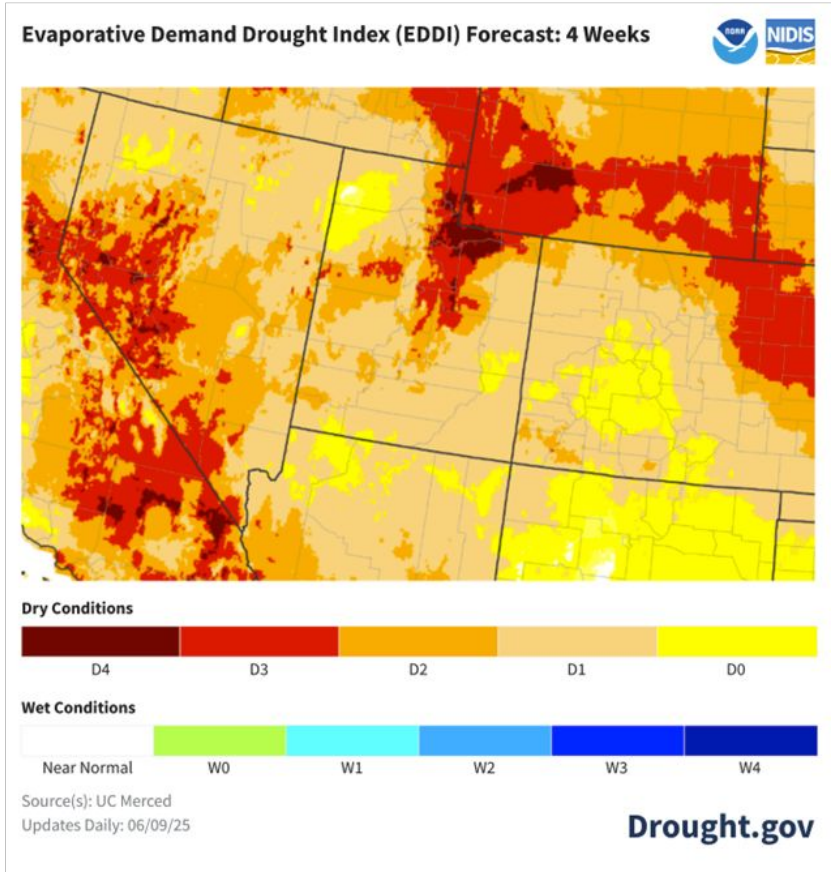
Forecast Evaporative Demand

The forecast over the remainder of the month and into July calls for statewide elevated evaporative demand. After that, EDDI will become a function of where the monsoon focuses the humidity, clouds, and precipitation.





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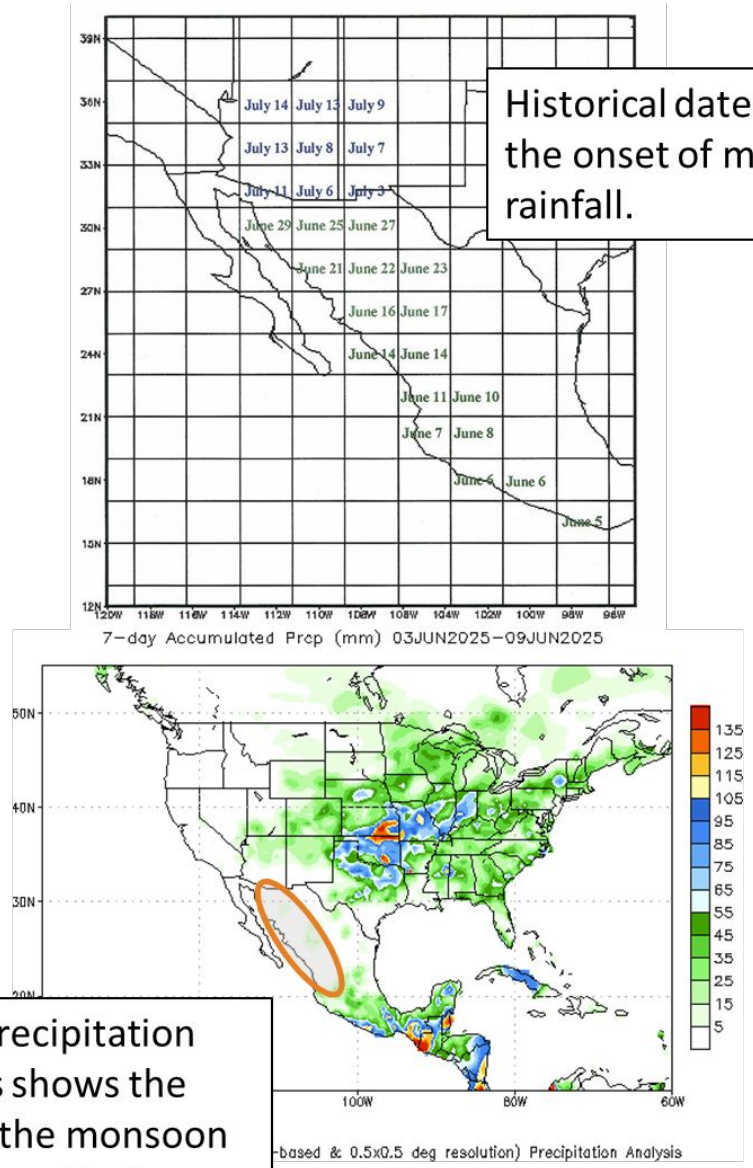
Thoughts on the Monsoon Outlook

1. The heart of the monsoon has yet to really begin beating. We watch for this first signal down in the Mexican mountain range circled in the figure to the right.
2. Still, ingredients remain in play that favor early onset (low regional soil moisture, warm sea-surface temps).
3. The MJO's presence in the Pacific in late June could also tip the scales towards early development, but most forecast guidance shows its strength weakening as it enters the region. Lack of MJO assistance towards early onset is more likely than the MJO adding to the early onset favorability.
4. Little agreement between model guidance on the focus of monsoon precipitation events through the season; results in the 50-50 neutral outlooks for areas like Utah that require the right weather pattern to bring the monsoon precipitation to the state.
5. Eastern Pacific hurricane outlook calls for lower than normal count of Tropical systems. So, while these are wildcards we never count on for seasonal outlooks, having fewer of them in the basin removes some of the wildcards from the deck.



Historical dates for the onset of monsoon rainfall.

7-day precipitation analysis shows the core of the monsoon is still "inactive"

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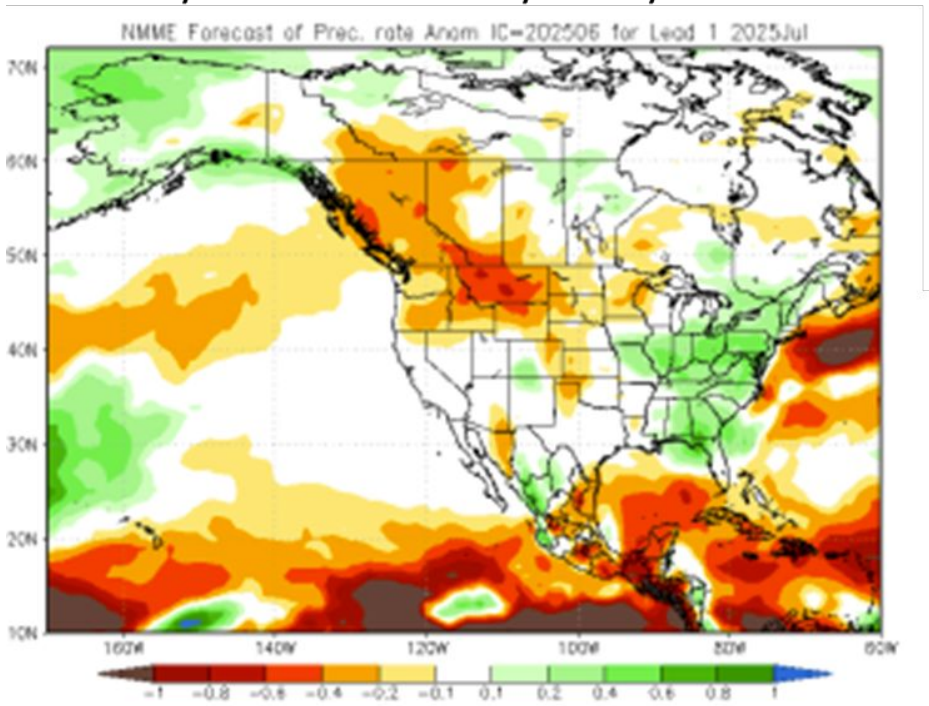
Presenter - Jon Meyer

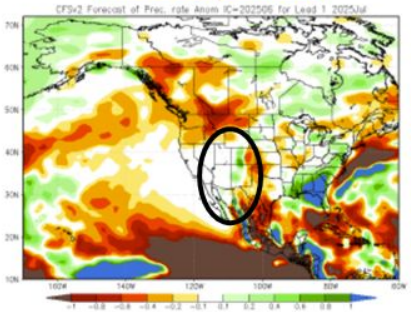
NCEP Monsoon Outlook is filled with uncertainty

The multi-model blend is not favorable for early monsoon activity in July!

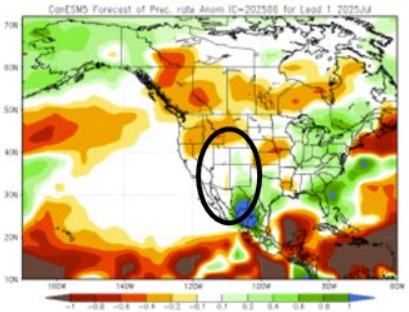


Lots to see here but focus on each model's southwest region to appreciate the range of predictions for July precipitation. Uncertainty in the outcome is borne from these highly different outcomes and underscores the inherent unpredictability of the monsoon system.

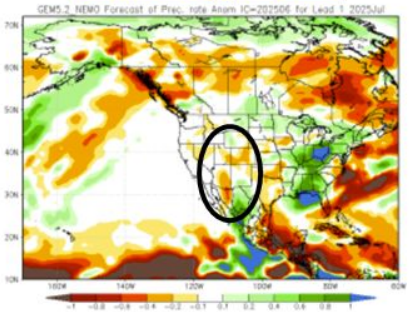
NCEP_CFSv2



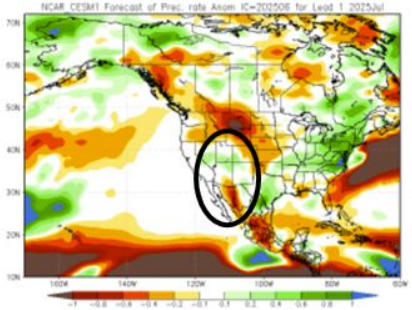
CanESM5



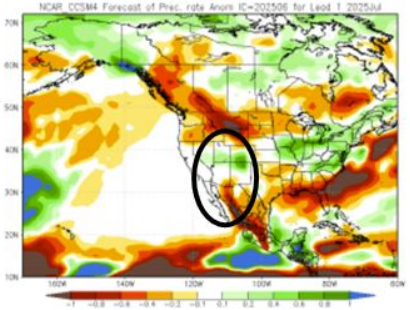
GEM5.2_NEMO



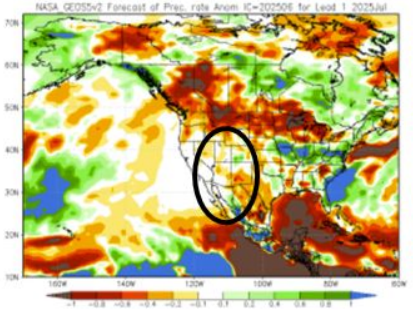
NCAR_CESM1



NCAR_CCSM4



NASA_GEOS5v2



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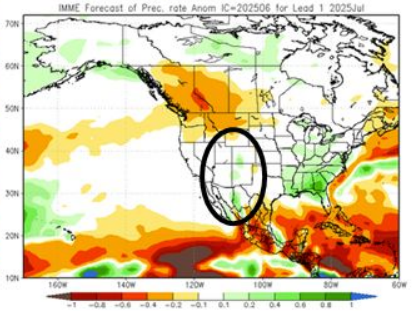

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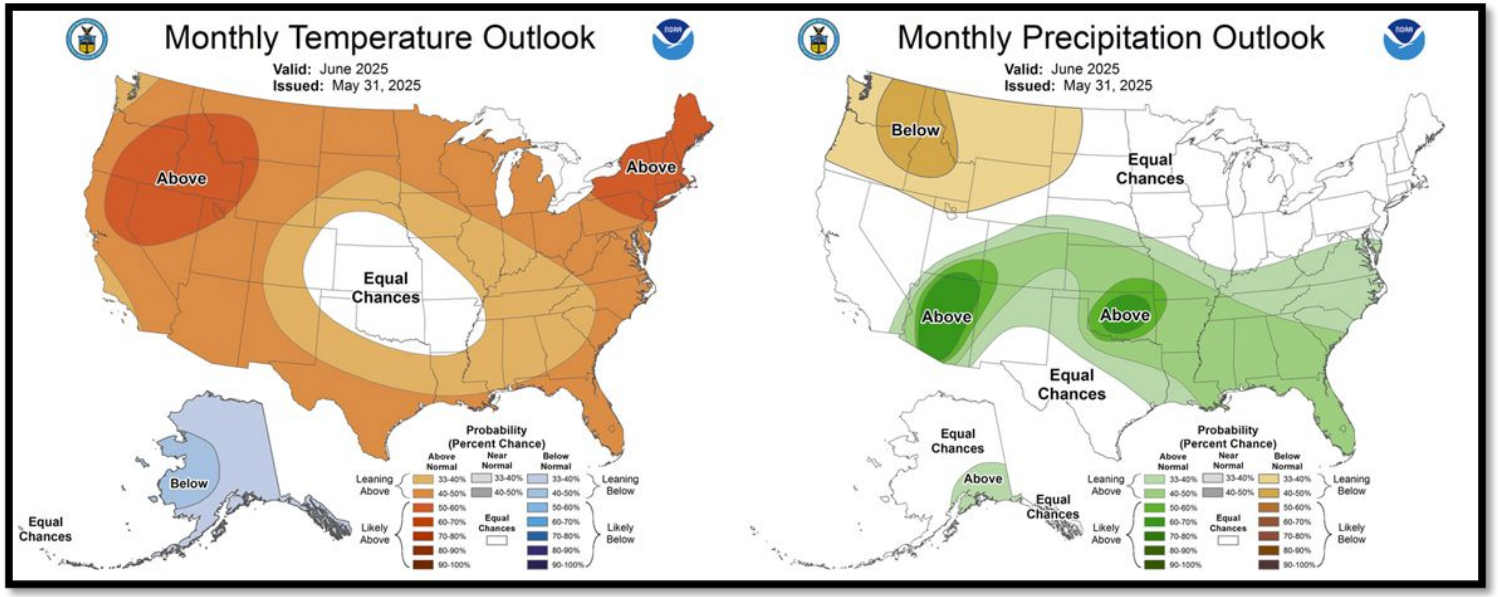
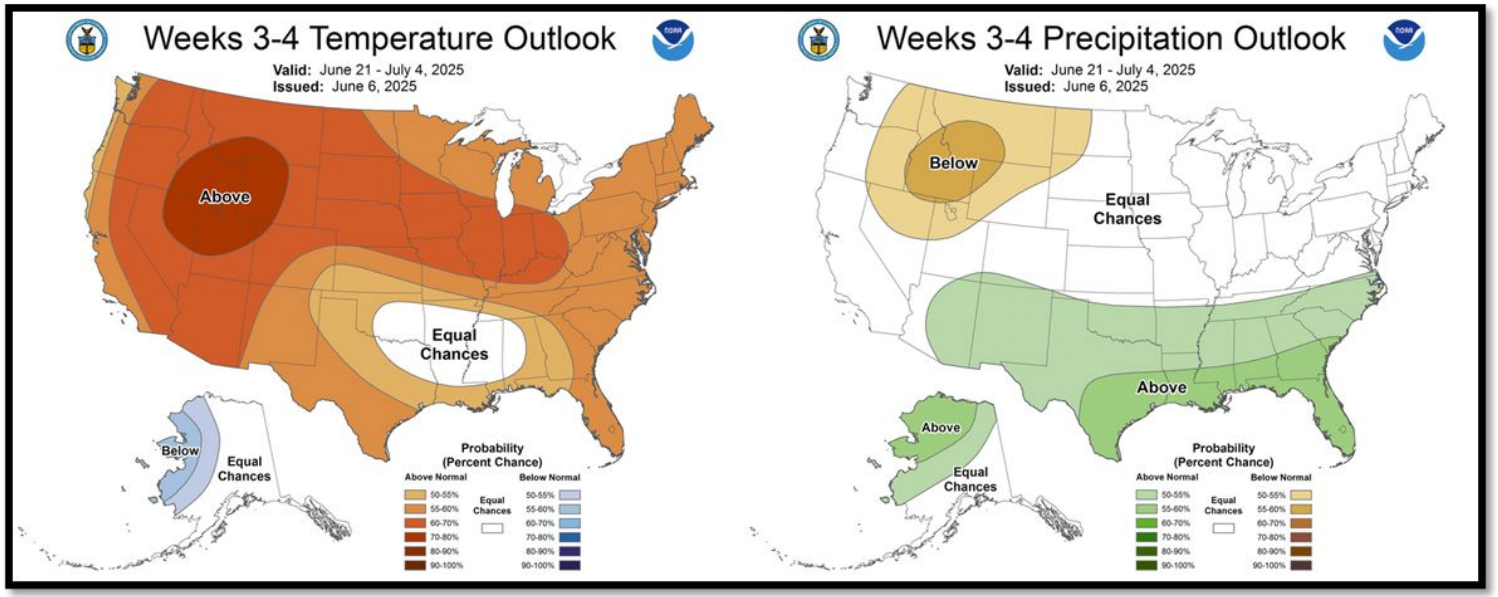
Presenter - Jon Meyer

CPC June Outlook + Week 3-4 Outlook when the monsoon should begin to creep across the border





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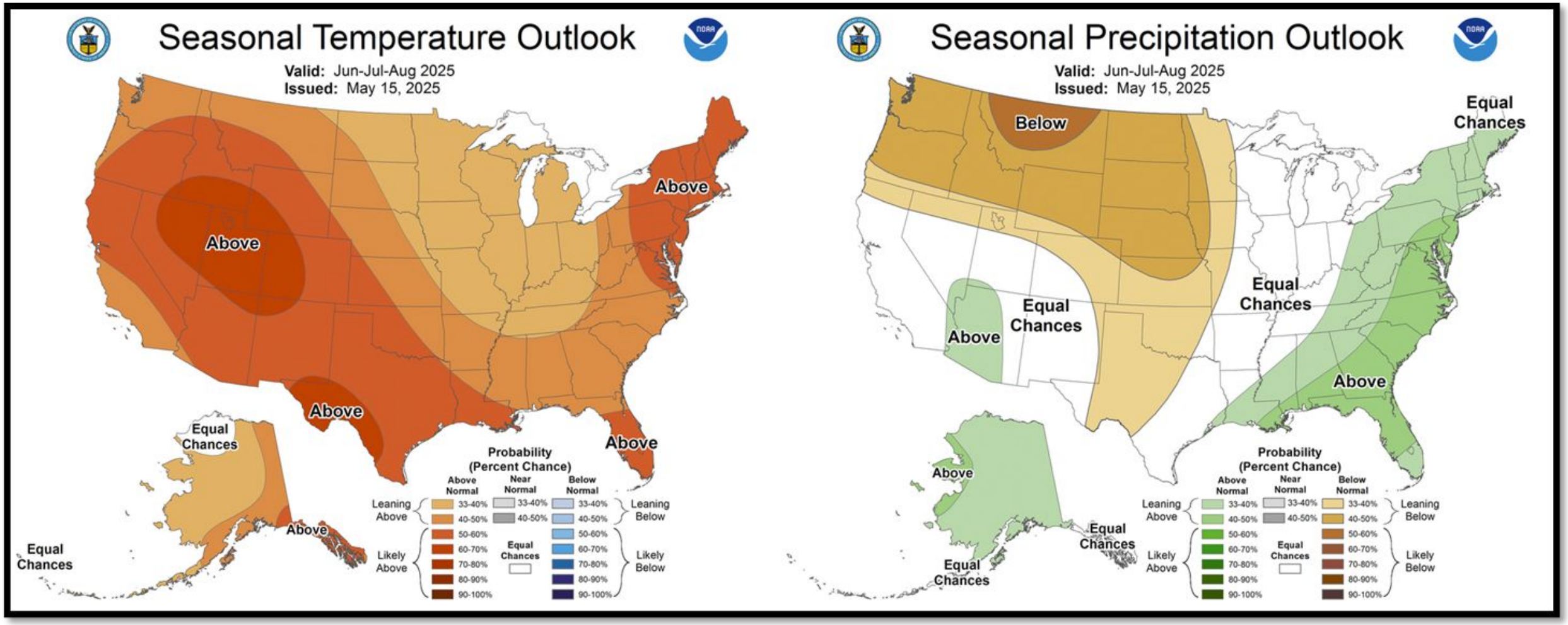
CPC June-Aug Outlook



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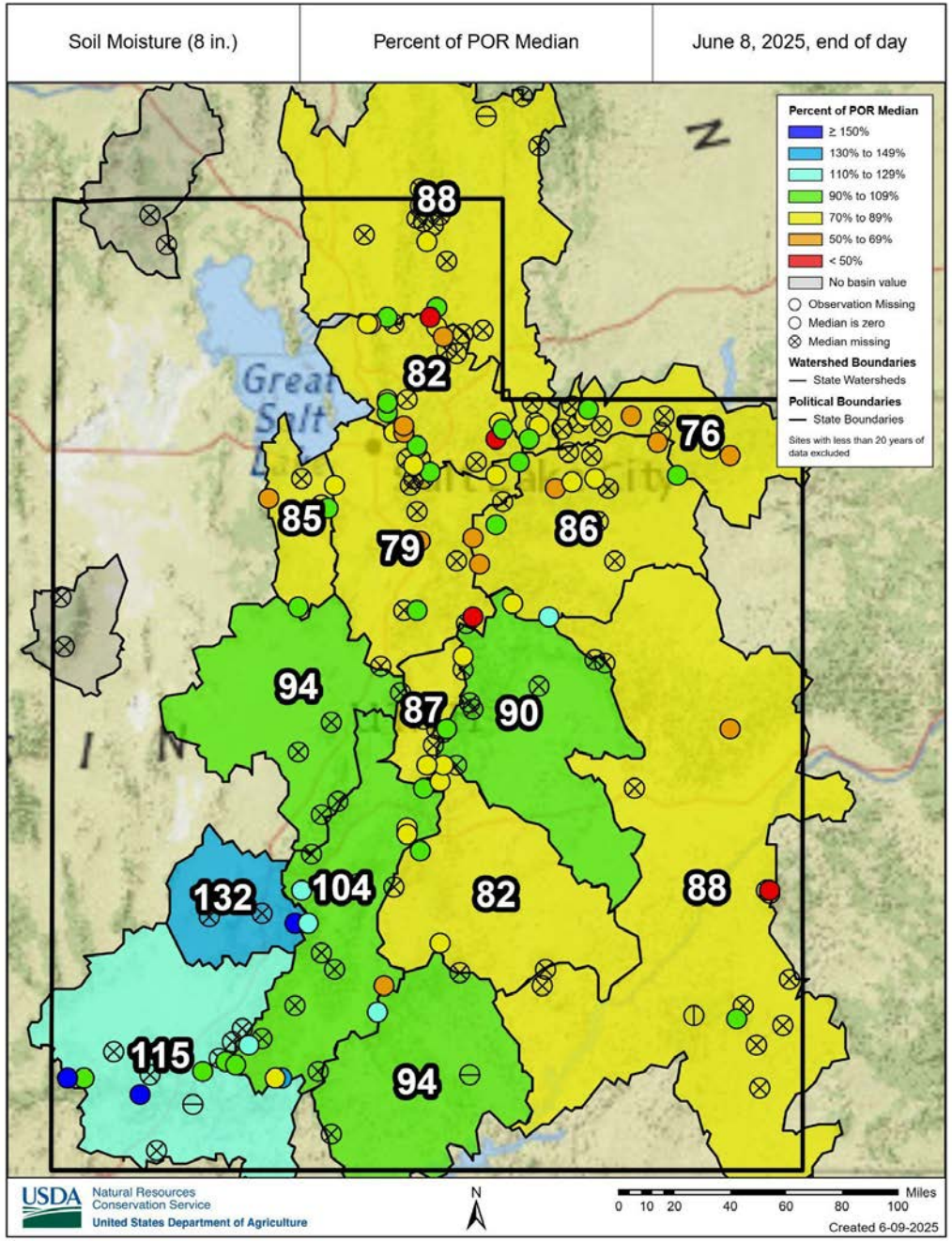
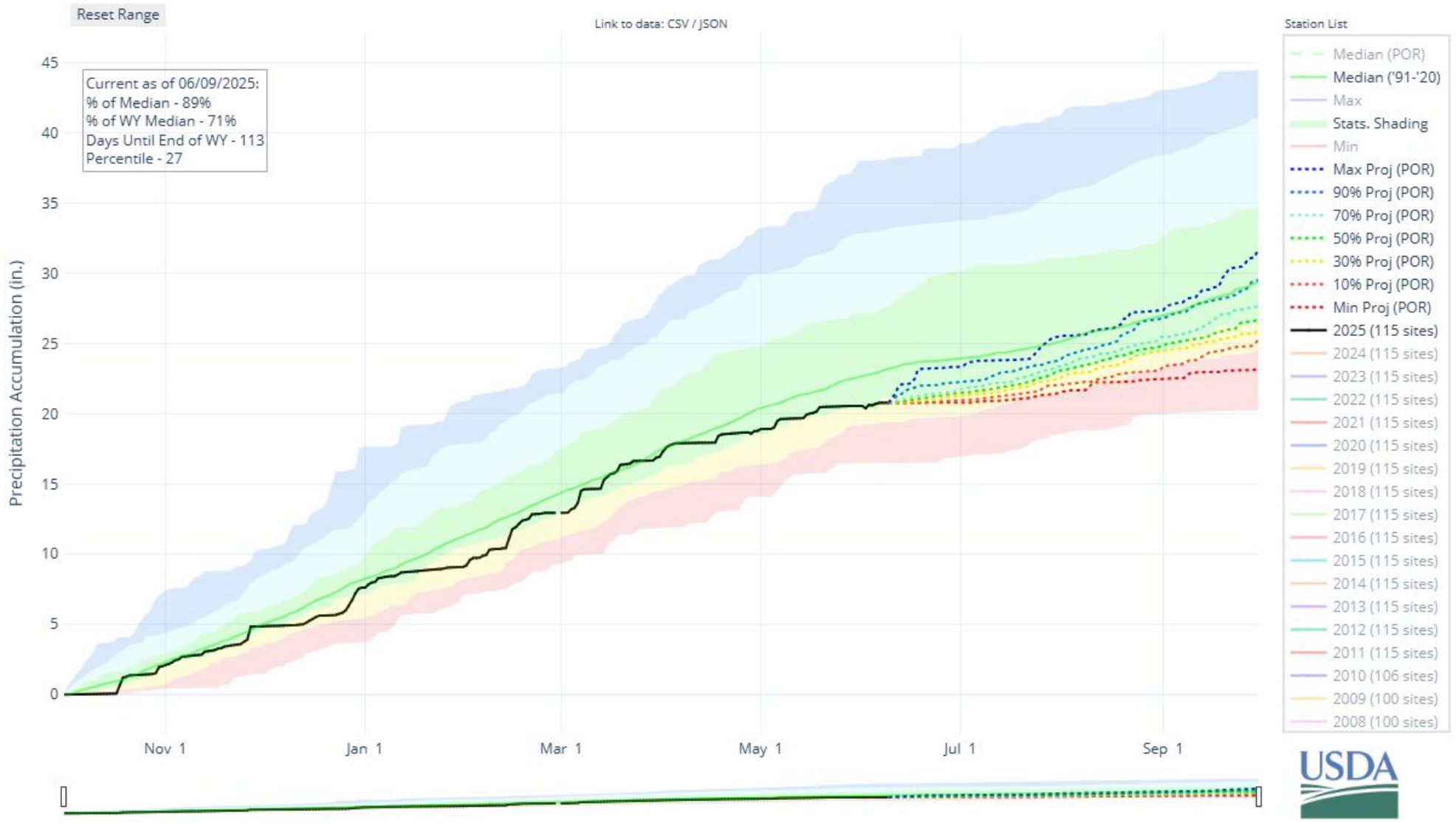
Presenter - Jon Meyer

8” soil depth is indicator of more recent conditions



Agency - NRCS (unable to attend)
Presenter -

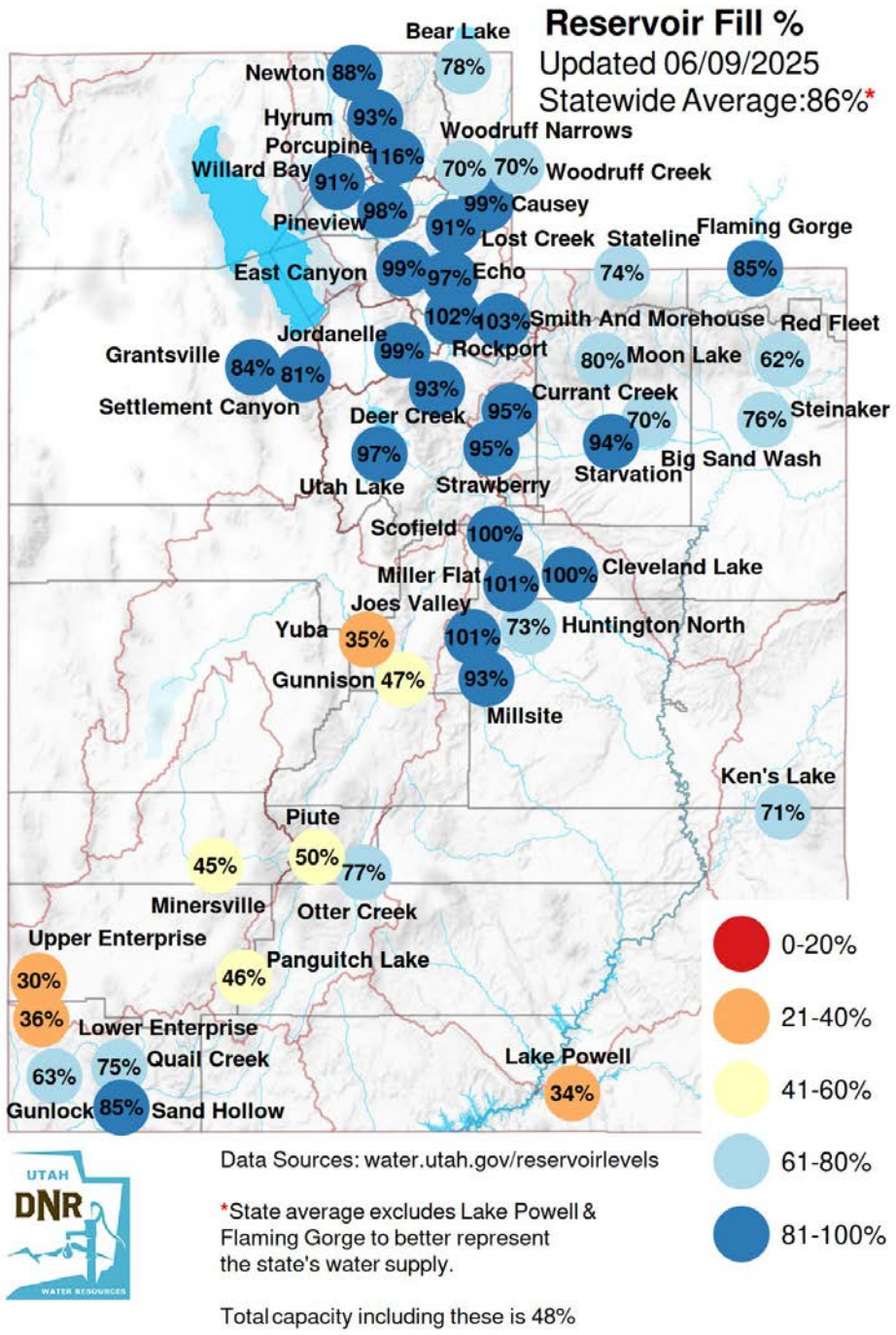


The 90% projection is near median precipitation for the year. All more probable projections are less than median.

Agency - NRCS (unable to attend)
Presenter -

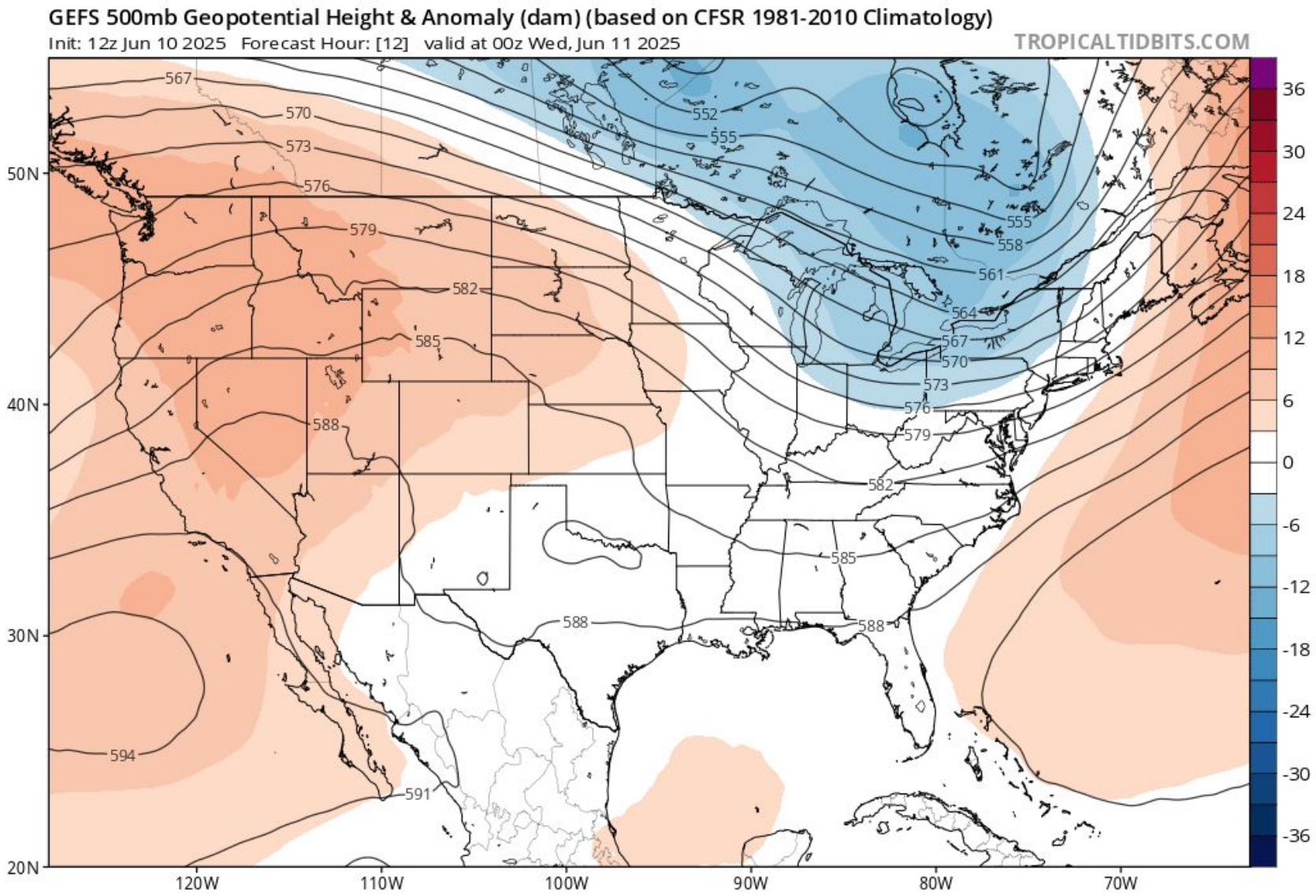
Reservoirs are 14% above typical for this time of year.

Northern Reservoirs are higher than southern/central reservoirs



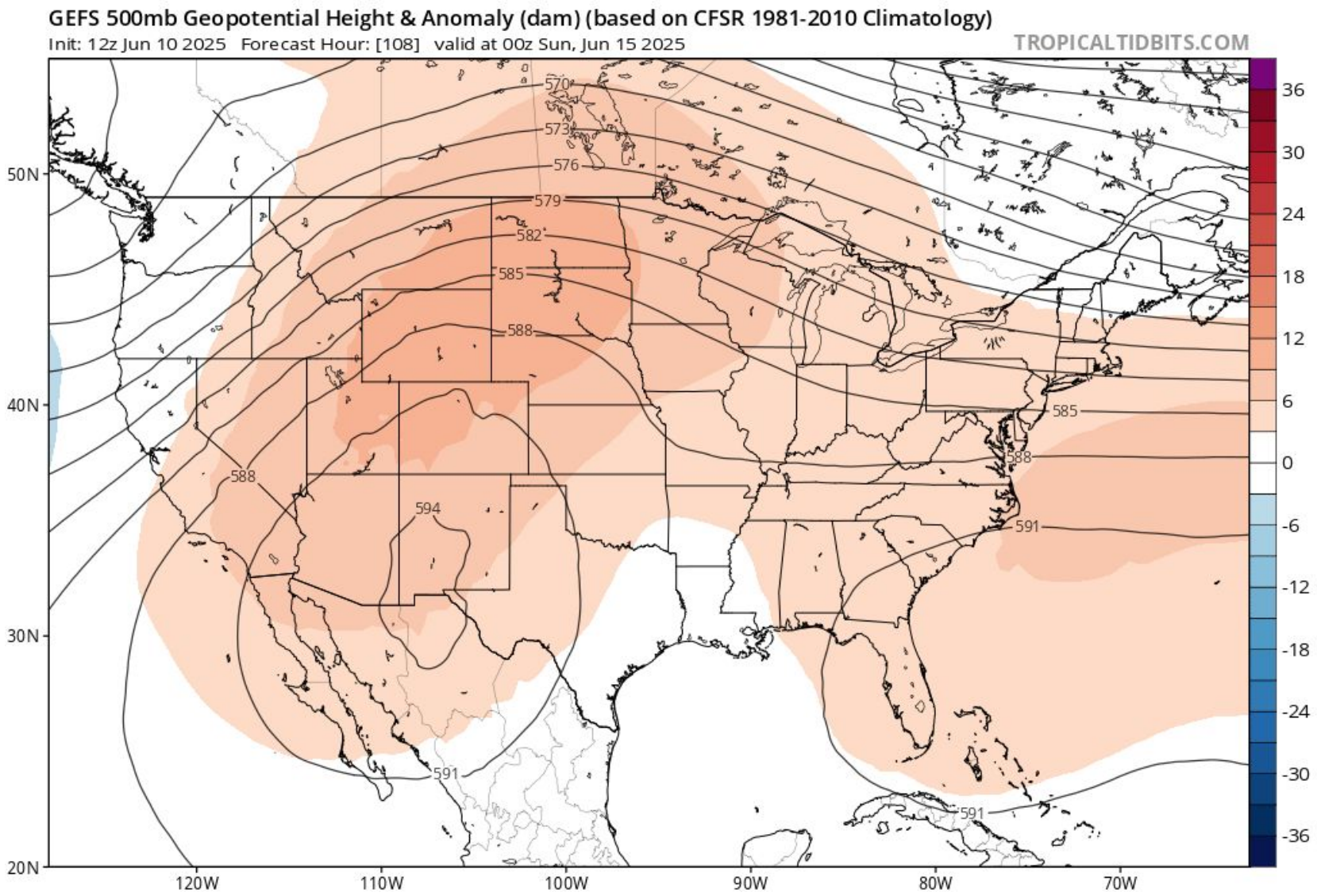
Agency - Division of Water Resources
Presenter -

Weather Forecast Office Utah Day 1-7 Outlook



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

Weather Forecast Office Utah Day 1-7 Outlook



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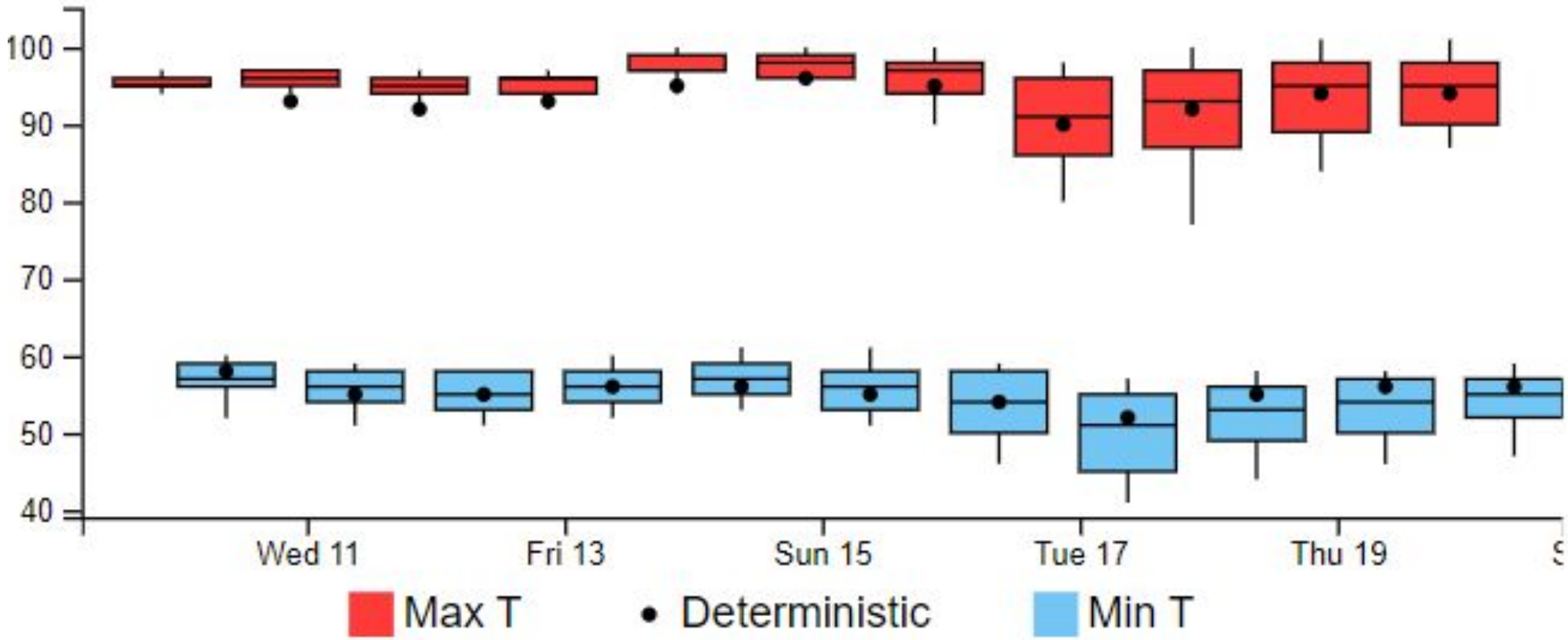
Weather Forecast Office Utah Day 1-7 Outlook - Milford Temperatures



Agency - National Weather Service Weather Forecast Office
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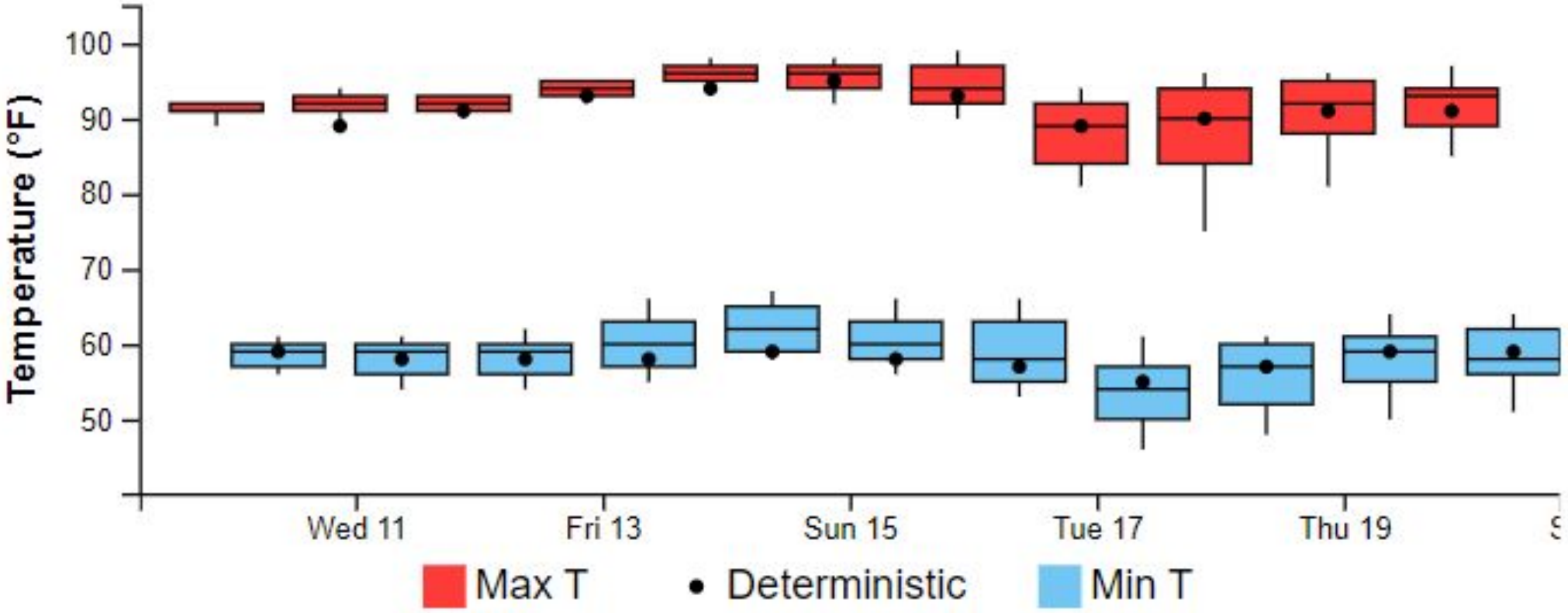
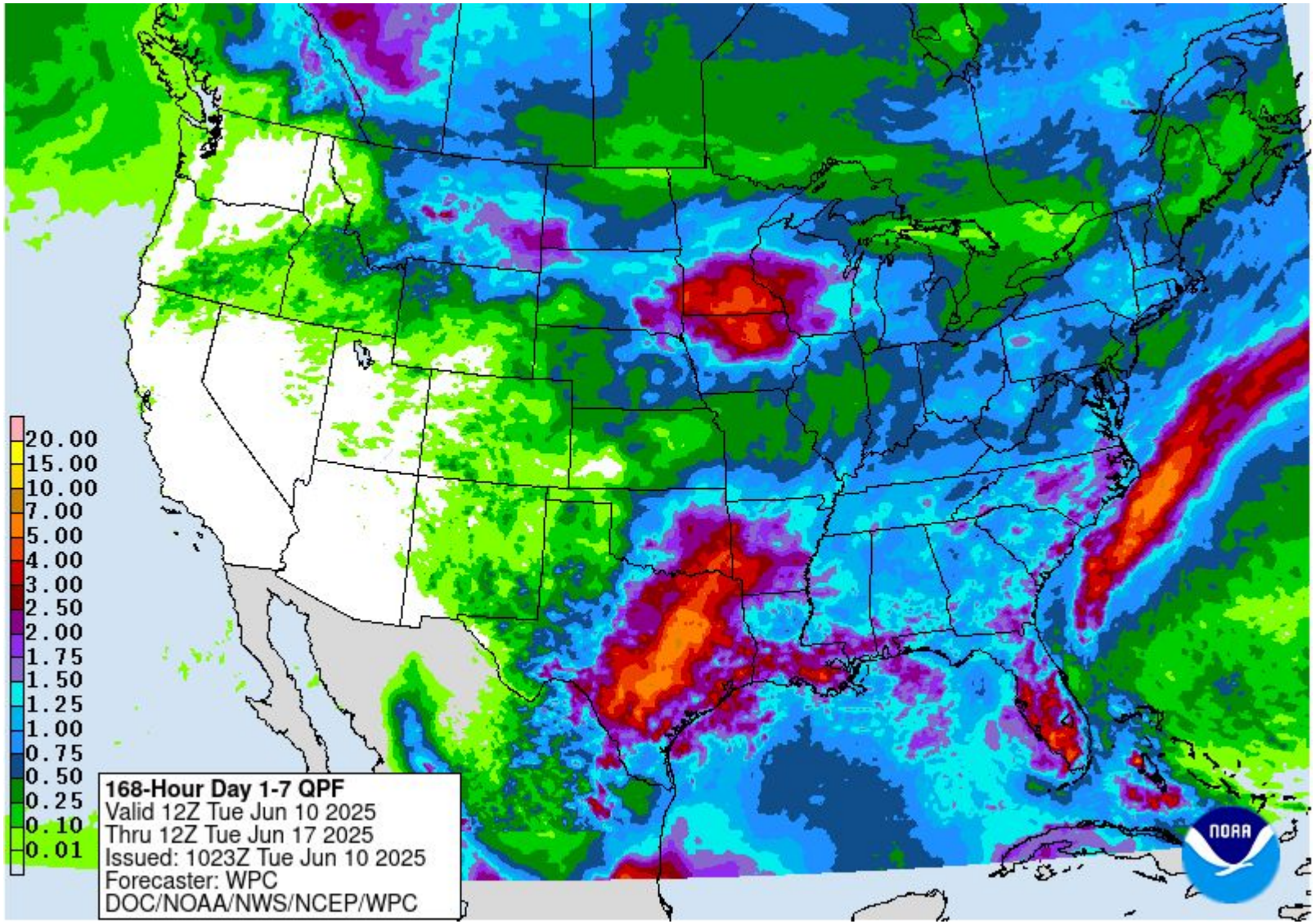
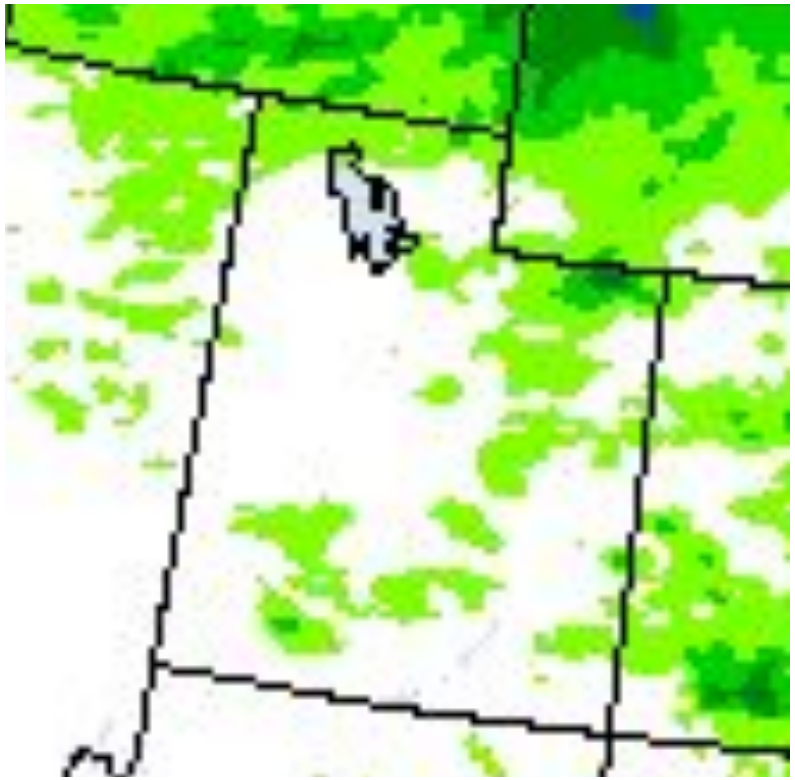
Weather Forecast Office Utah Day 1-7 Outlook - Price Temperatures



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

Weather Forecast Office Utah Day 1-7 Outlook - Precipitation





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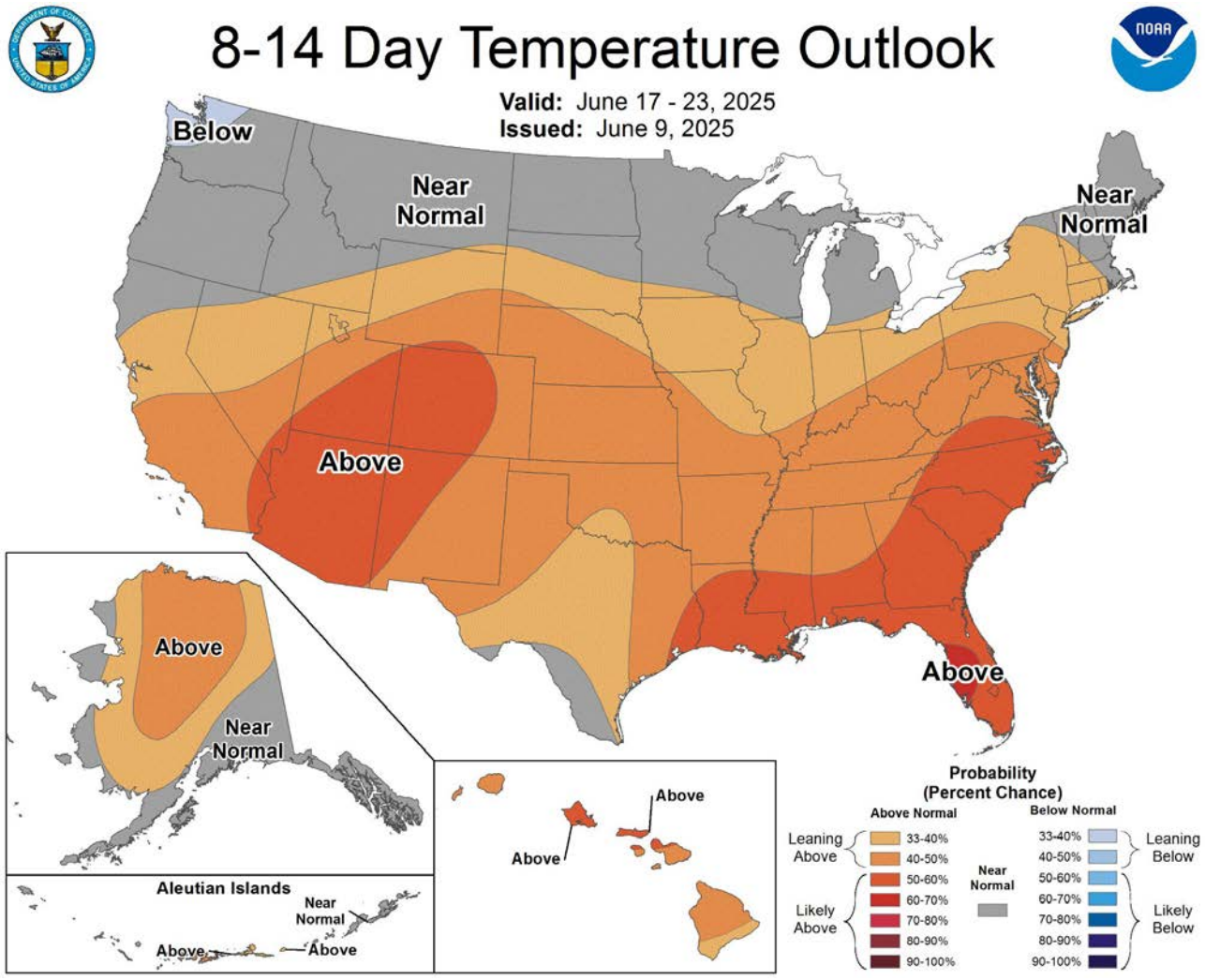
Climate Prediction Center 8 to 14 Day Outlooks - Temperature



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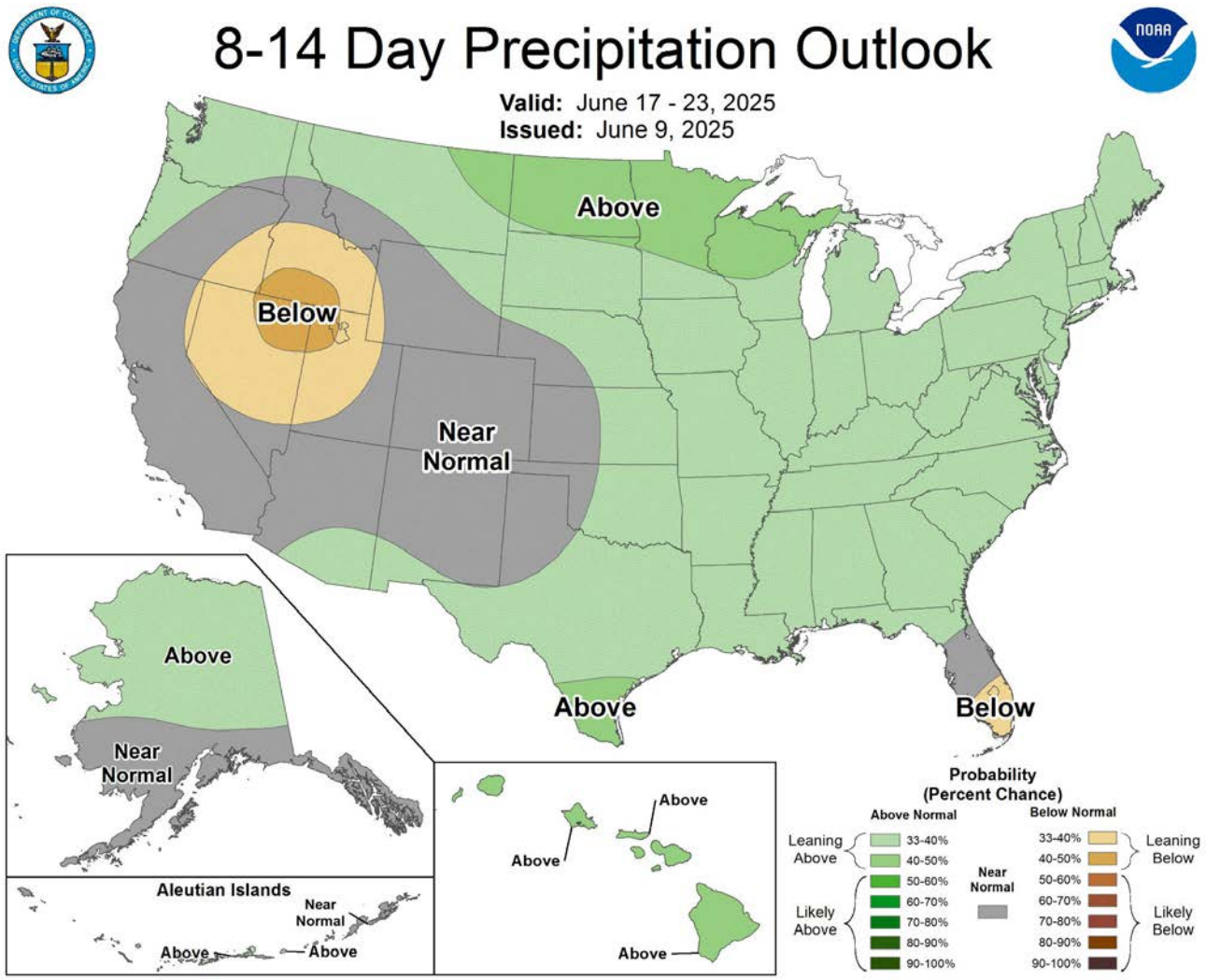
Climate Prediction Center 8 to 14 Day Outlooks - Precipitation



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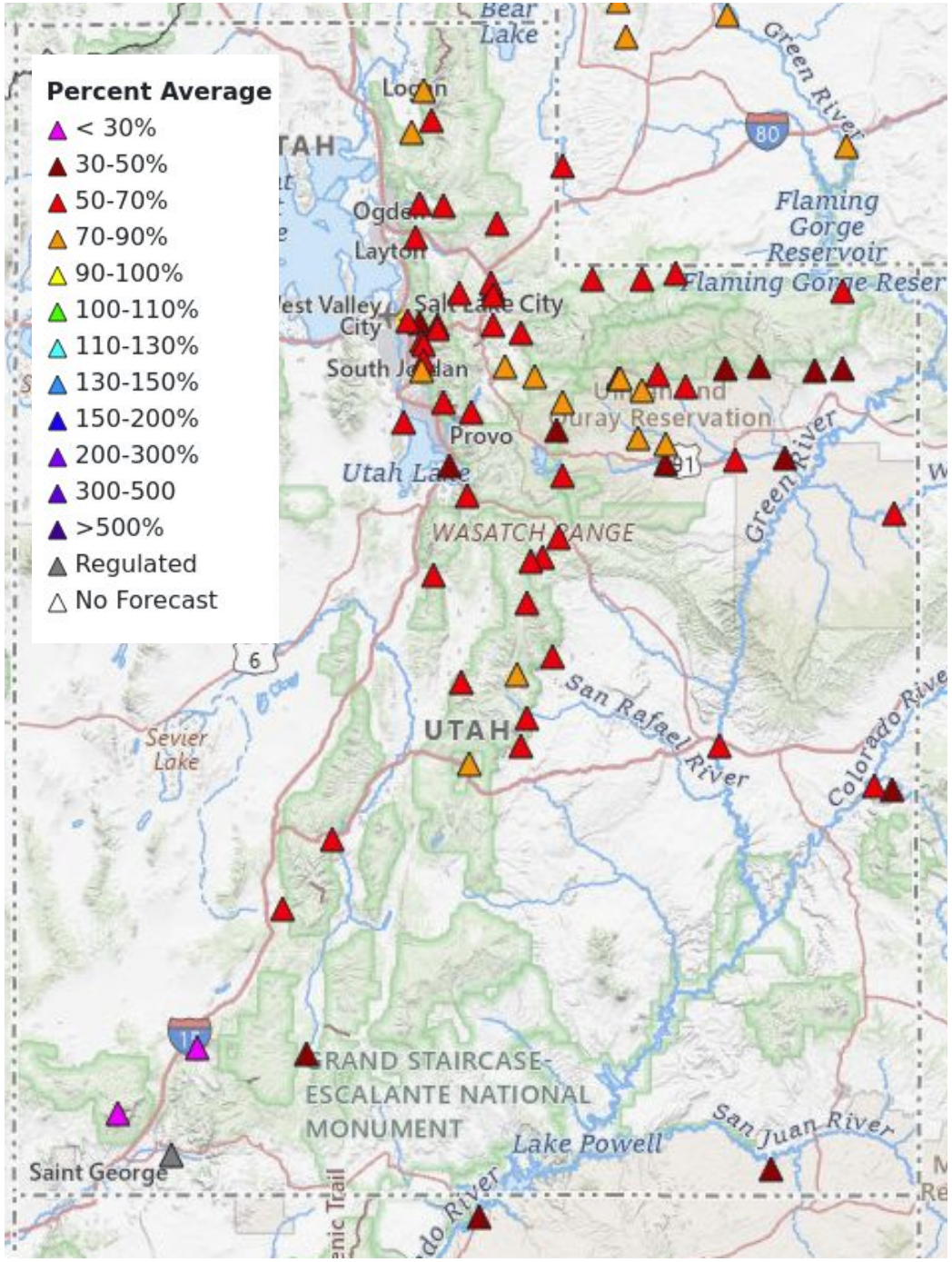
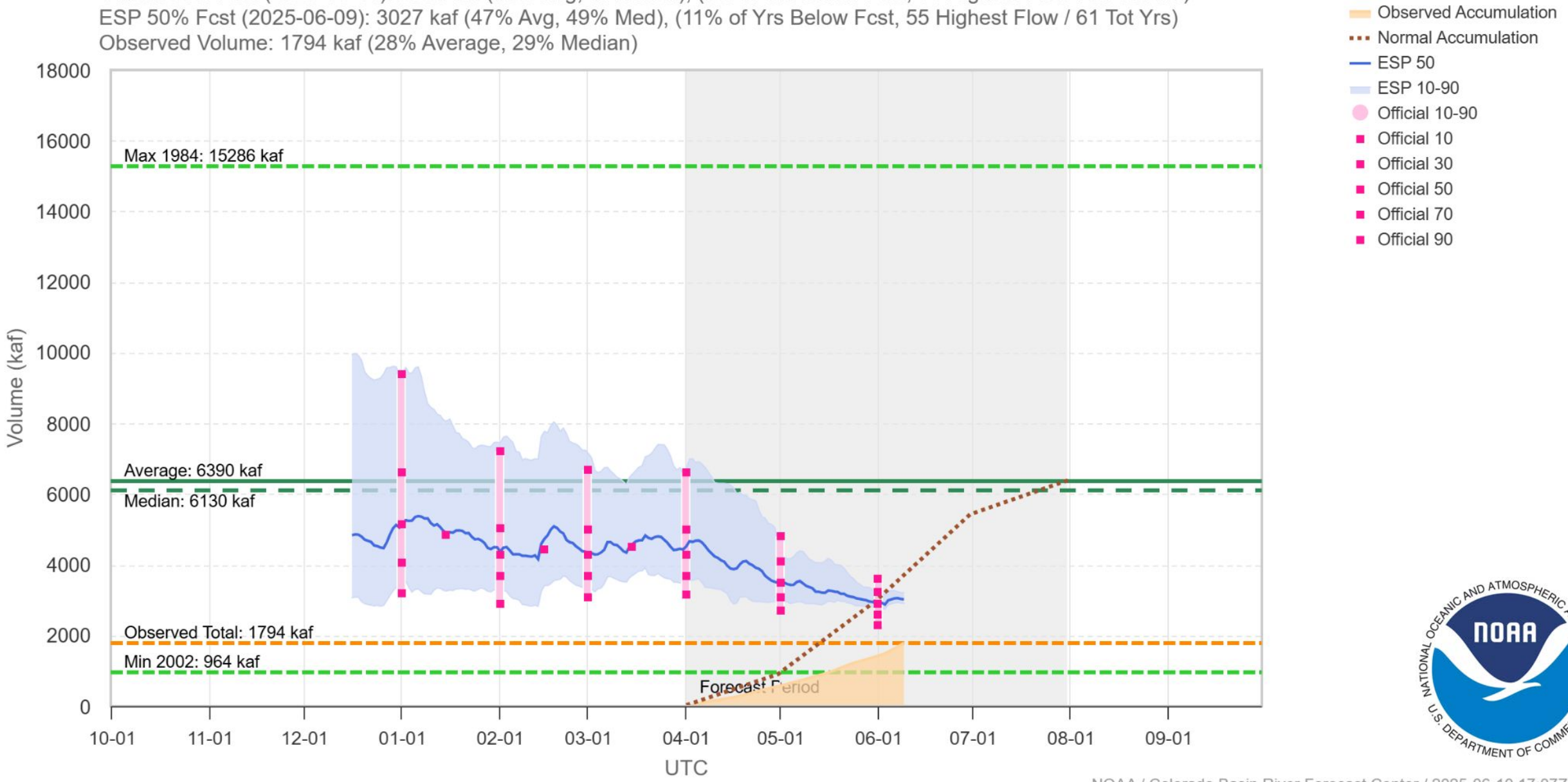


Water supply forecasts throughout Utah remained well below average in response to continued dry and warm conditions. Forecasts ranges across basins are:

Bear	55% to 86%
Weber	49% to 69%
Six Creeks	44% to 76%
Provo	39% to 88%
Sevier	27% to 71%
Virgin	22%

2025 Water Supply Forecast - Colorado - Lake Powell, Glen Cyn Dam, At (GLDA3)

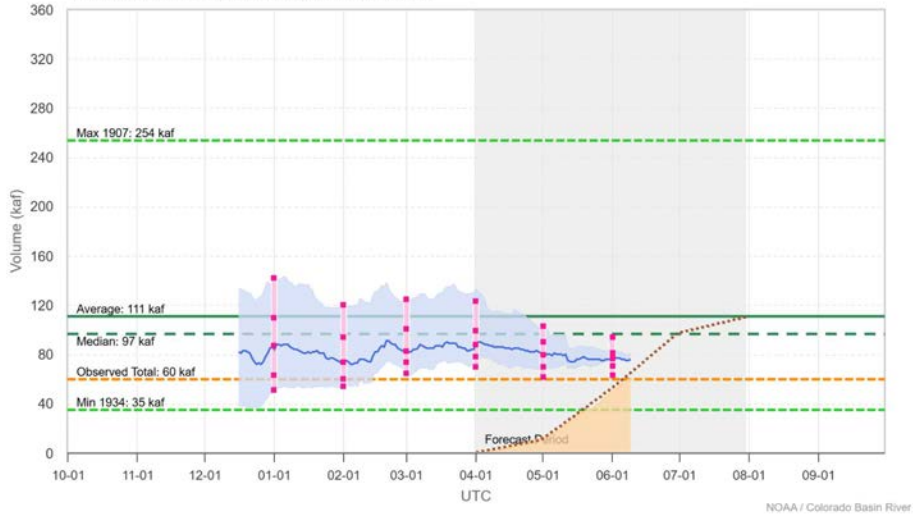
ESP is Unregulated and No Precipitation Forecast Included
Official 50% Fcst (2025-06-01): 2900 kaf (45% Avg, 47% Med), (9% of Yrs Below Fcst, 56 Highest Flow / 61 Tot Yrs)
ESP 50% Fcst (2025-06-09): 3027 kaf (47% Avg, 49% Med), (11% of Yrs Below Fcst, 55 Highest Flow / 61 Tot Yrs)
Observed Volume: 1794 kaf (28% Average, 29% Median)



NOAA / Colorado Basin River Forecast Center / 2025-06-10 17:07Z

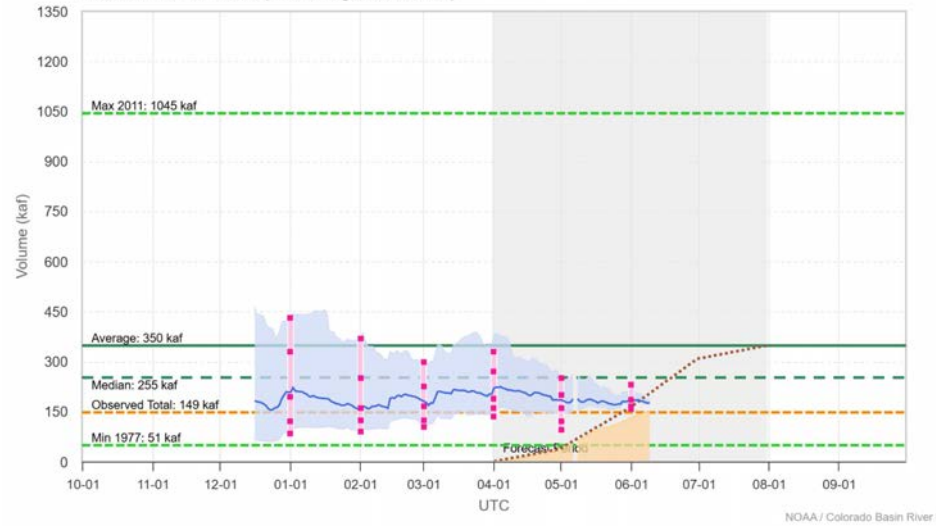
2025 Water Supply Forecast - Weber - Oakley, Nr (OAWU1)

ESP is Unregulated and No Precipitation Forecast Included
Official 50% Fcst (2025-06-01): 77 kaf (69% Avg, 79% Med), (16% of Yrs Below Fcst, 100 Highest Flow / 119 Tot Yrs)
ESP 50% Fcst (2025-06-09): 76 kaf (69% Avg, 79% Med), (15% of Yrs Below Fcst, 101 Highest Flow / 119 Tot Yrs)
Observed Volume: 60 kaf (54% Average, 62% Median)



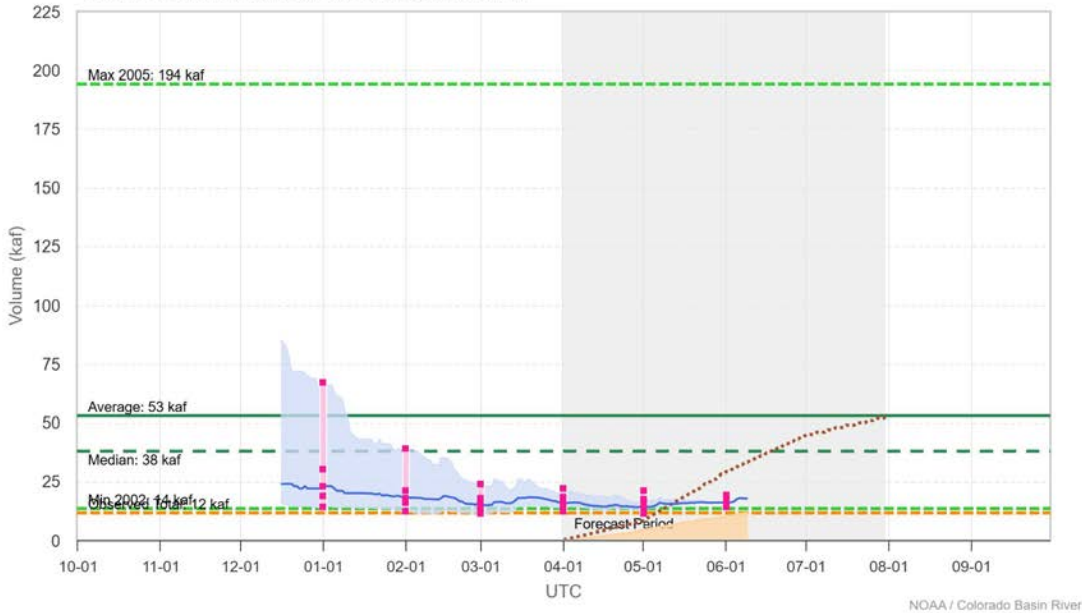
2025 Water Supply Forecast - Duchesne - Randlett, Nr (DURU1)

ESP is Unregulated and No Precipitation Forecast Included
Official 50% Fcst (2025-06-01): 165 kaf (47% Avg, 65% Med), (18% of Yrs Below Fcst, 68 Highest Flow / 82 Tot Yrs)
ESP 50% Fcst (2025-06-09): 177 kaf (51% Avg, 69% Med), (20% of Yrs Below Fcst, 66 Highest Flow / 82 Tot Yrs)
Observed Volume: 149 kaf (43% Average, 58% Median)



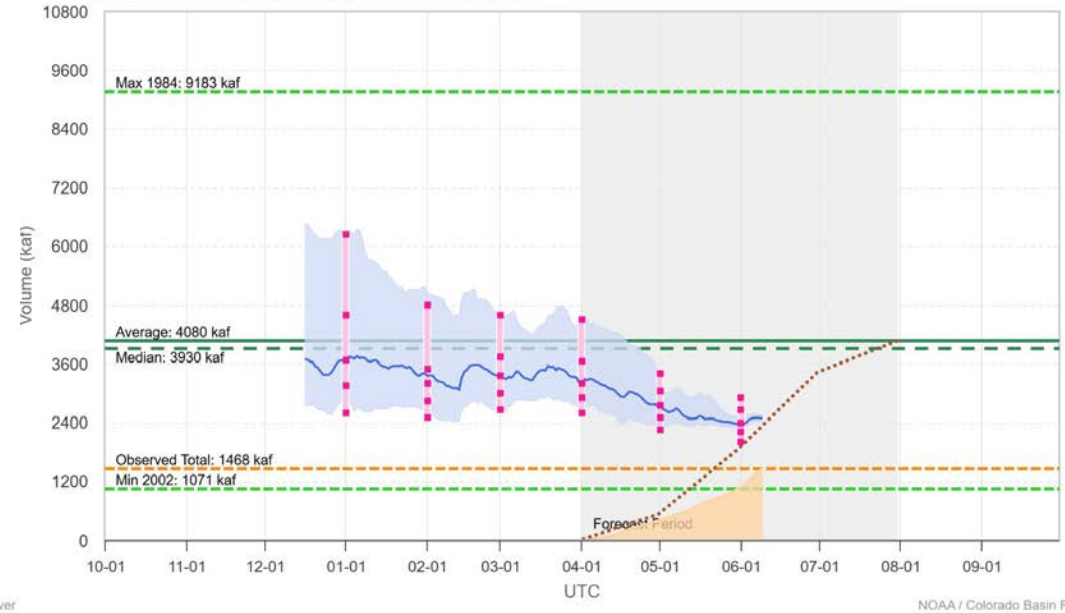
2025 Water Supply Forecast - Sevier - Hatch (HATU1)

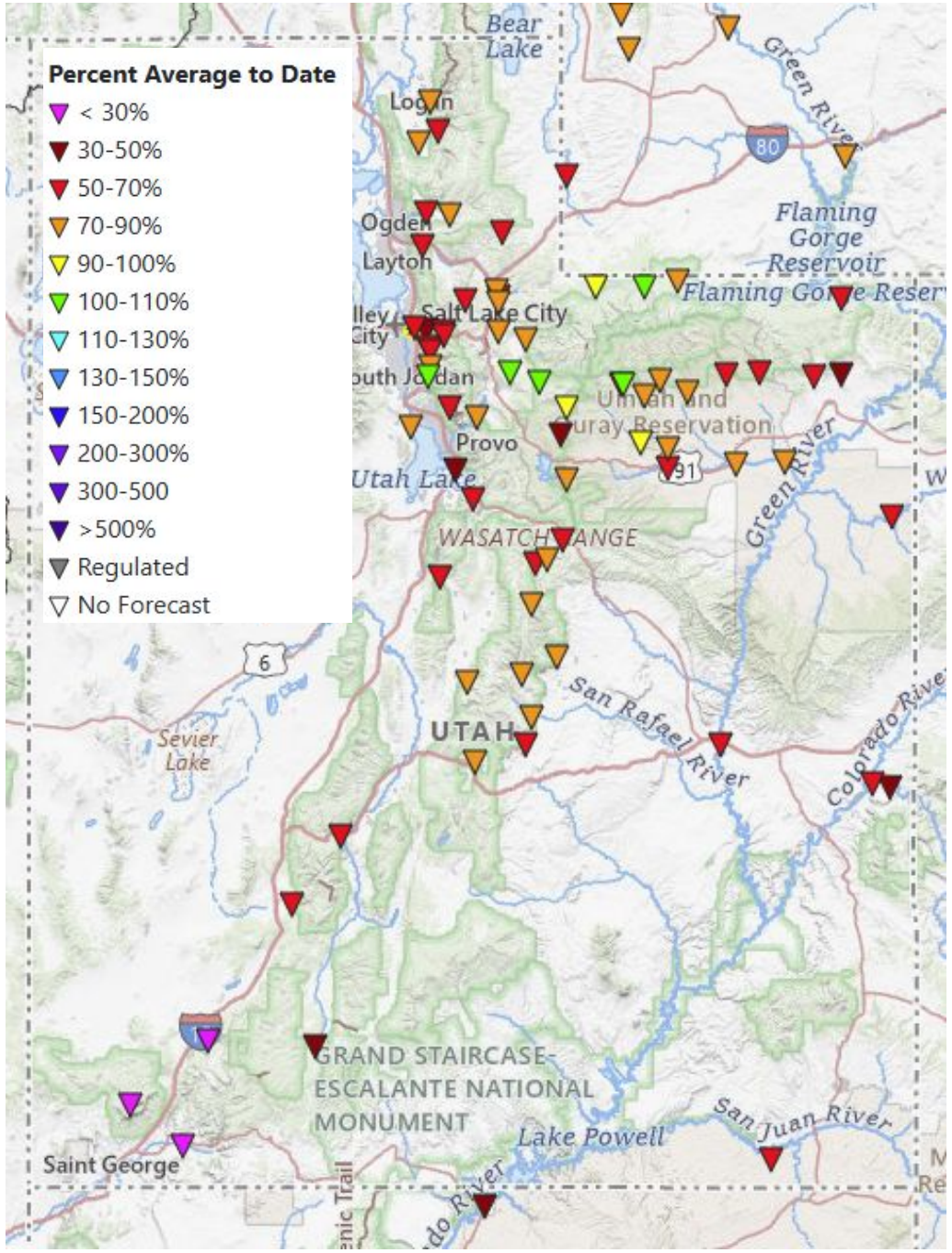
ESP is Unregulated and No Precipitation Forecast Included
Official 50% Fcst (2025-06-01): 16.2 kaf (31% Avg, 43% Med), (4% of Yrs Below Fcst, 69 Highest Flow / 71 Tot Yrs)
ESP 50% Fcst (2025-06-09): 17.8 kaf (33% Avg, 47% Med), (5% of Yrs Below Fcst, 68 Highest Flow / 71 Tot Yrs)
Observed Volume: 11.6 kaf (22% Average, 30% Median)



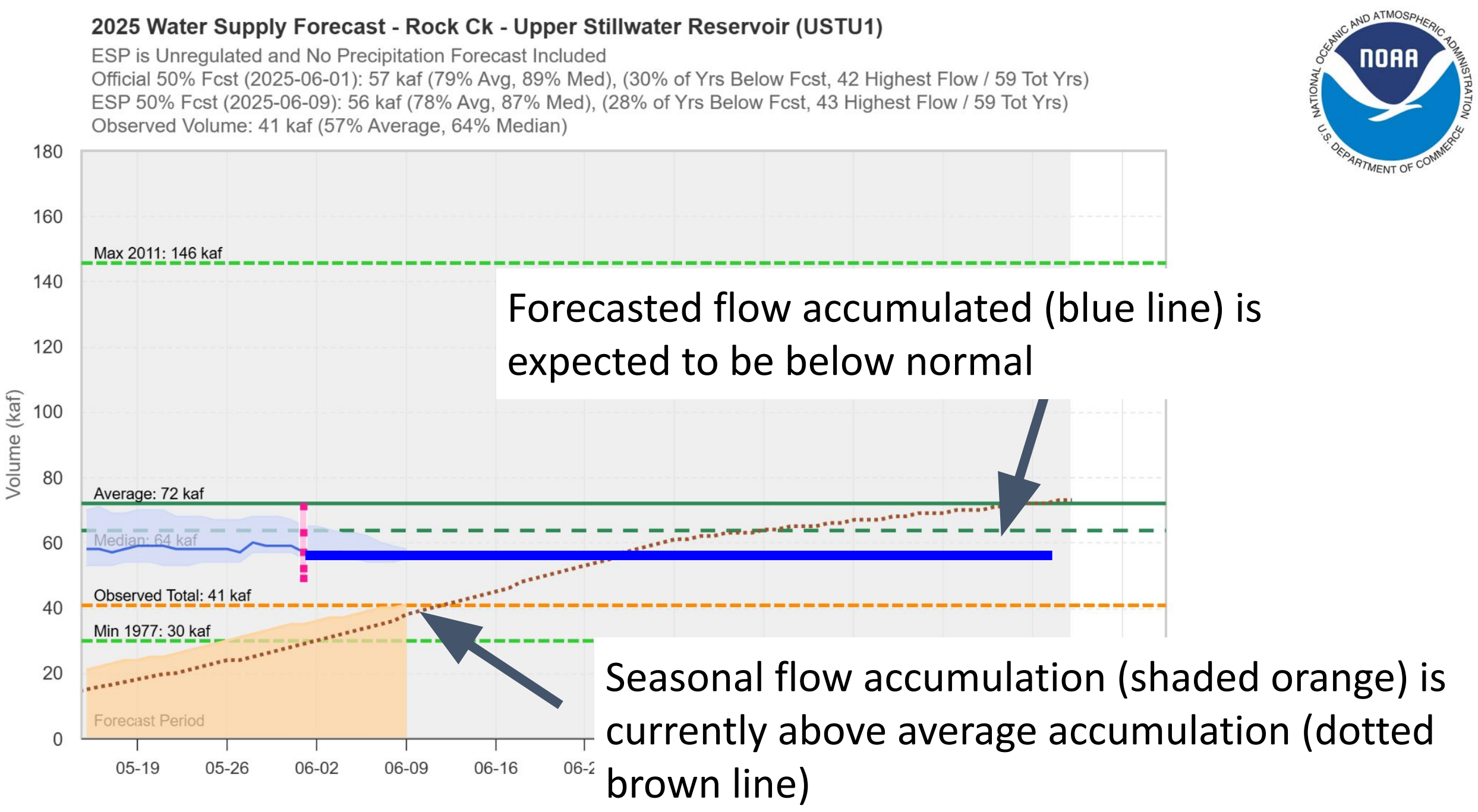
2025 Water Supply Forecast - Colorado - Cisco, Nr (CLRU1)

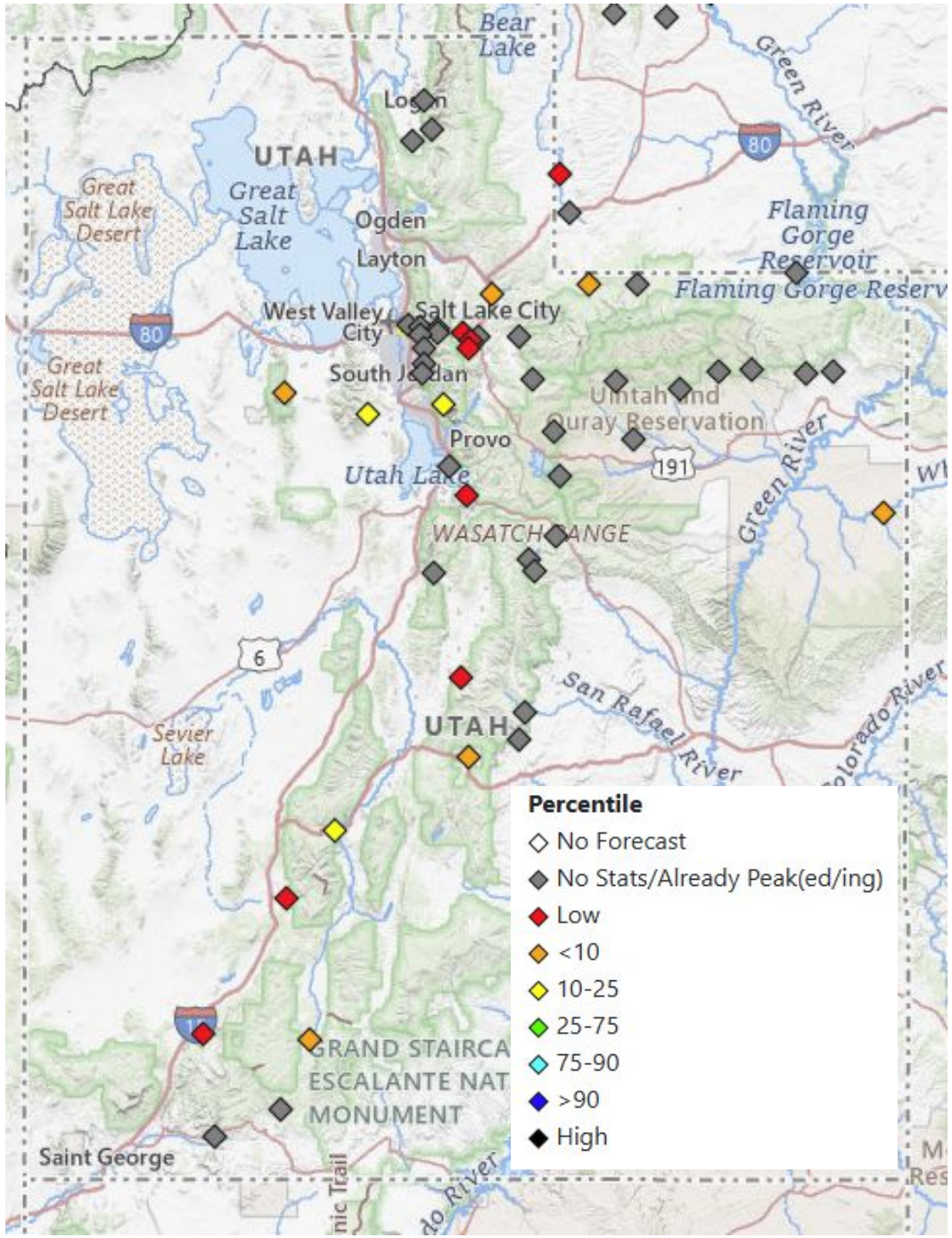
ESP is Unregulated and No Precipitation Forecast Included
Official 50% Fcst (2025-06-01): 2400 kaf (59% Avg, 61% Med), (13% of Yrs Below Fcst, 39 Highest Flow / 44 Tot Yrs)
ESP 50% Fcst (2025-06-09): 2496 kaf (61% Avg, 64% Med), (13% of Yrs Below Fcst, 39 Highest Flow / 44 Tot Yrs)
Observed Volume: 1468 kaf (36% Average, 37% Median)





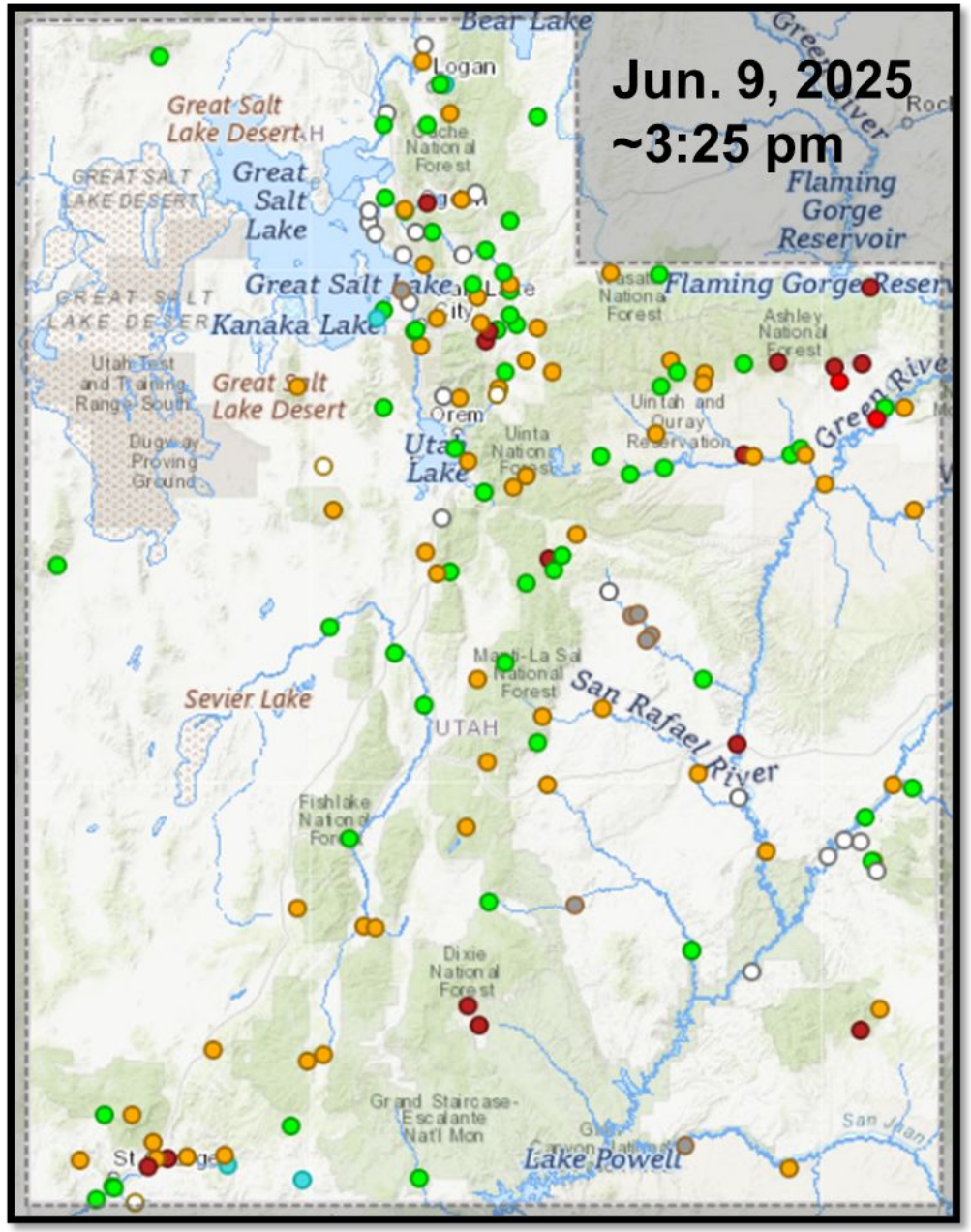
If you are interested in seeing how seasonal streamflow volume accumulation is progressing, you can access that information from our website. Total seasonal volumes for all sites is expected to be below average, but there are some sites where seasonal runoff to date has exceeded the average accumulation.


2025 Water Supply Forecast - Rock Ck - Upper Stillwater Reservoir (USTU1)
ESP is Unregulated and No Precipitation Forecast Included
Official 50% Fcst (2025-06-01): 57 kaf (79% Avg, 89% Med), (30% of Yrs Below Fcst, 42 Highest Flow / 59 Tot Yrs)
ESP 50% Fcst (2025-06-09): 56 kaf (78% Avg, 87% Med), (28% of Yrs Below Fcst, 43 Highest Flow / 59 Tot Yrs)
Observed Volume: 41 kaf (57% Average, 64% Median)
Volume (kaf)
180
160
140
120
100
80
60
40
20
0
Max 2011: 146 kaf
Average: 72 kaf
Median: 64 kaf
Observed Total: 41 kaf
Min 1977: 30 kaf
Forecast Period
05-19
05-26
06-02
06-09
06-16
Forecasted flow accumulated (blue line) is expected to be below normal
Seasonal flow accumulation (shaded orange) is currently above average accumulation (dotted brown line)



Forecasted and observed peak flows throughout Utah are also below average, with most remaining peaks forecasted to be below the 10th percentile or historically low.

Current Streamflow Conditions



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

Percentage of Gages

Day-of-Year Status	May 27	June 9
All-time high for this day-of-year	0.0%	0.0%
Much above normal for this day-of-year	1.3%	0.0%
Above normal for this day-of-year	0.6%	2.4%
Normal for this day-of-year	38.4%	35.2%
Below normal for this day-of-year	26.4%	34.5%
Much below normal for this day-of-year	13.8%	9.1%
All-time low for this day-of-year	3.1%	1.2%
Not ranked - insufficient record	13.2%	15.2%

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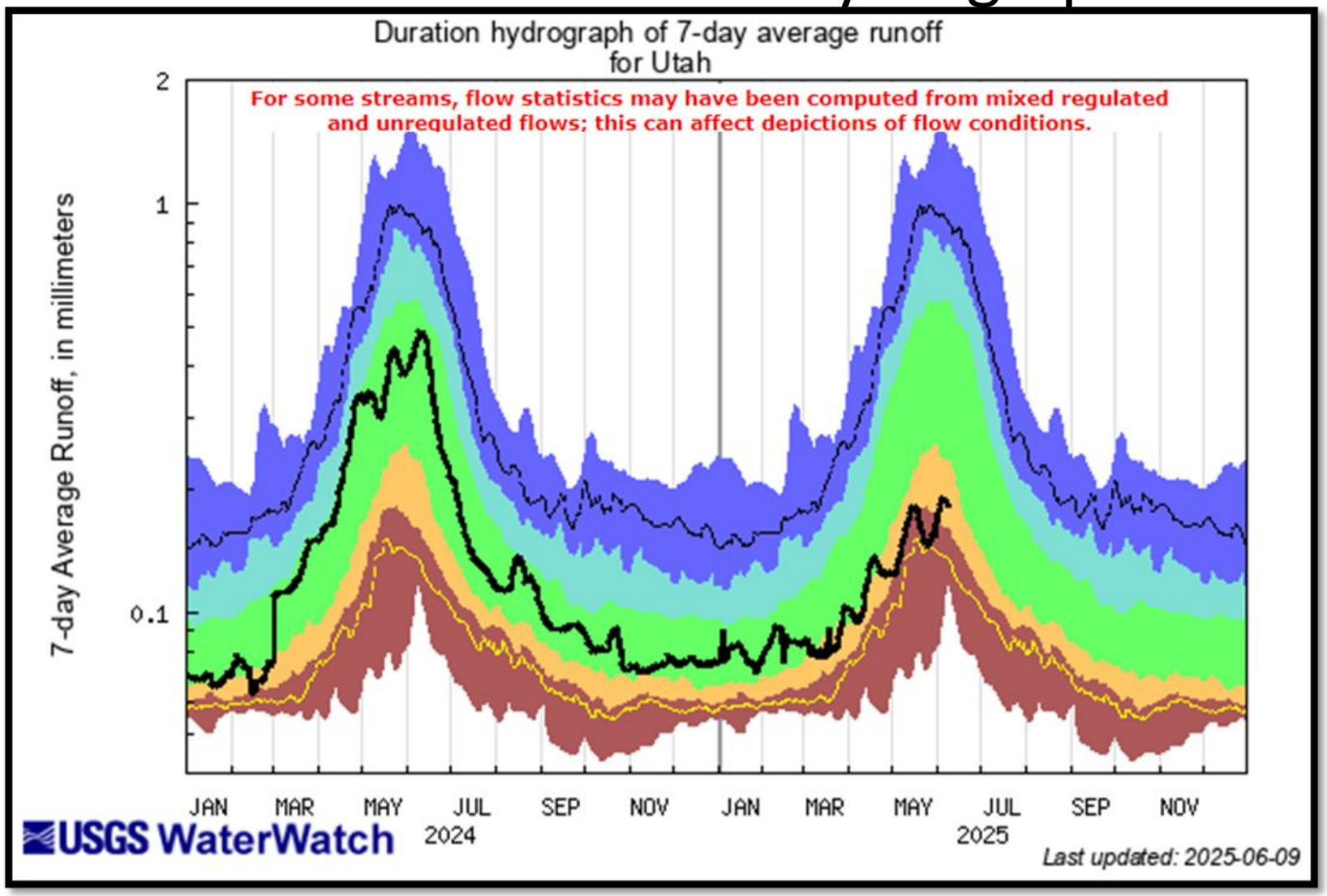
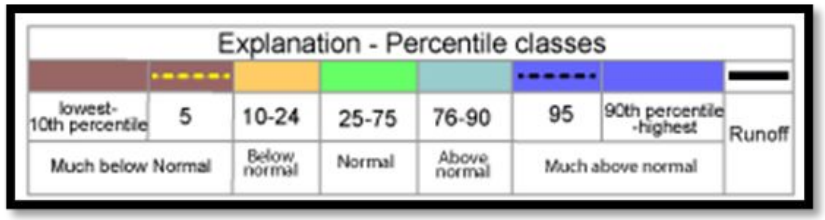
Utah Area-Based Duration Hydrograph





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- **The Runoff Duration Hydrograph is a graphical presentation of area-based runoff (the black line) calculated as a weighted average of HUC 8-runoff, plotted over the long-term statistics of runoff for each day or month of the year for each area.**

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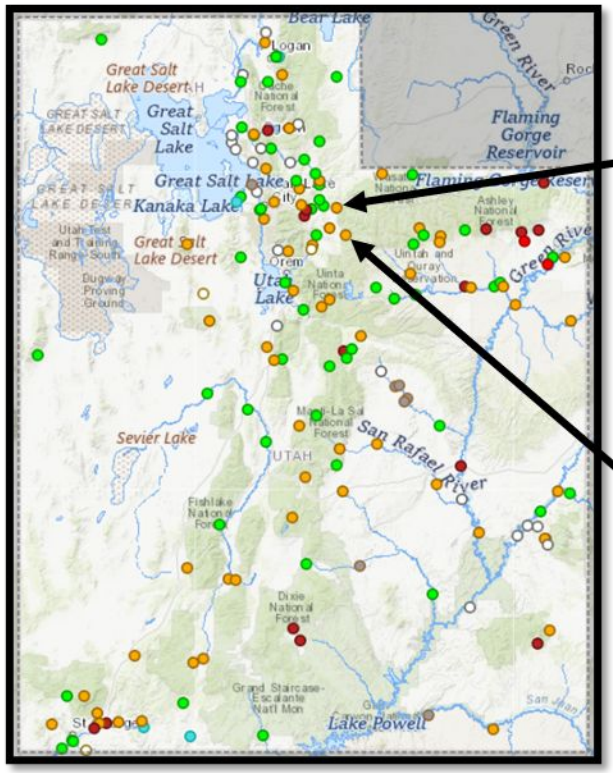
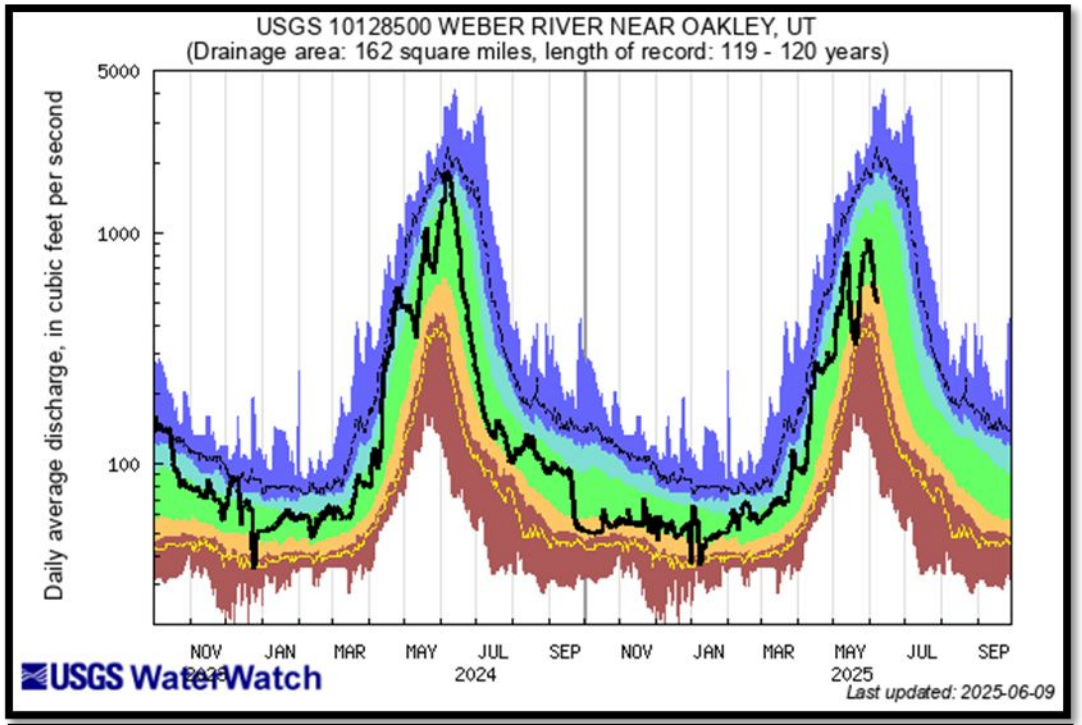
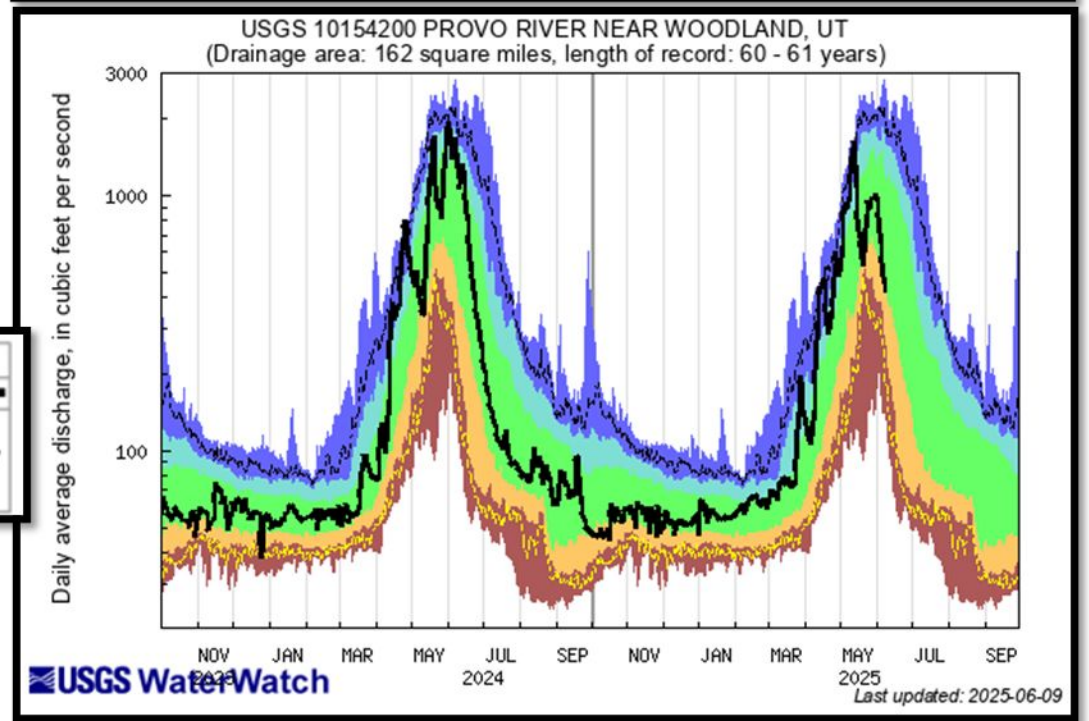
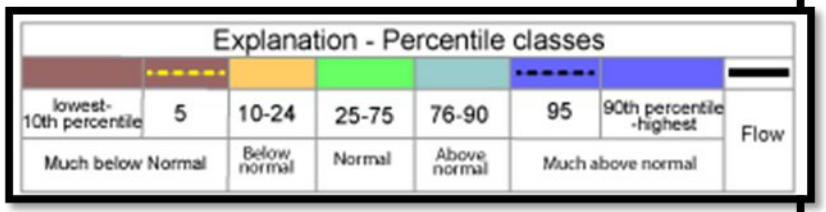
Streamflow at Selected Gages









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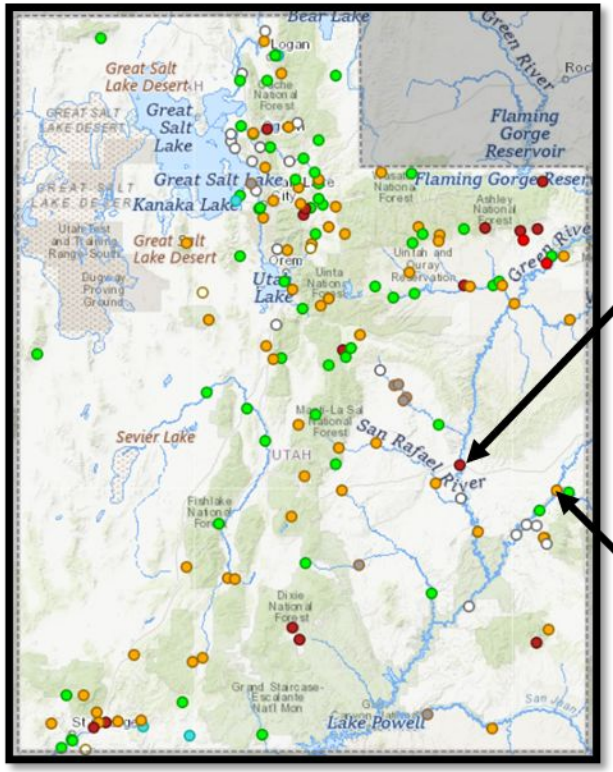
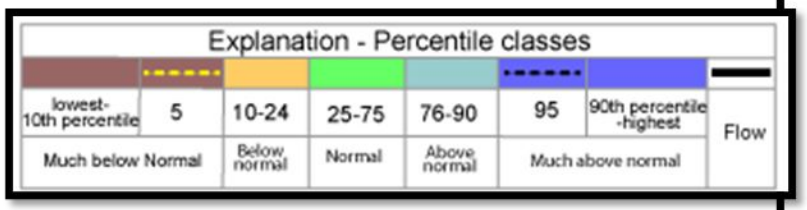
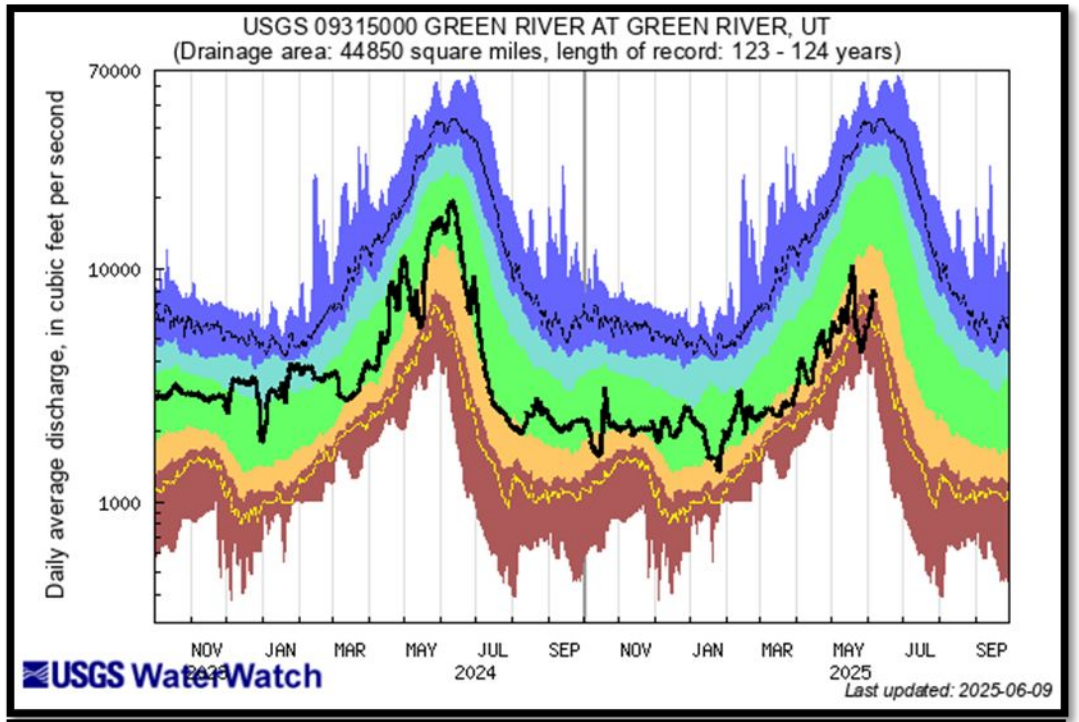
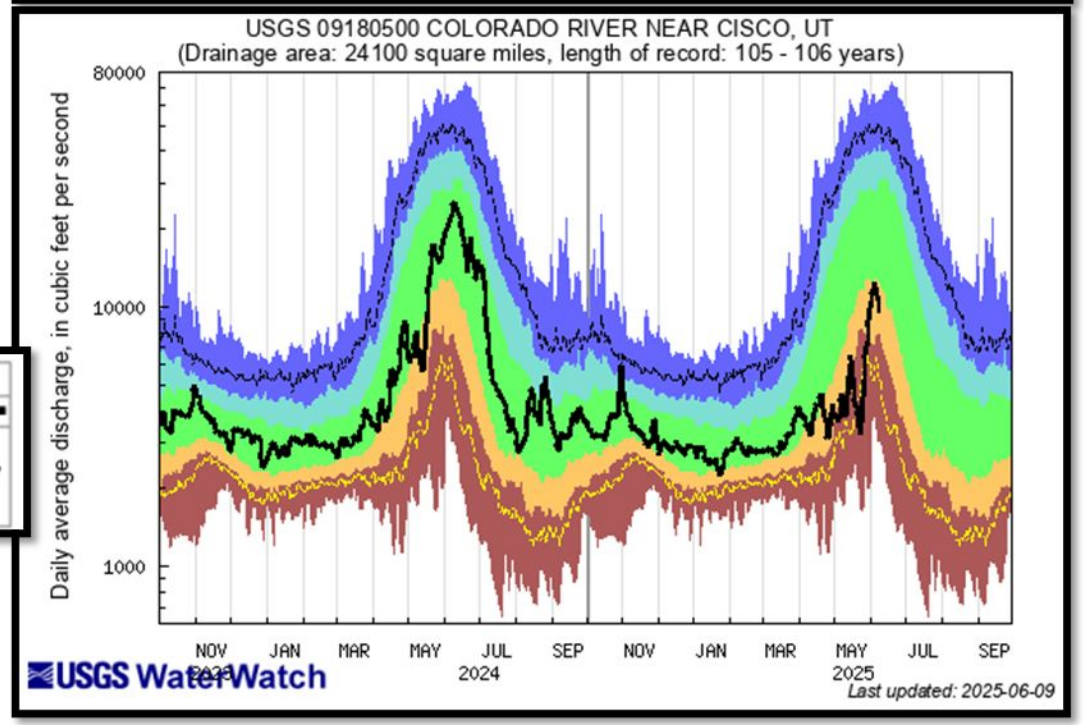
Streamflow at Selected Gages









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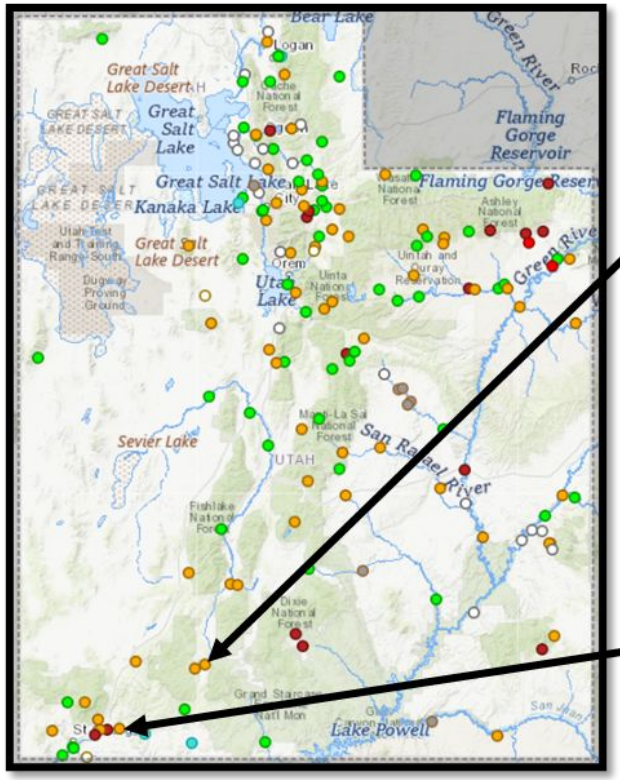
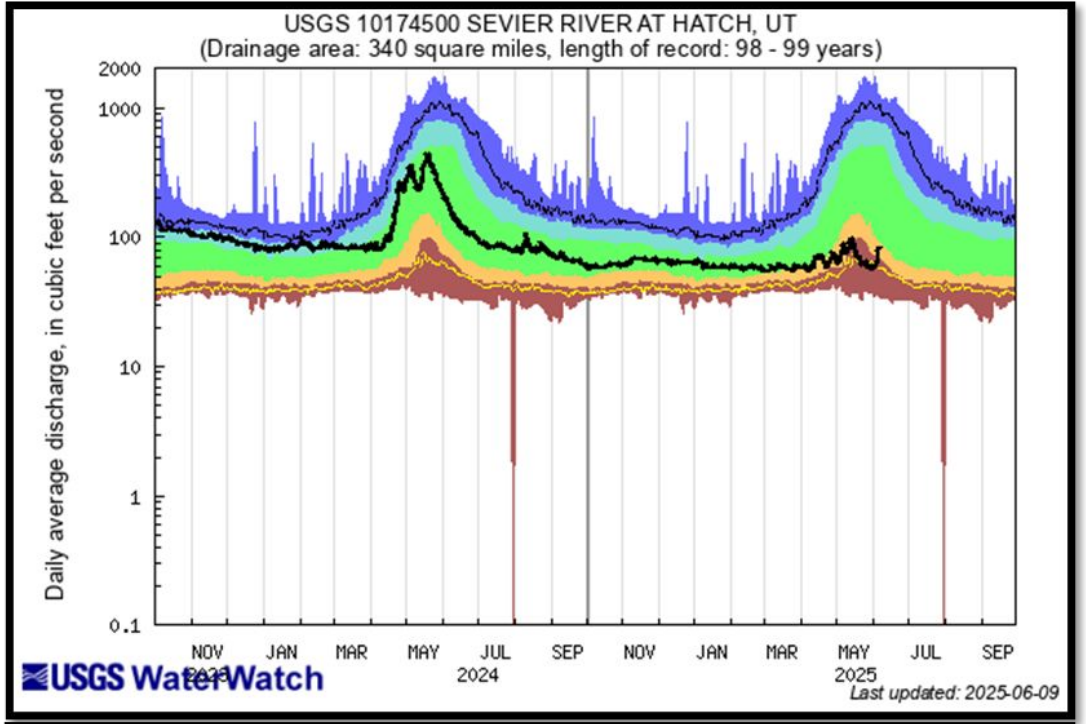
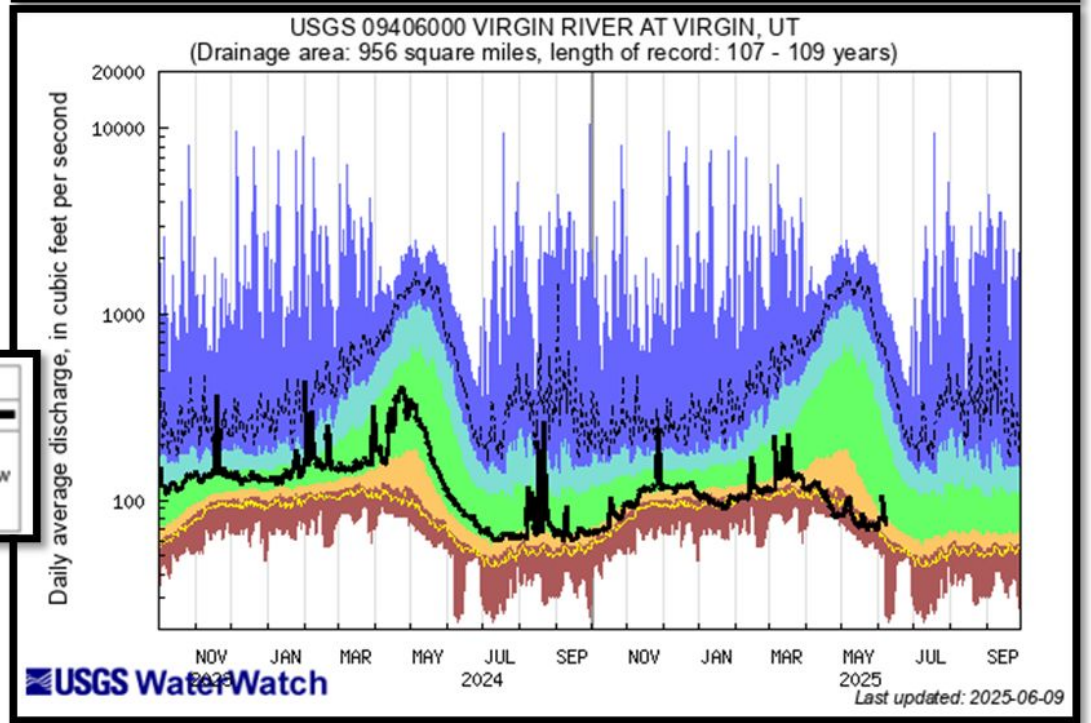
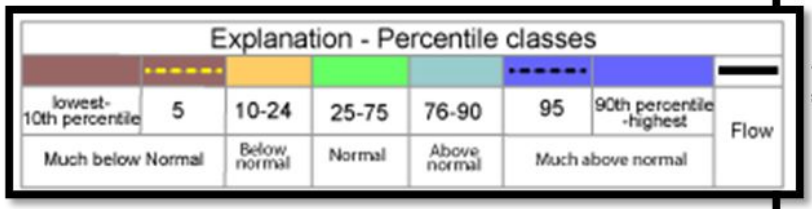
Streamflow at Selected Gages









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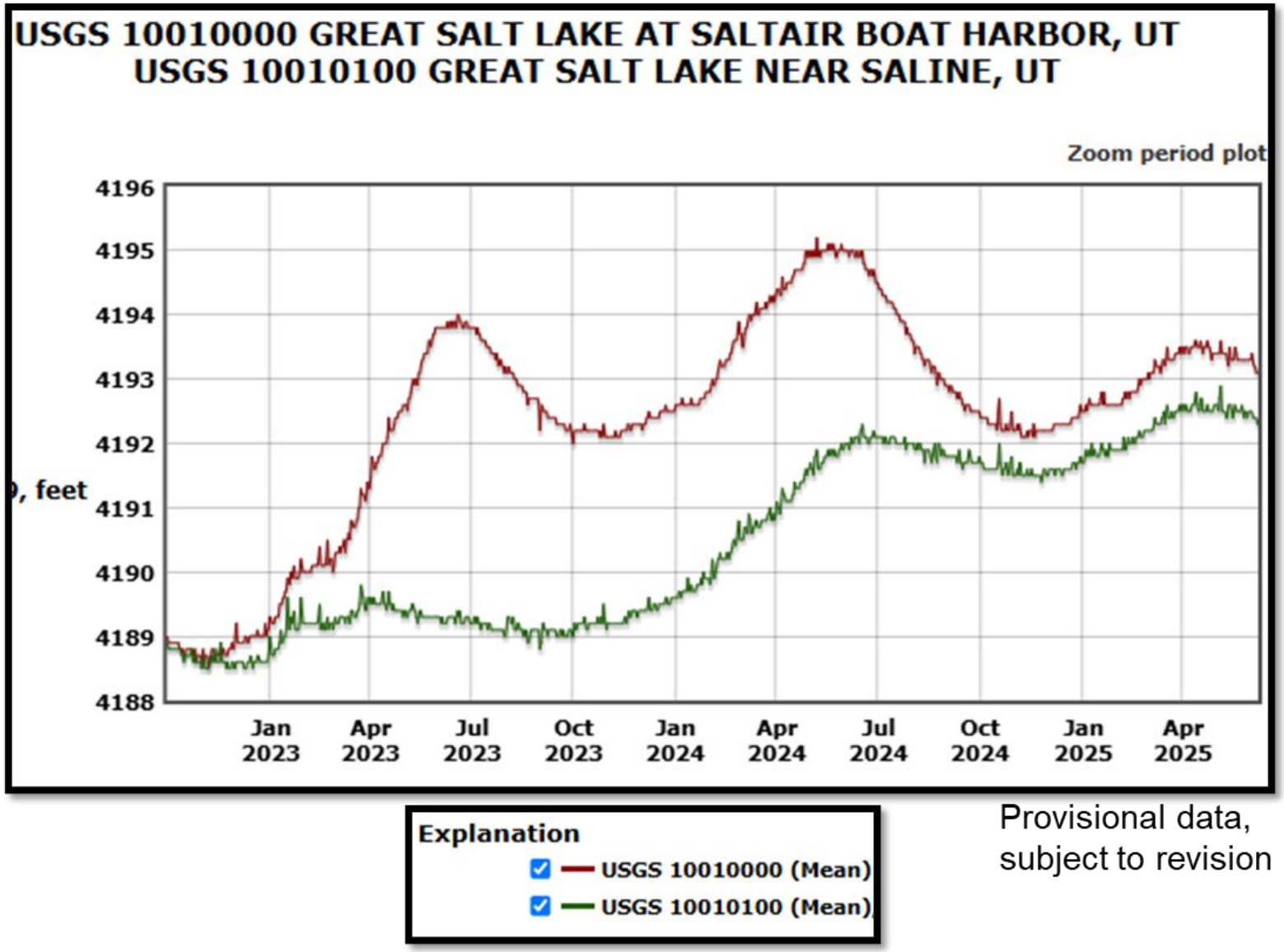
Great Salt Lake Water Surface Elevations



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Daily Values 6/8/2025

- **South Arm: 4,193.1’**
  - **Down 0.5’ since seasonal peak Apr. 2025**
- **North Arm: 4,192.3’**
  - **Down 0.6’ since seasonal peak in May 2025**

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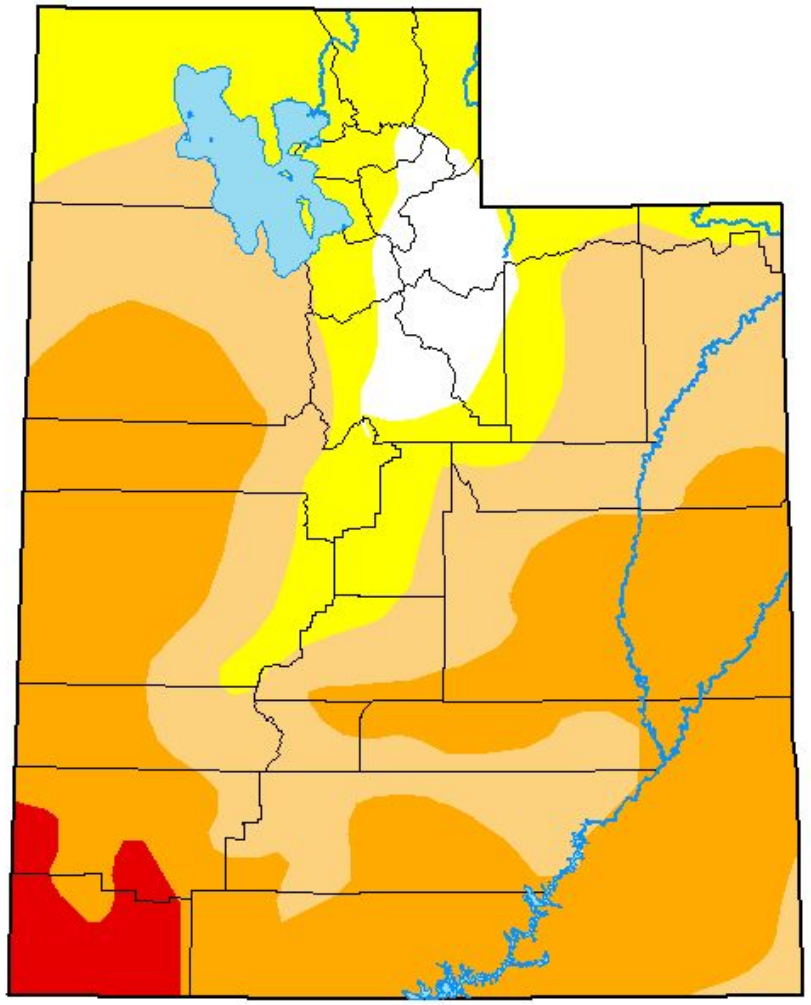
U.S. Drought Monitor
Utah

June 3, 2025
(Released Thursday, Jun. 5, 2025)
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

Author:

Brad Pugh
CPC/NOAA

droughtmonitor.unl.edu

To report on conditions between meetings:

Submit a report on CMOR drought website
Email Lhaskell@utah.gov
email drought@utah.gov