



Utah Water Conditions (drought webinar)

The meeting will begin shortly



Thank you to our contributors



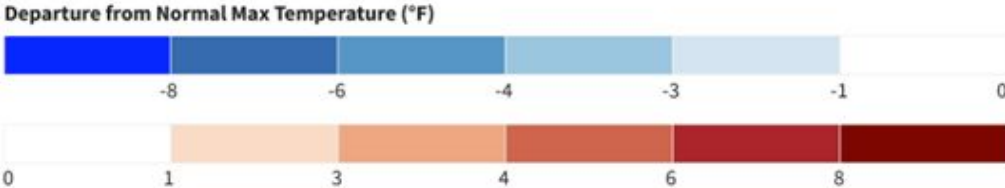
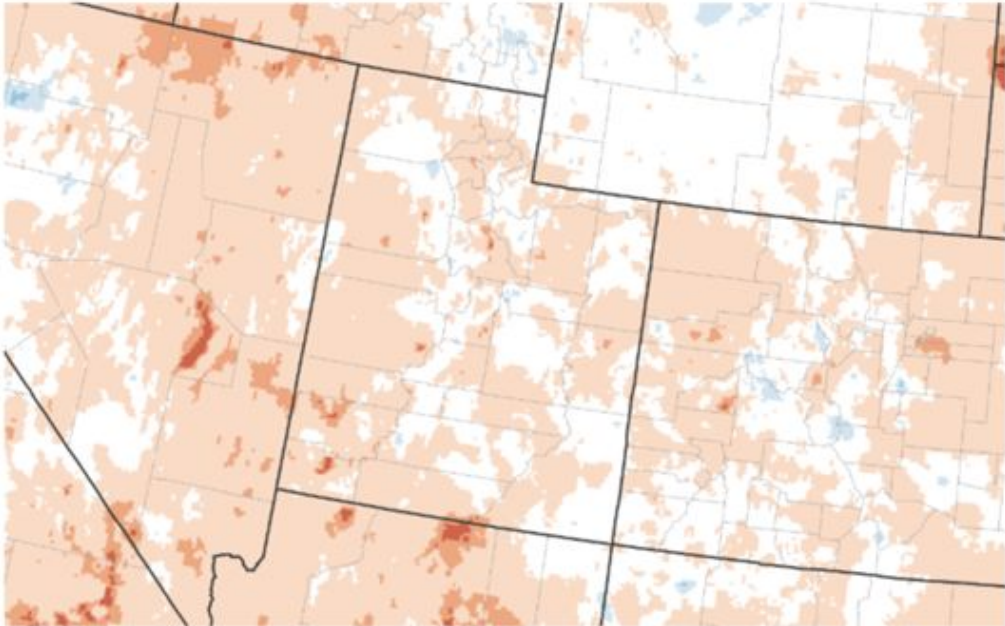


Utah Water Conditions Update

August 20, 2024

Temperature

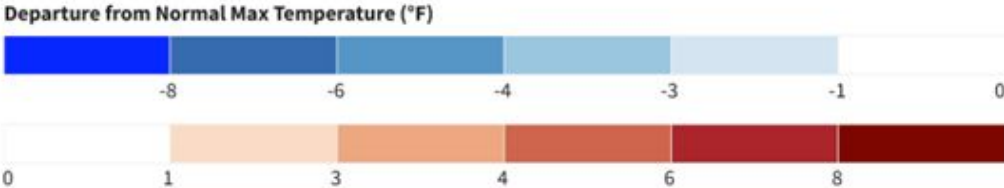
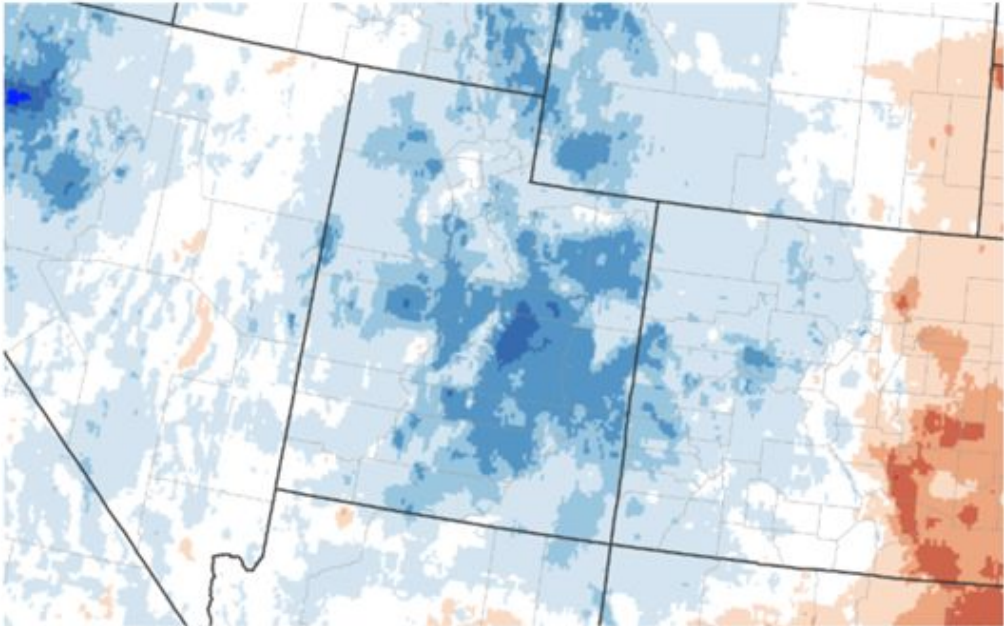
30-Day Departure from Normal Maximum Temperature (°F)



Source(s): UC Merced
Data Valid: 08/17/24

Drought.gov

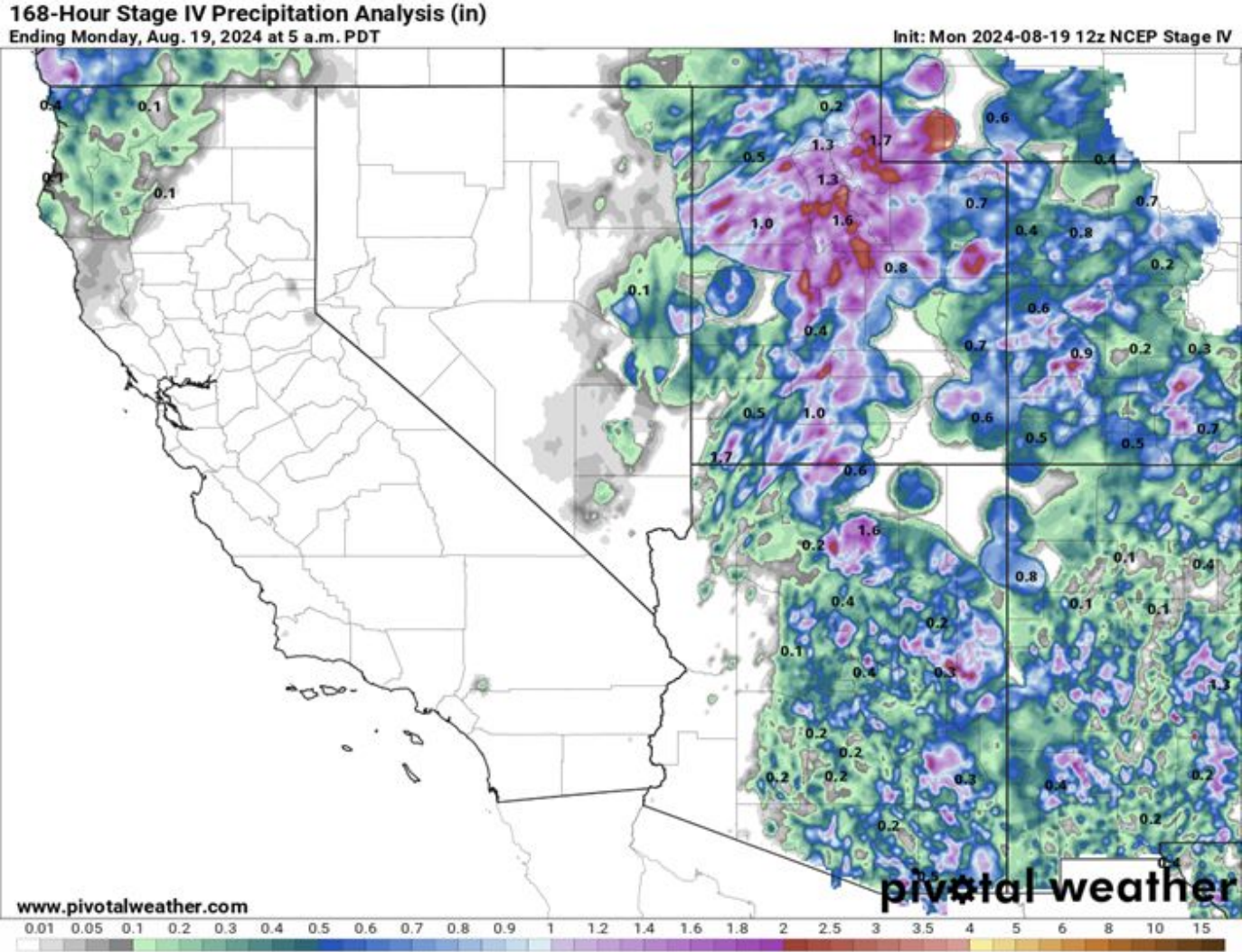
7-Day Departure from Normal Maximum Temperature (°F)



Source(s): UC Merced
Data Valid: 08/17/24

Drought.gov

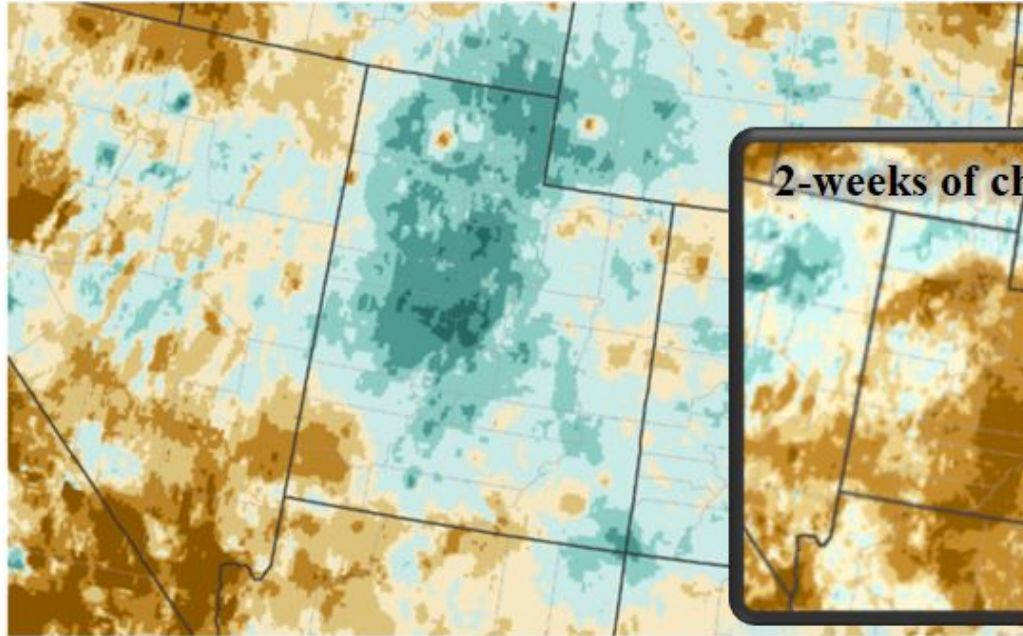
7-day Precipitation



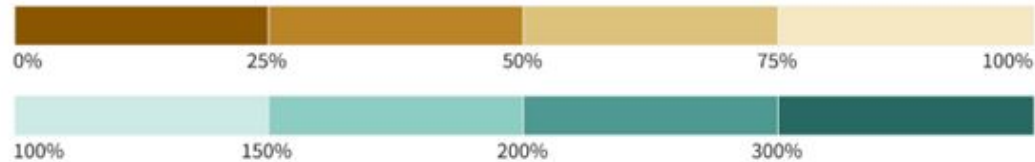
Agency - Utah Climate Center
Presenter - Jon Meyer

Precipitation

30-Day Percent of Normal Precipitation



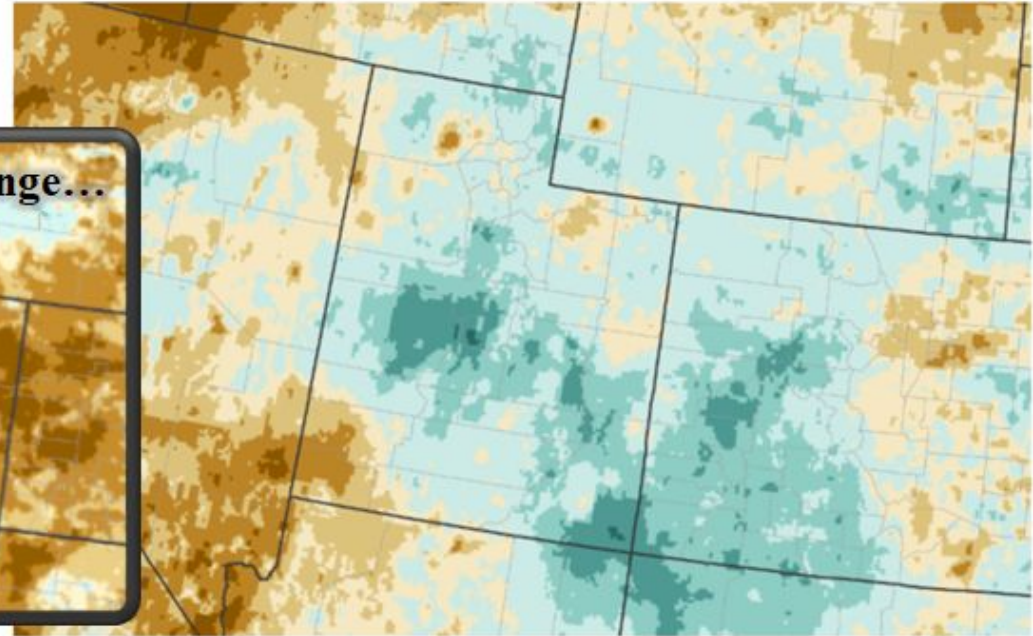
Percent of Normal Precipitation (%)



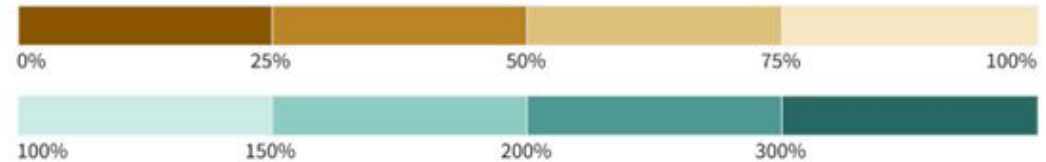
Source(s): UC Merced
Data Valid: 08/17/24

Drought.gov

60-Day Percent of Normal Precipitation



Percent of Normal Precipitation (%)

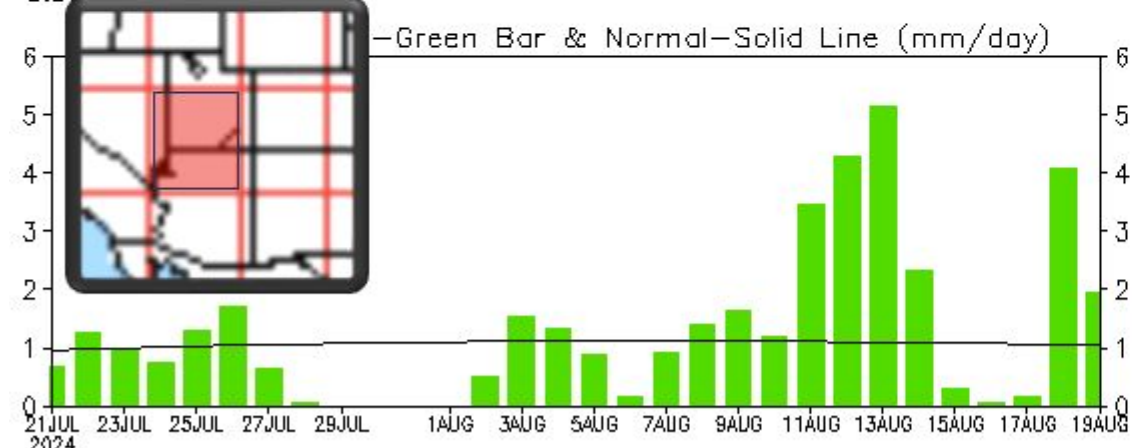
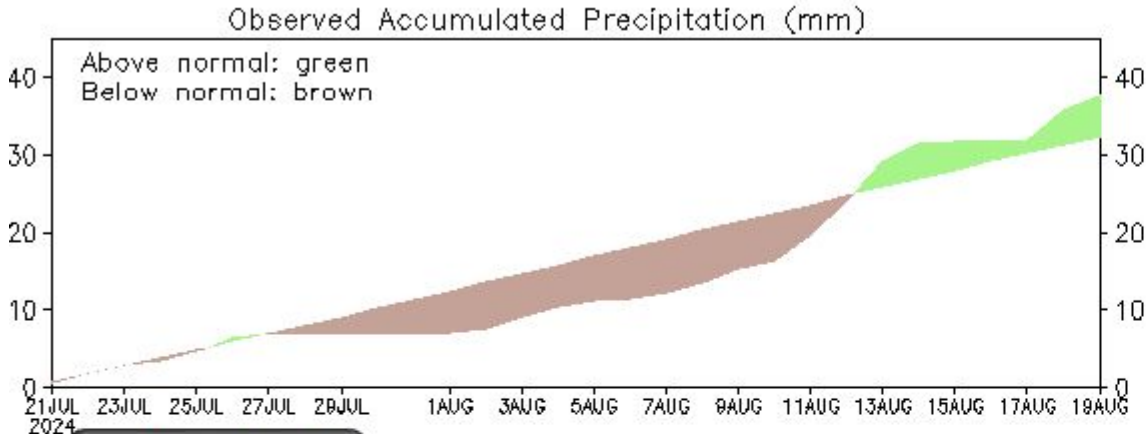


Source(s): UC Merced
Data Valid: 08/17/24

Drought.gov

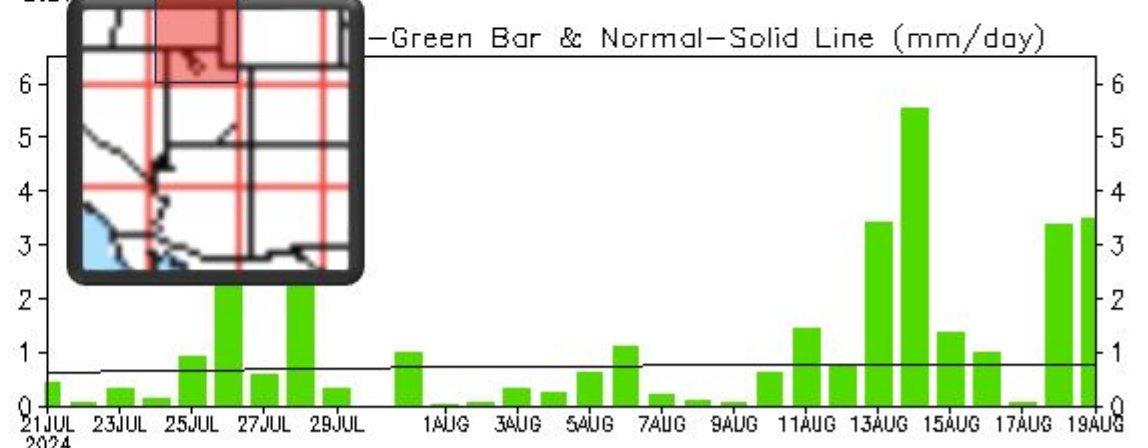
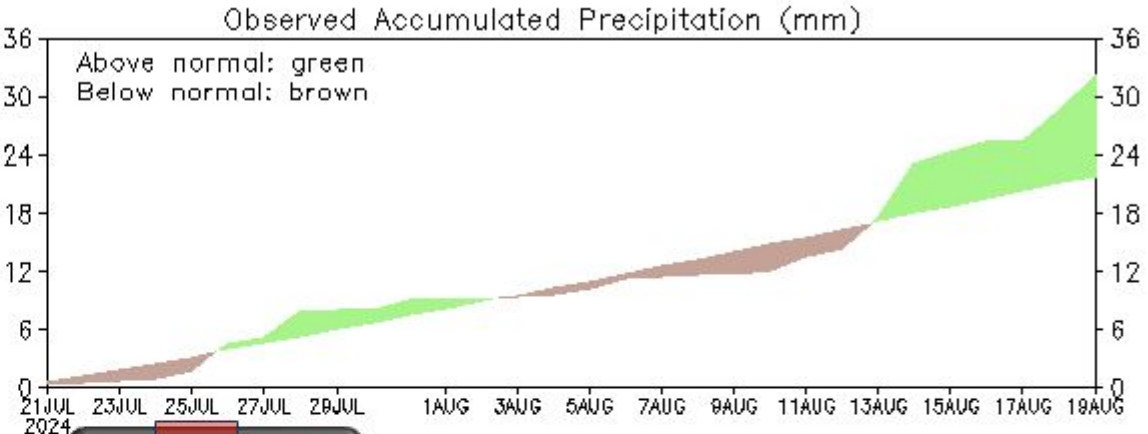
Seasonal Precipitation

(35N-40N, 115W-110W)



Data Source: CPC (Gauge-Based) Unified Precipitation (Climatology 1991-2020)
(updated on 00Z19AUG2024)

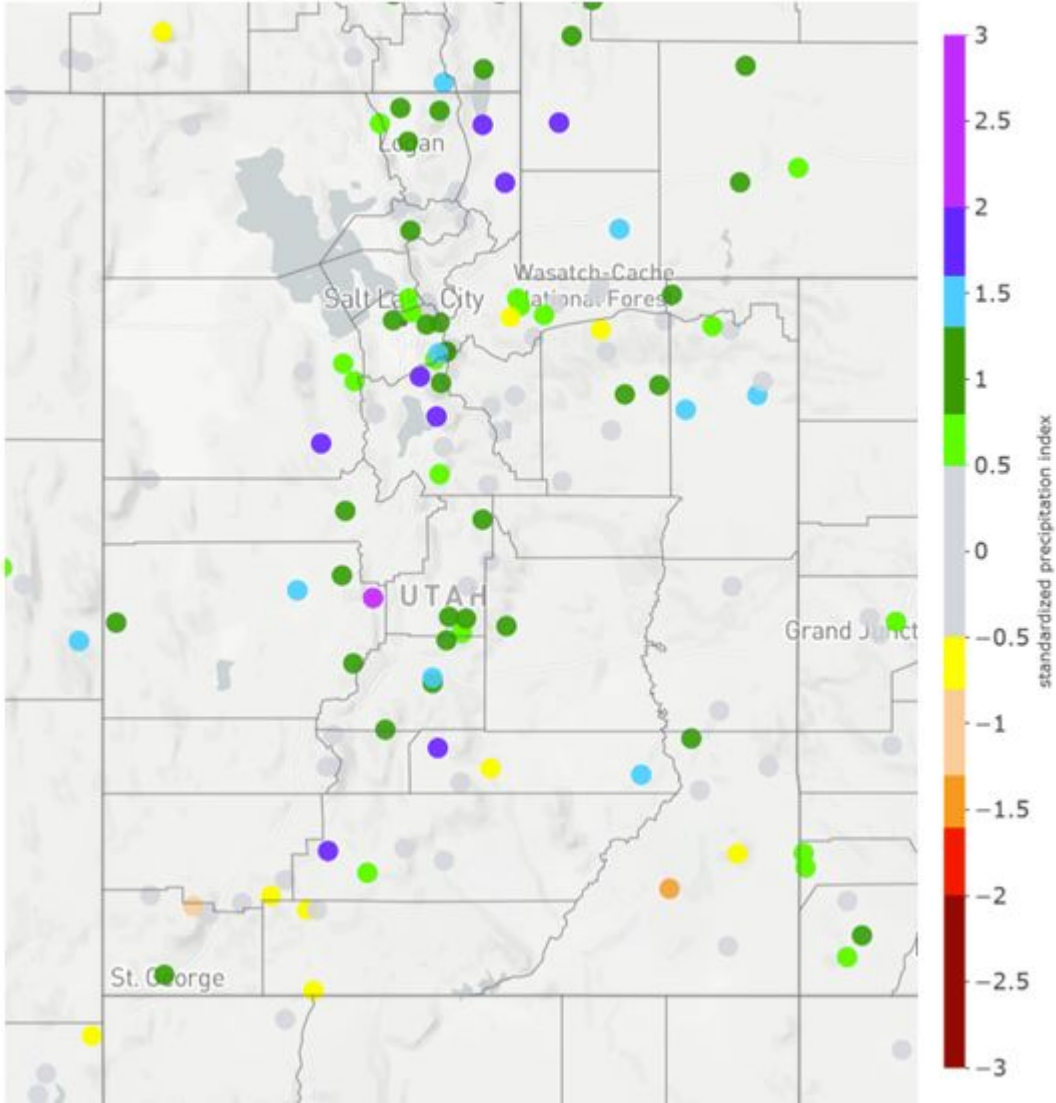
(40N-45N, 115W-110W)



Data Source: CPC (Gauge-Based) Unified Precipitation (Climatology 1991-2020)
(updated on 00Z19AUG2024)

Standardized Precipitation Index (SPI)

30-day Standardized Precipitation Index: 2024/07/21 - 2024/08/19



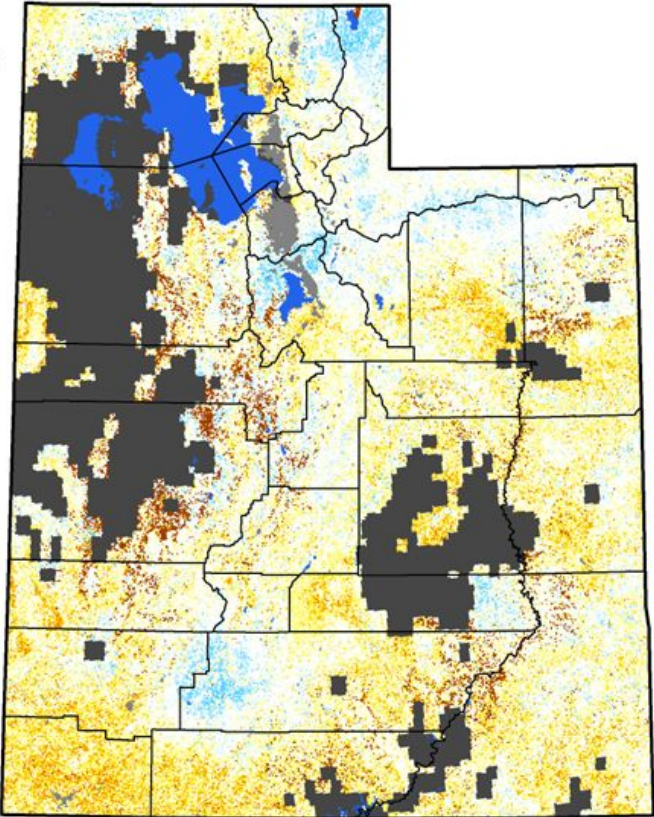
Agency - Utah Climate Center
Presenter - Jon Meyer

Drought Metrics

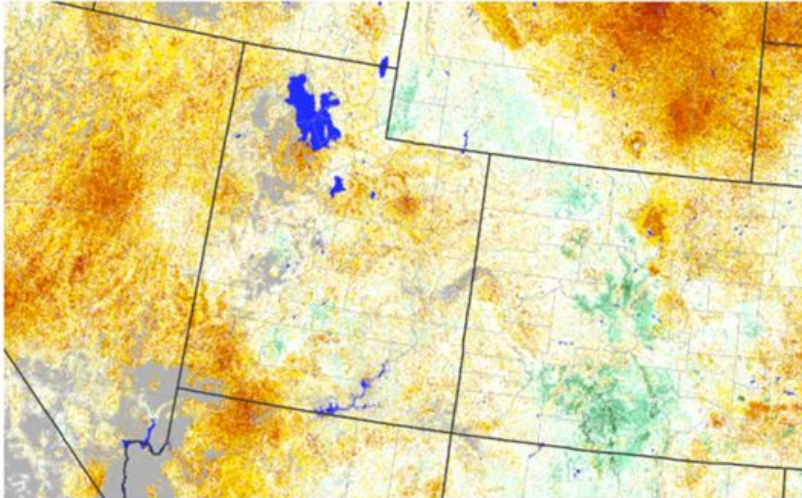
Quick Drought Response Index Utah

August 18, 2024
(Week 33)

- Conditions Relative to 4-Week Historical Average
- Wetter
 - Near Average
 - Drier
 - Out of Season
 - Urban
 - No Data
 - Water



Vegetation Drought Response Index (VegDRI)



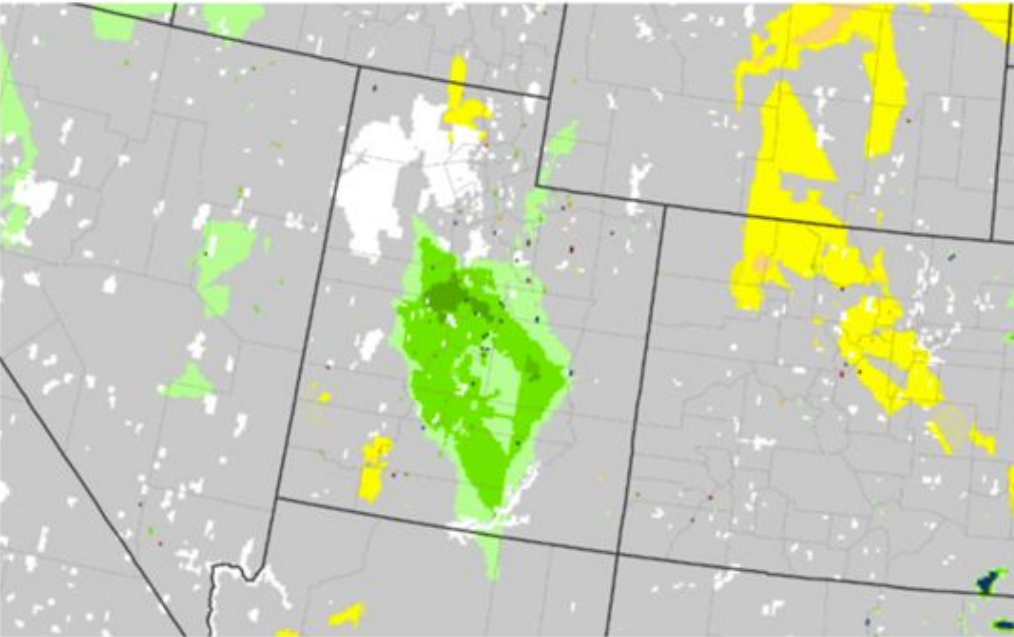
- Vegetation Conditions
- Extreme Drought
 - Severe Drought
 - Moderate Drought
 - Pre-Drought Stress
 - Near Normal
 - Unusually Moist
 - Very Moist
 - Extremely Moist
 - Out of Season
 - Water
 - Other Landcover

Source(s): NDMC, USGS, HPRCC
Updates Weekly: 08/18/24

Drought.gov

Soil Moisture and Evaporative Demand

20 cm Soil Moisture Percentile



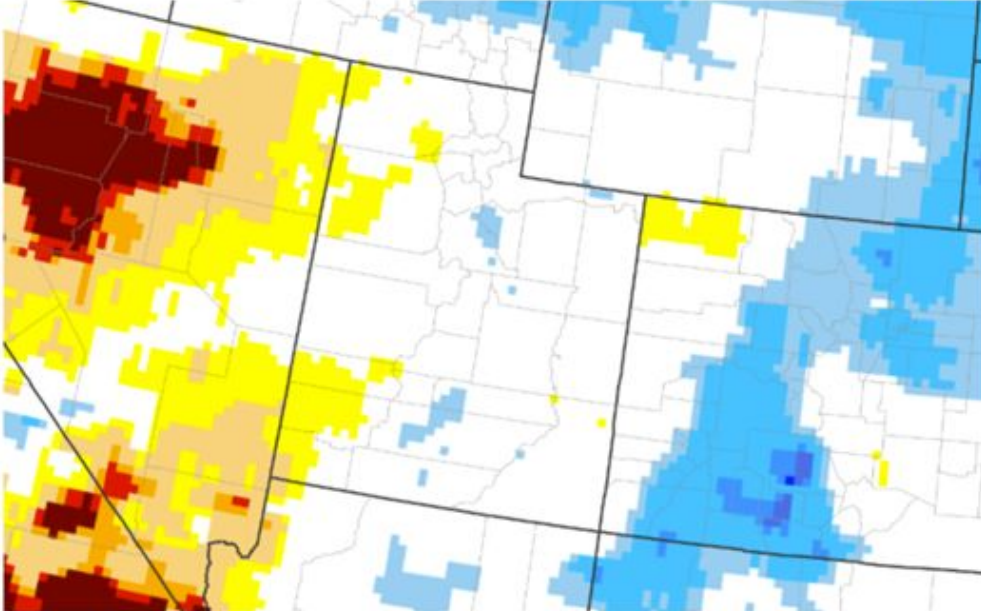
20 cm Soil Moisture Percentile



Source(s): NationalSoilMoisture.com
Data Valid: 08/17/24

Drought.gov

Evaporative Demand Drought Index (EDDI): 1 Week



Drought Conditions



Wet Conditions

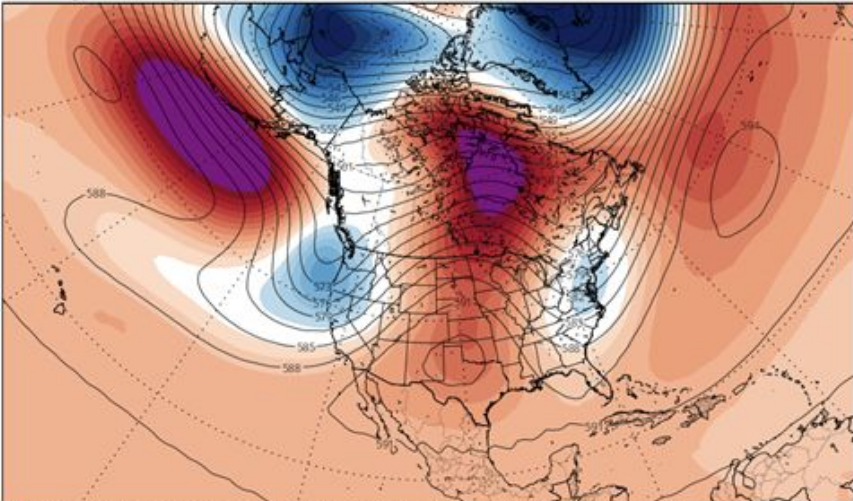


Source(s): NOAA Physical Sciences Laboratory
Data Valid: 08/14/24

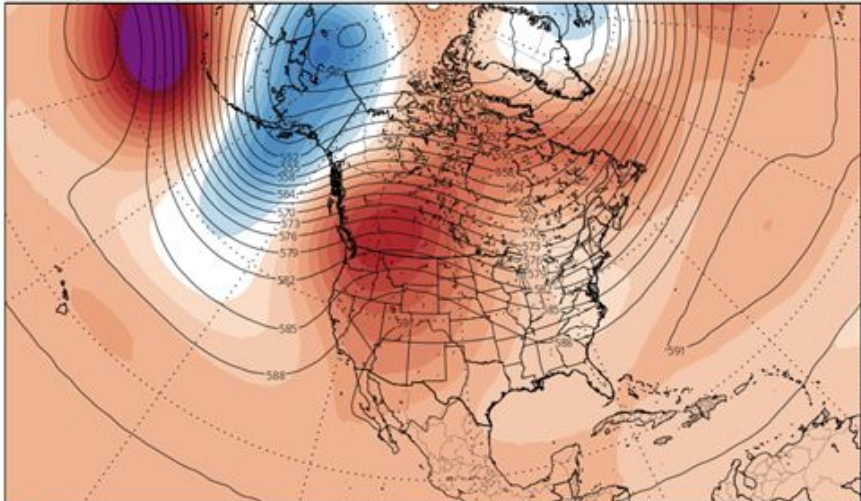
Drought.gov

Looking ahead at the weather pattern

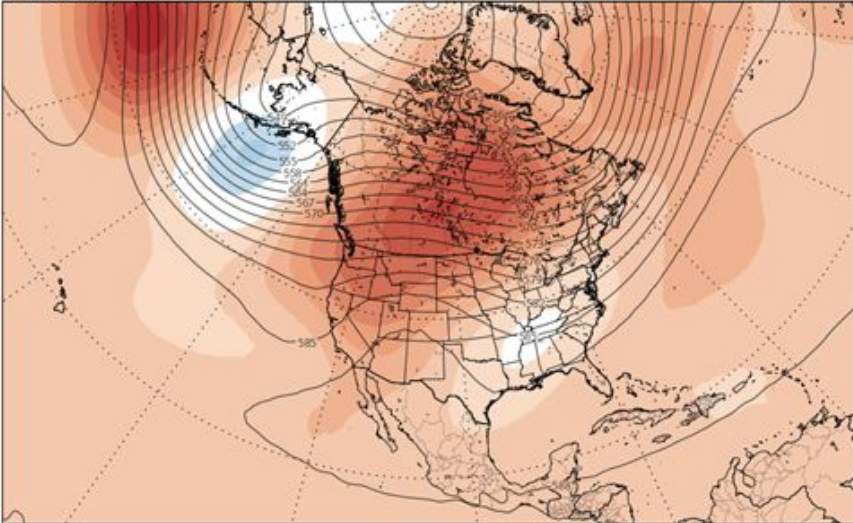
CFSv2 Mean 500mb GPH & Anomaly (dam) from 00z19Aug2024 to 00z26Aug2024 (Days 1-7)
Average of last 48 forecasts (12 runs x 4 members)
Init: 06z Aug 16 2024 through 00z Aug 19 2024



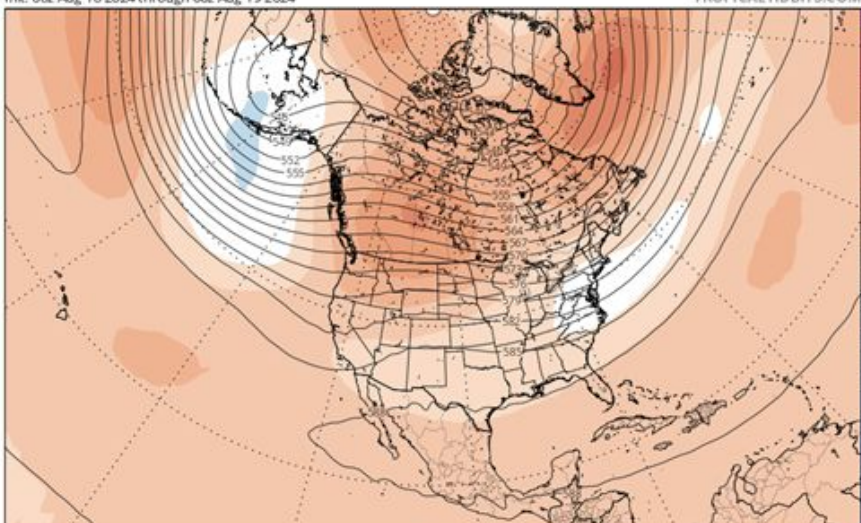
CFSv2 Mean 500mb GPH & Anomaly (dam) from 00z26Aug2024 to 00z02Sep2024 (Days 8-14)
Average of last 48 forecasts (12 runs x 4 members)
Init: 06z Aug 16 2024 through 00z Aug 19 2024



CFSv2 Mean 500mb GPH & Anomaly (dam) from 00z02Sep2024 to 00z09Sep2024 (Days 15-21)
Average of last 48 forecasts (12 runs x 4 members)
Init: 06z Aug 16 2024 through 00z Aug 19 2024

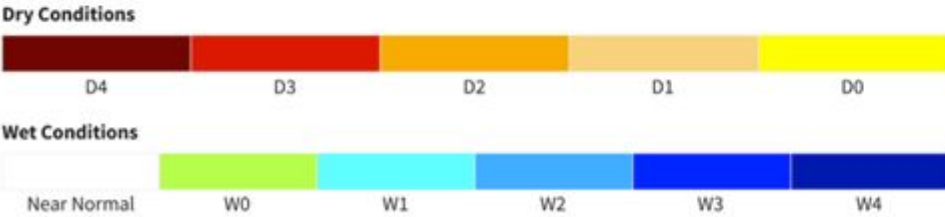
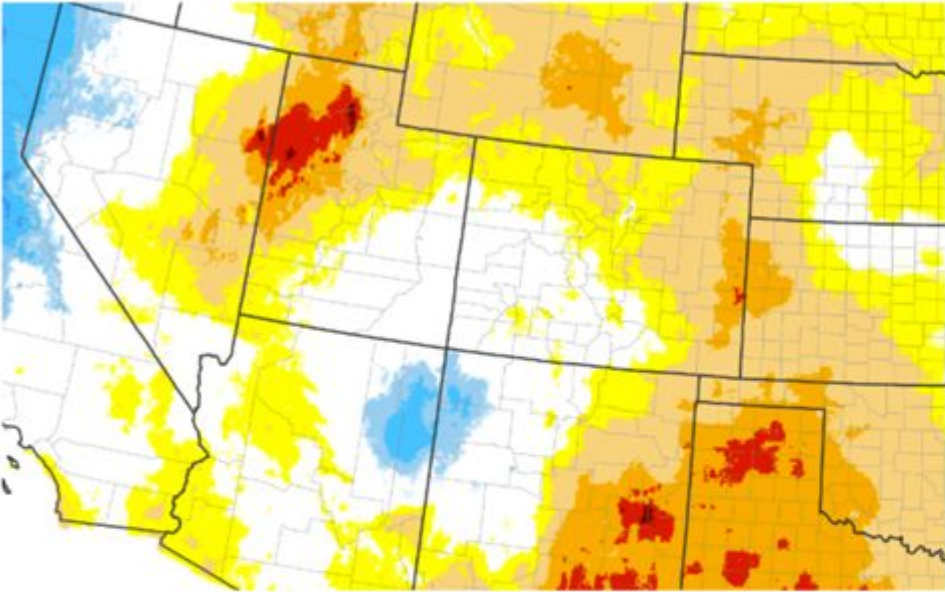


CFSv2 Mean 500mb GPH & Anomaly (dam) from 00z09Sep2024 to 00z16Sep2024 (Days 22-28)
Average of last 48 forecasts (12 runs x 4 members)
Init: 06z Aug 16 2024 through 00z Aug 19 2024



Forecast Evaporative Demand

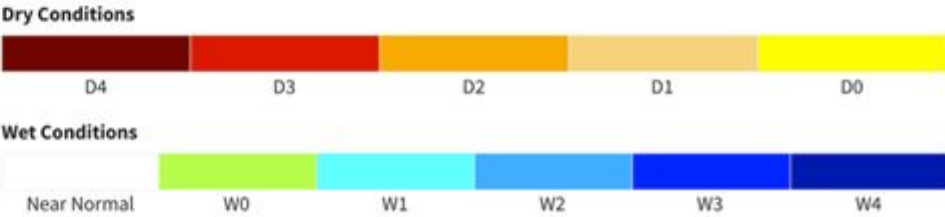
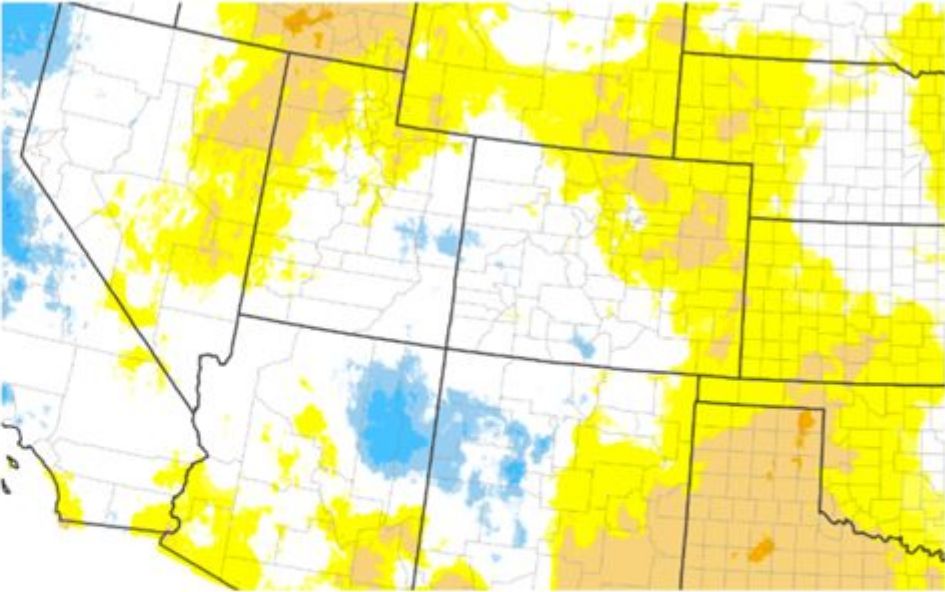
Evaporative Demand Drought Index (EDDI) Forecast: 2 Weeks



Source(s): UC Merced
Updates Daily: 08/18/24

Drought.gov

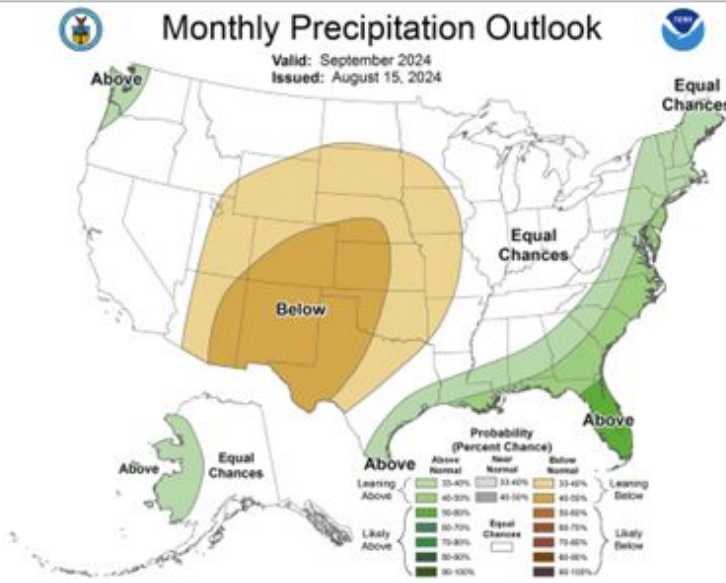
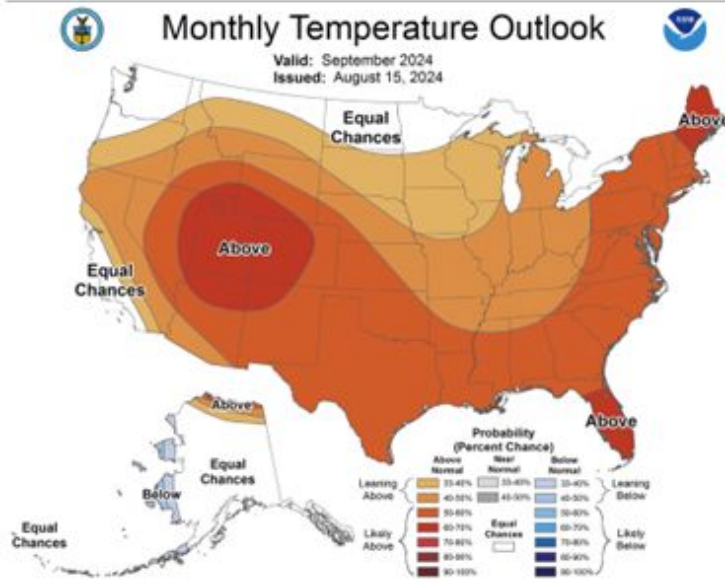
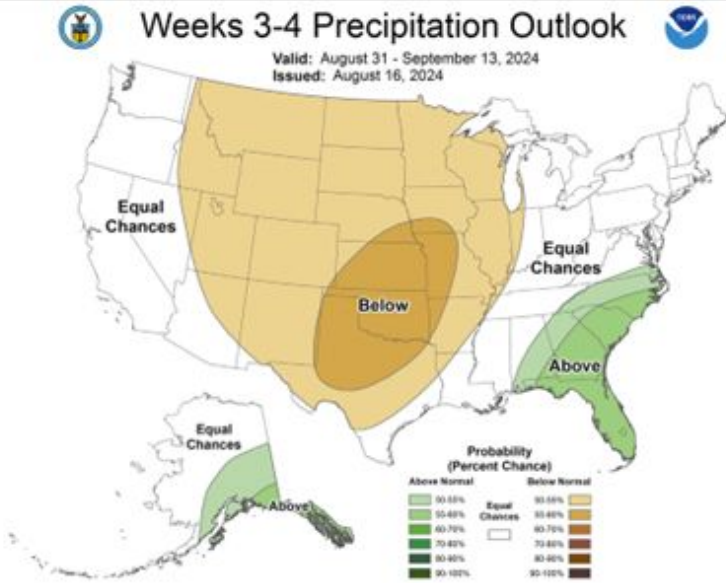
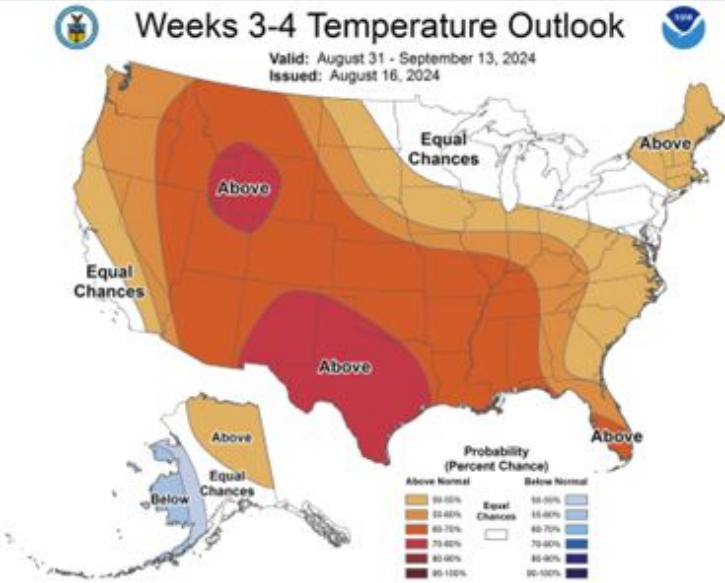
Evaporative Demand Drought Index (EDDI) Forecast: 4 Weeks



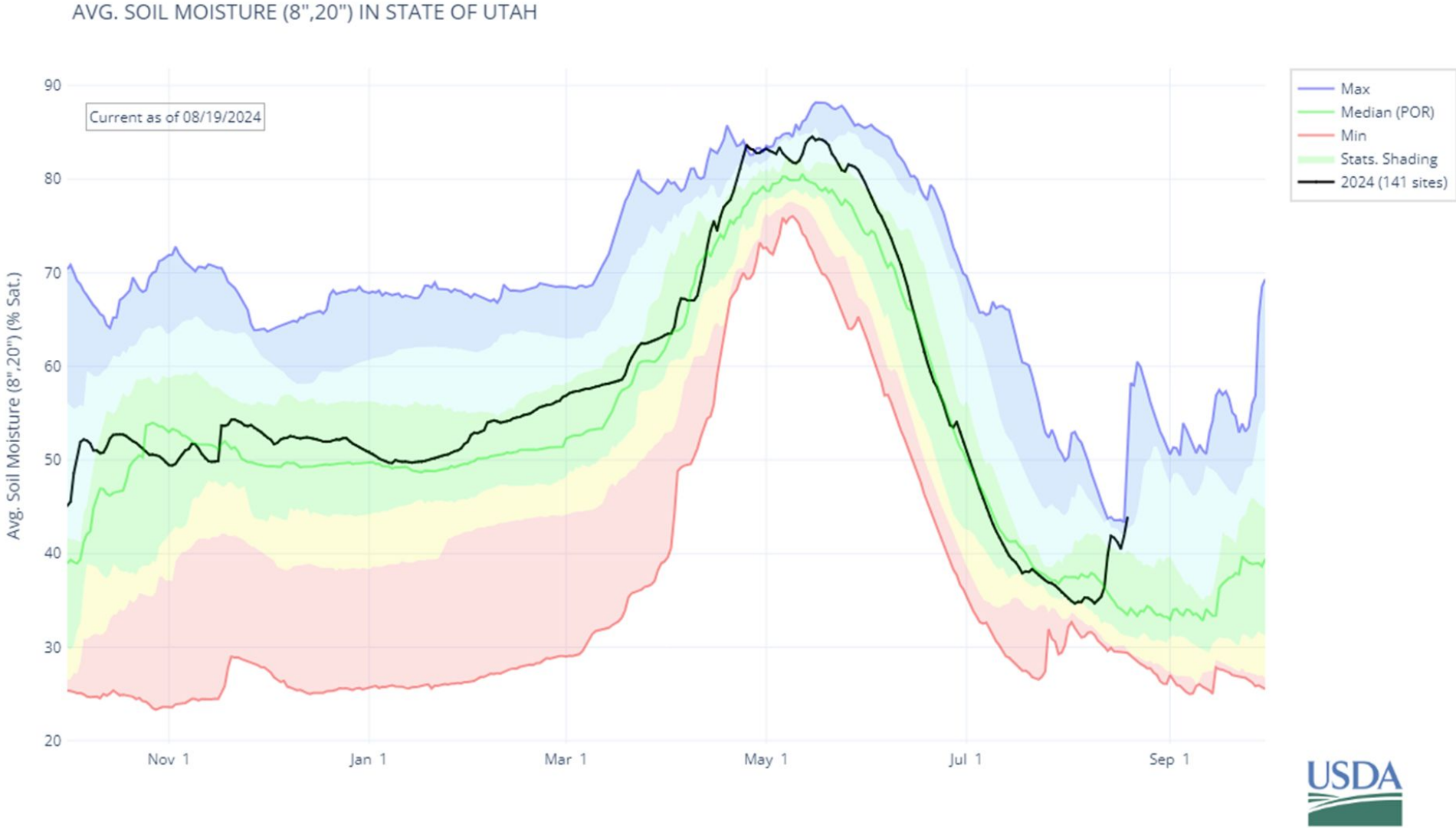
Source(s): UC Merced
Updates Daily: 08/18/24

Drought.gov

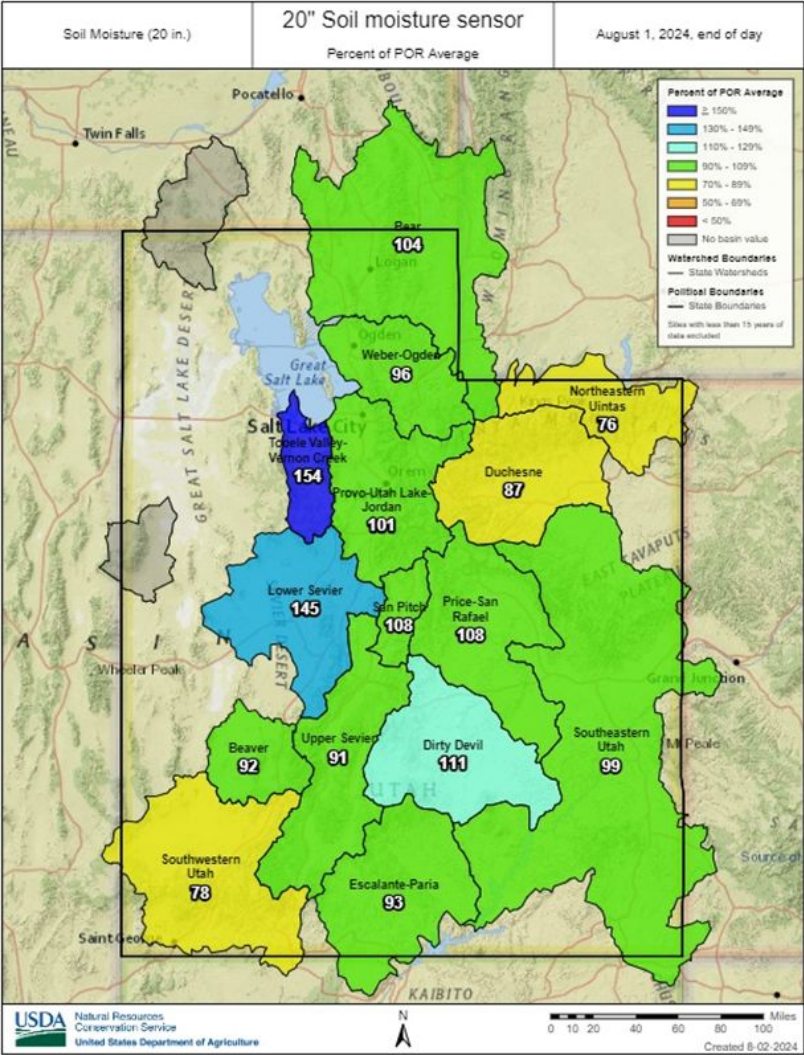
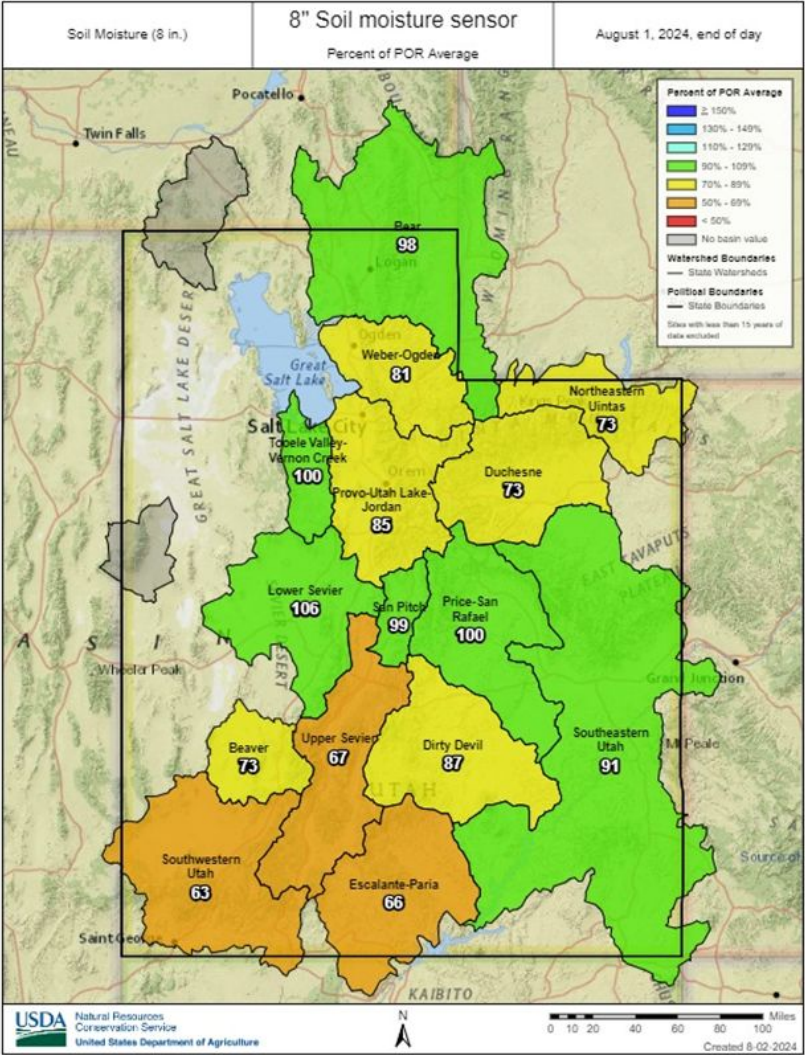
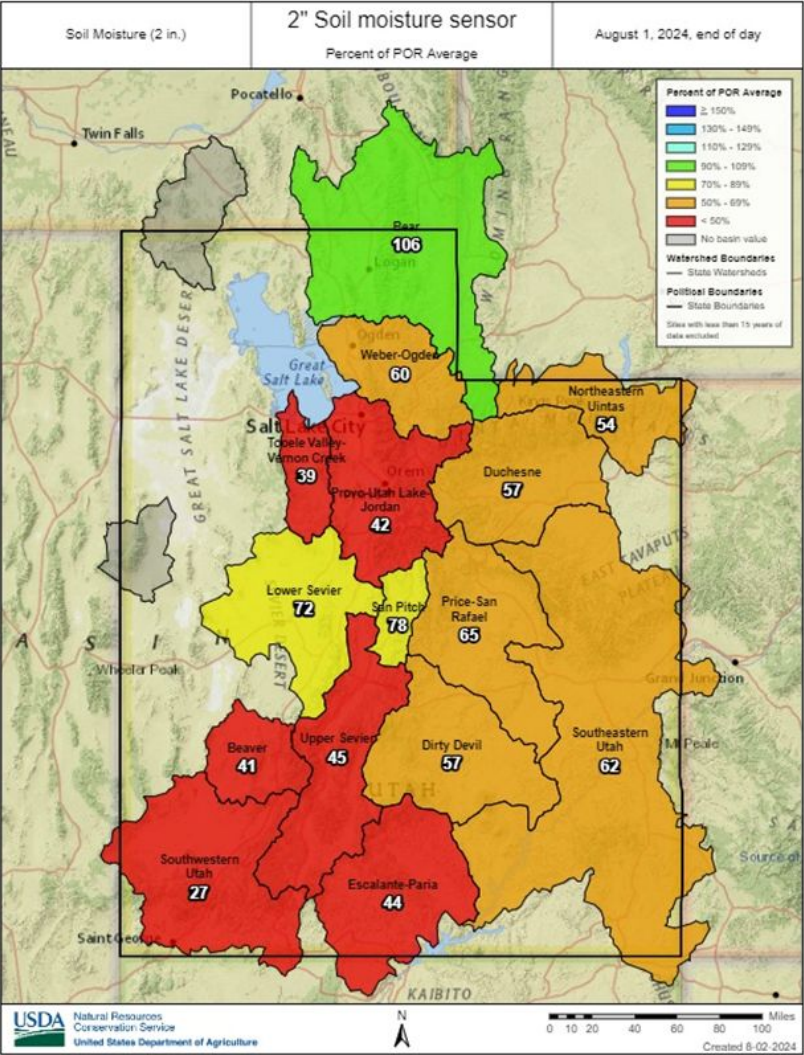
CPC Sub-Seasonal Outlook



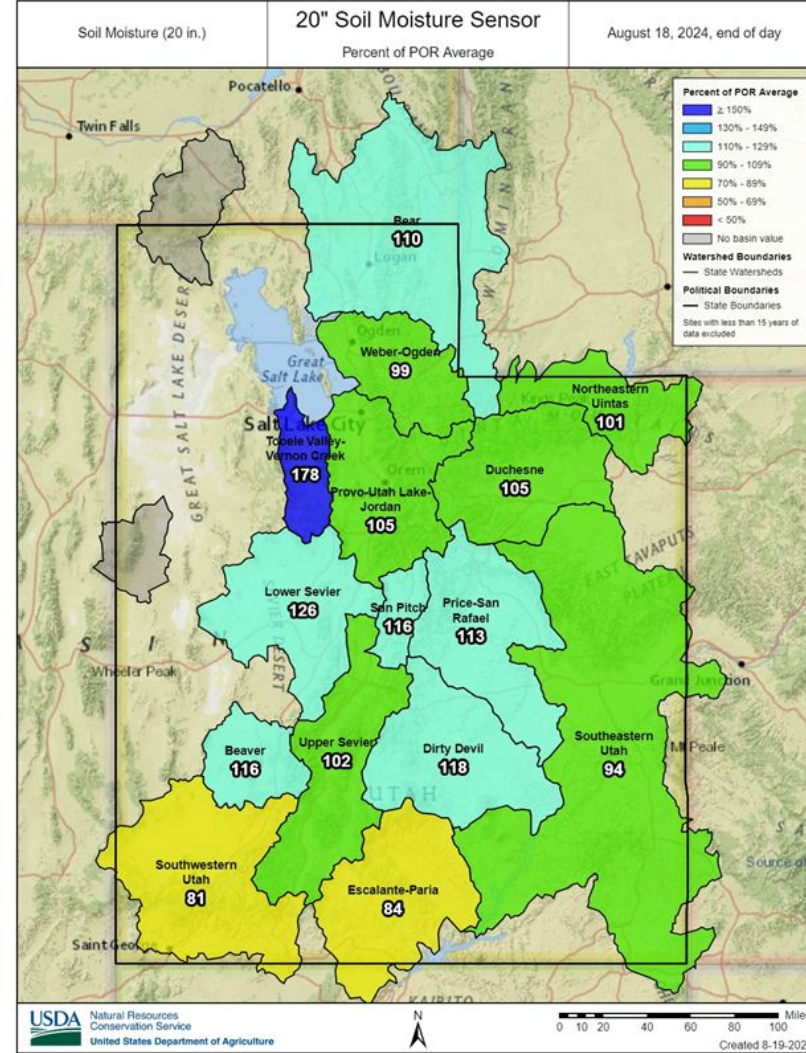
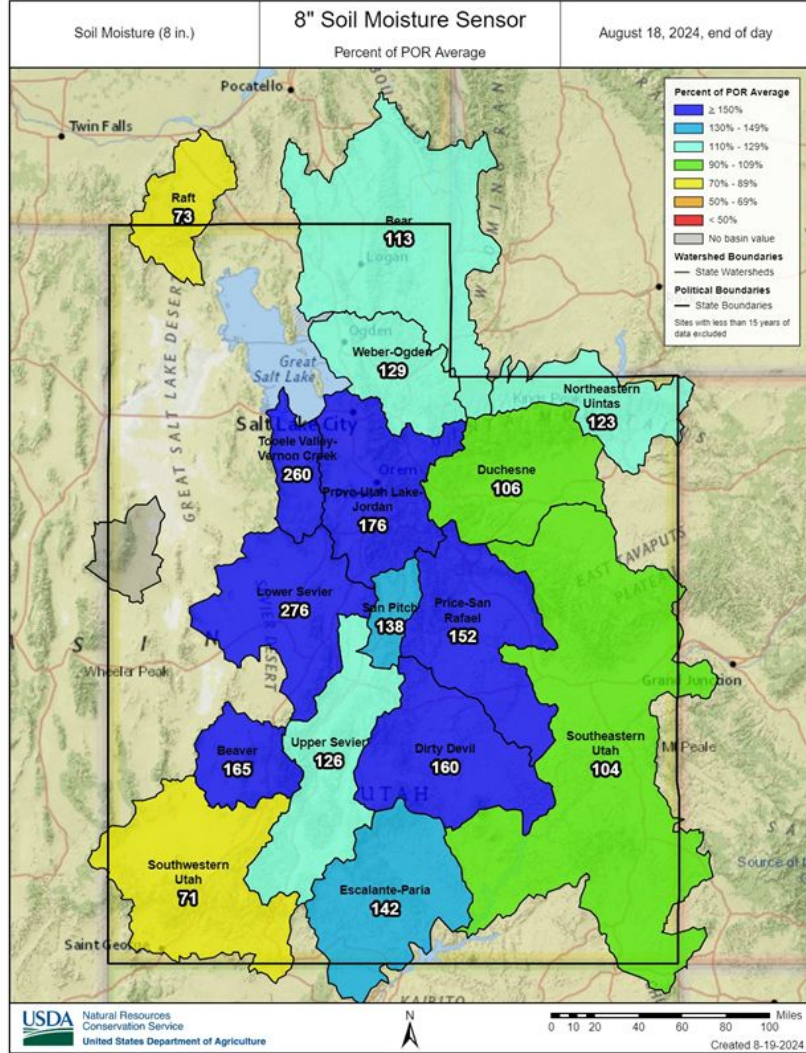
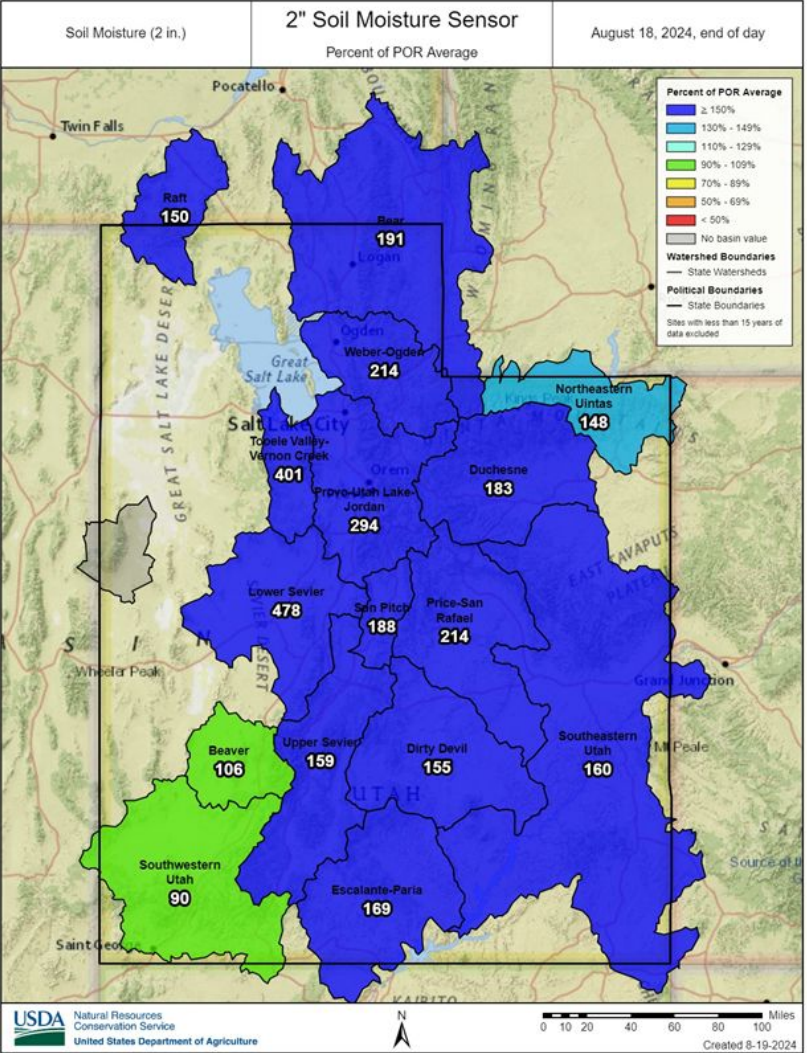
Soil Moisture



Soil Moisture: beginning of month



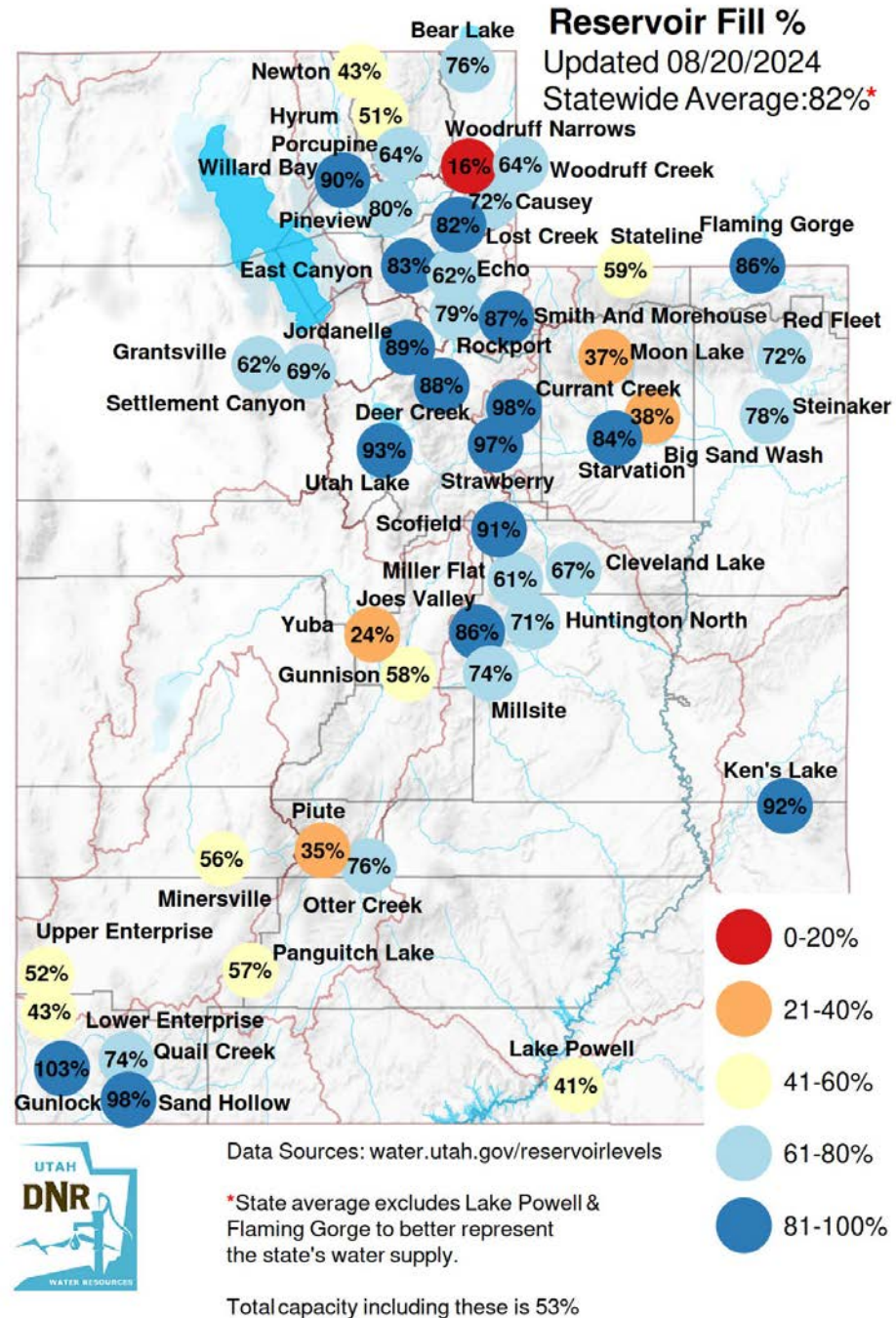
Soil Moisture: current (showing impact of monsoonal moisture)



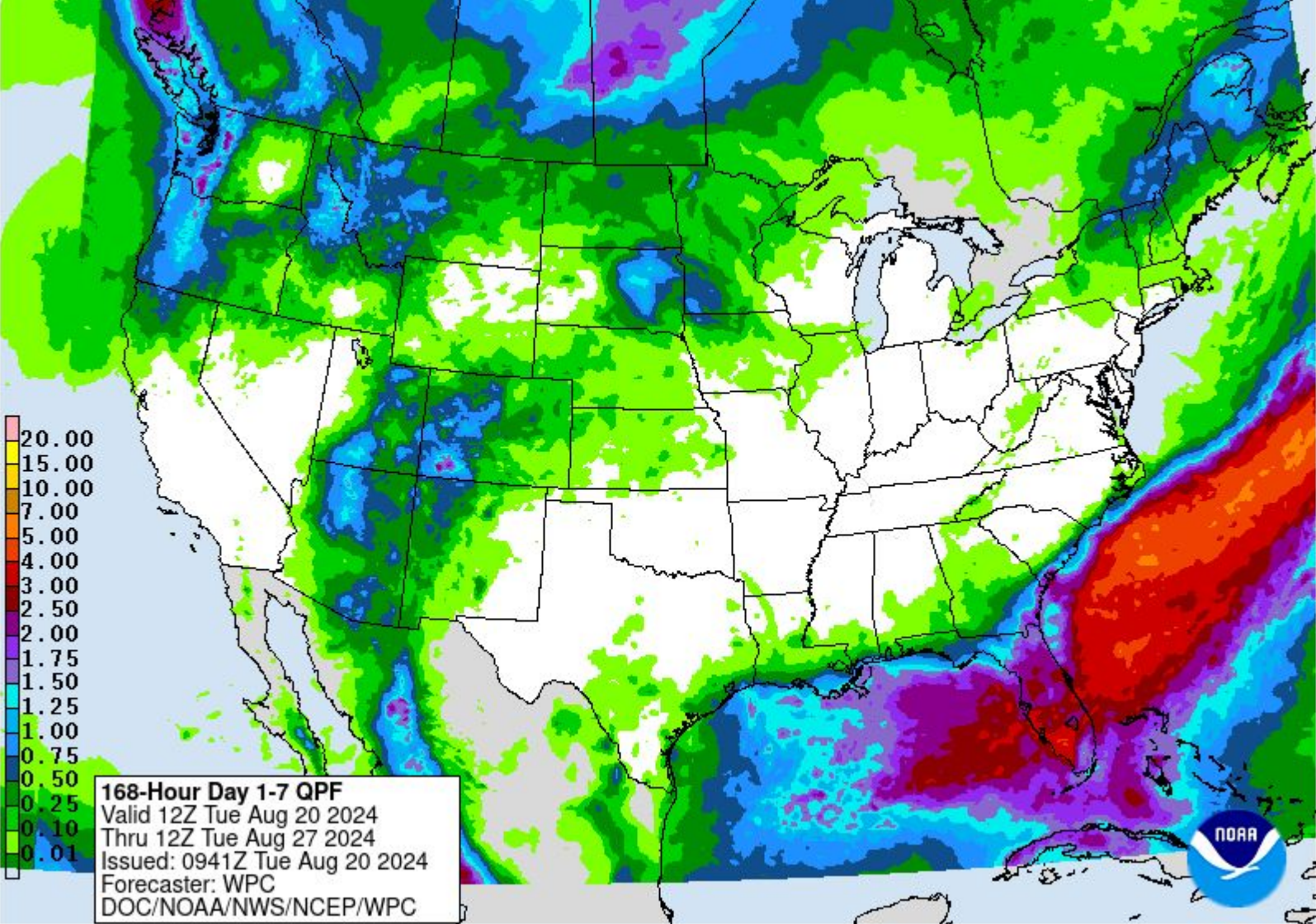
Agency - NRCS Snow Survey

(less change in 20", underscores why this is the best depth to use for drought assessment)

With the exception of Yuba Lake, reservoirs below 40% are following typical patterns

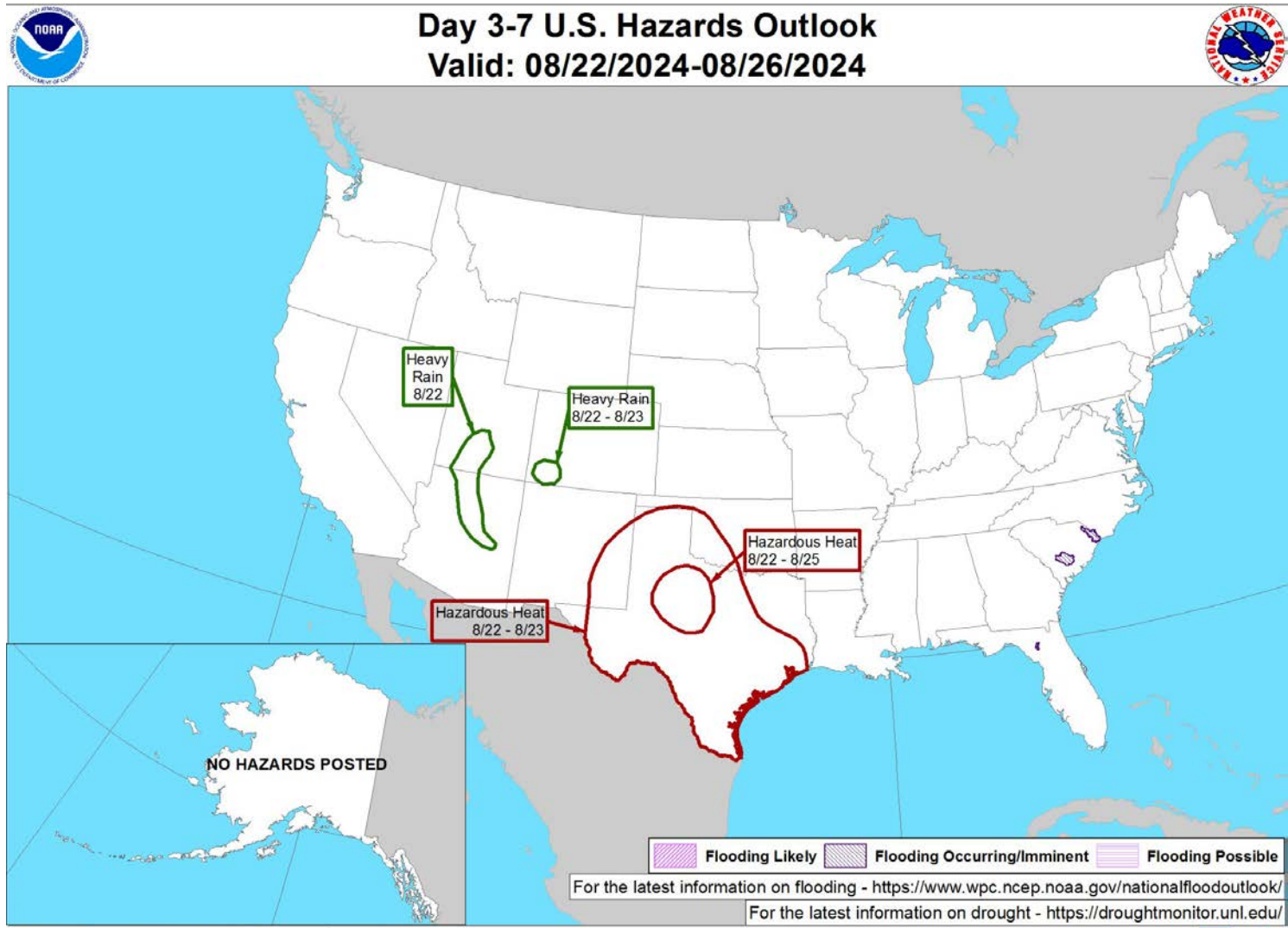


Weather Forecast Office Utah Day 1-7 Outlook



Agency - National Weather Service Weather Forecast Office
Presenter - Christine Kruse

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



Weather Prediction Center
Made: 08/19/2024 03:45 PM EDT

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www.wpc.ncep.noaa.gov

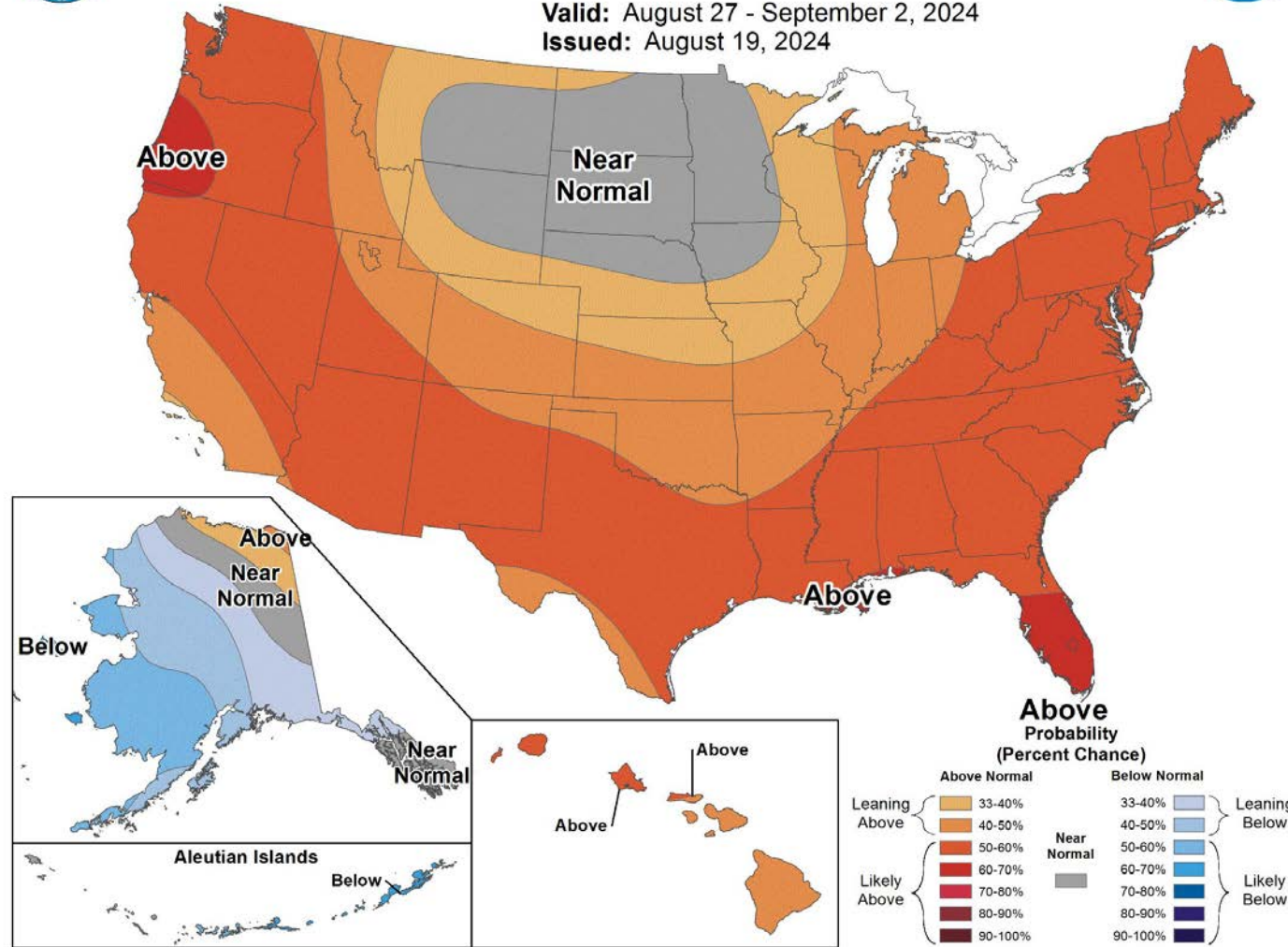
Agency - National Weather Service Weather Forecast Office
Presenter - Christine Kruse

Climate Prediction Center 8 to 14 Day Outlooks - Temperature



8-14 Day Temperature Outlook

Valid: August 27 - September 2, 2024
Issued: August 19, 2024



Climate Prediction Center 8 to 14 Day Outlooks - Precipitation



8-14 Day Precipitation Outlook

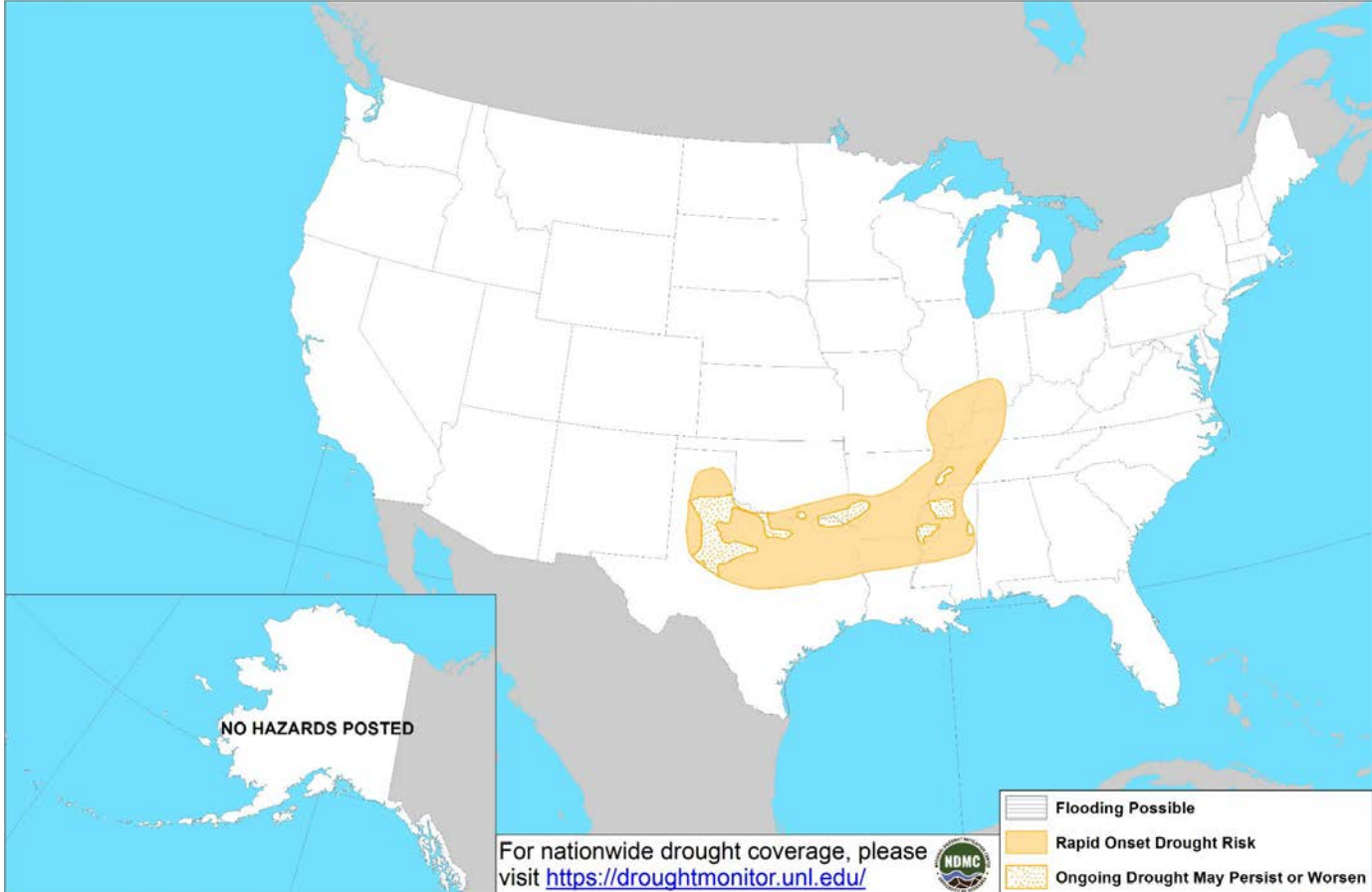
Valid: August 27 - September 2, 2024
Issued: August 19, 2024



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



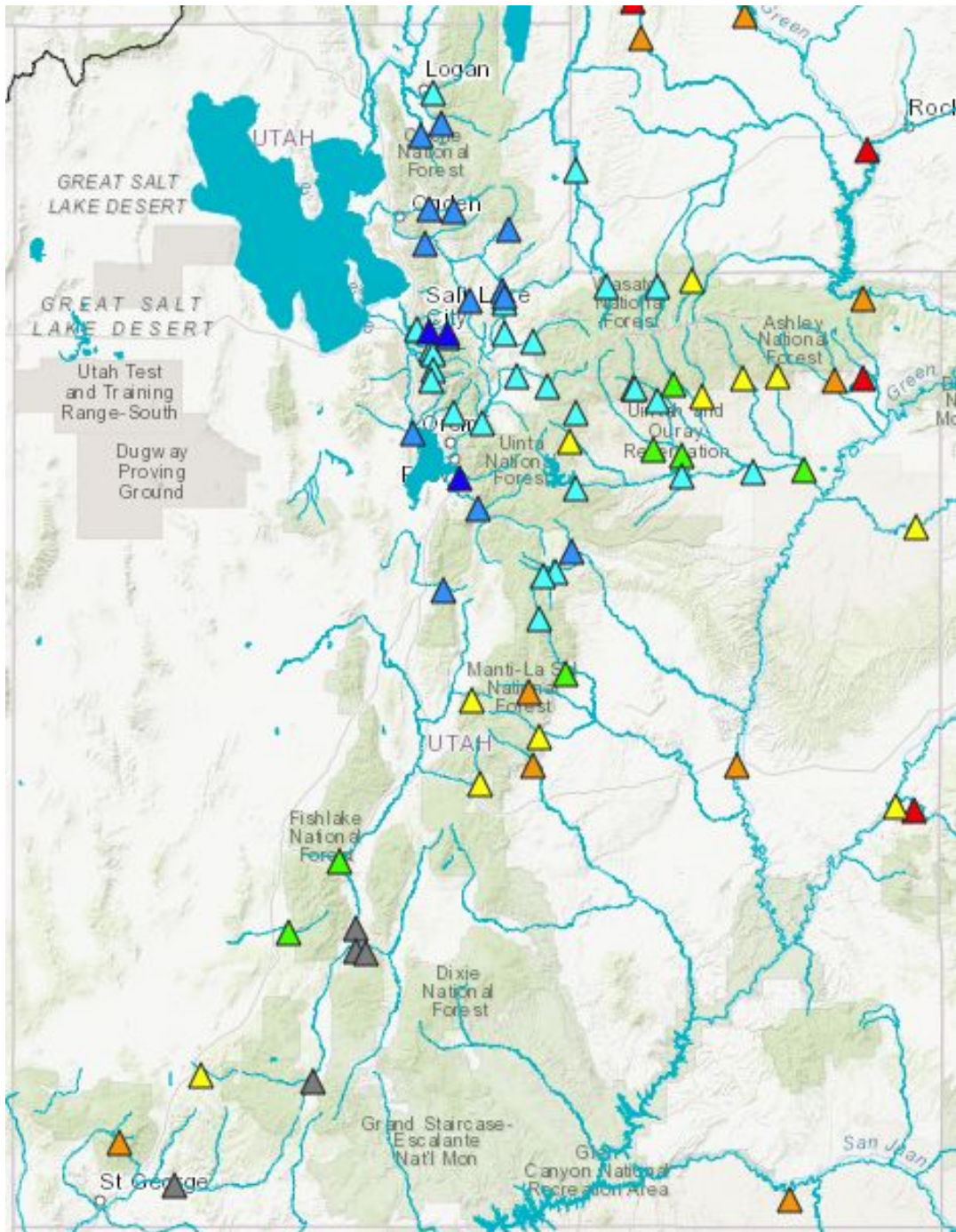
Day 8-14 U.S. Hazards Outlook
Valid: 08/27/2024-09/02/2024



Climate Prediction Center
Made: 08/19/2024 3PM EDT

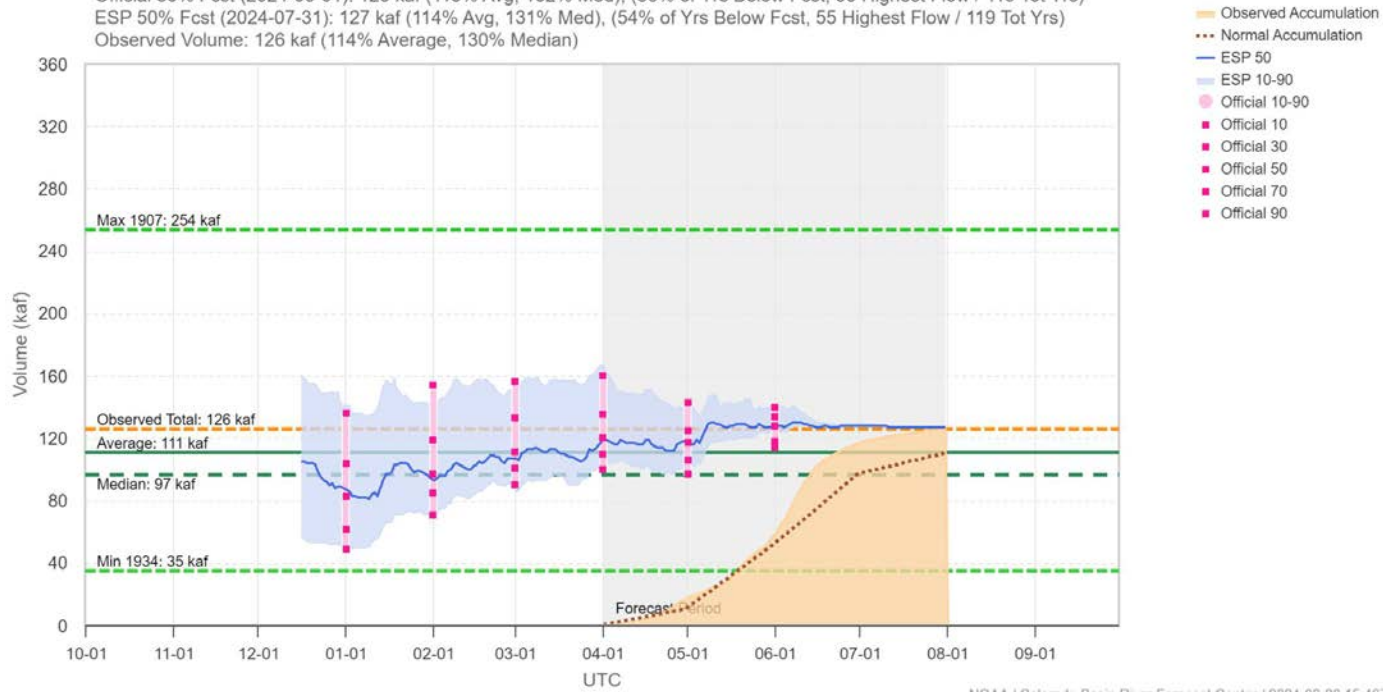
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Agency - National Weather Service Weather Forecast Office
Presenter - Christine Kruse



2024 Water Supply Forecast - Weber - Oakley, Nr (OAWU1)

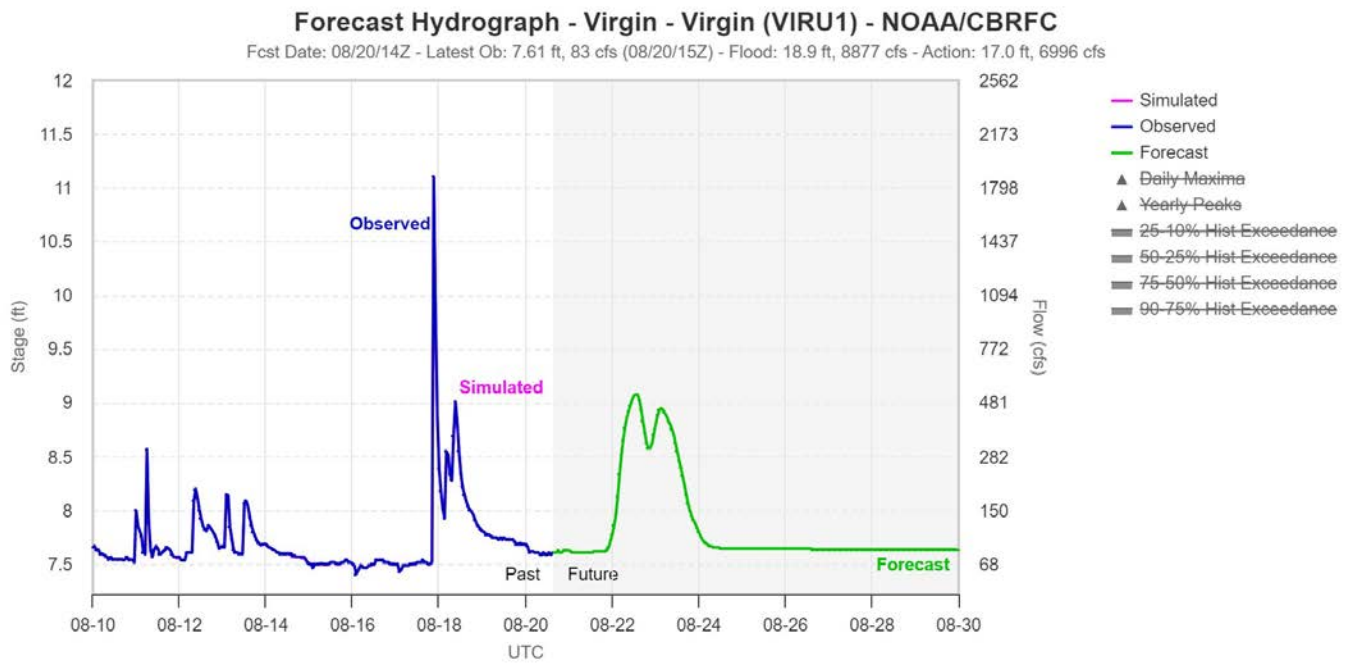
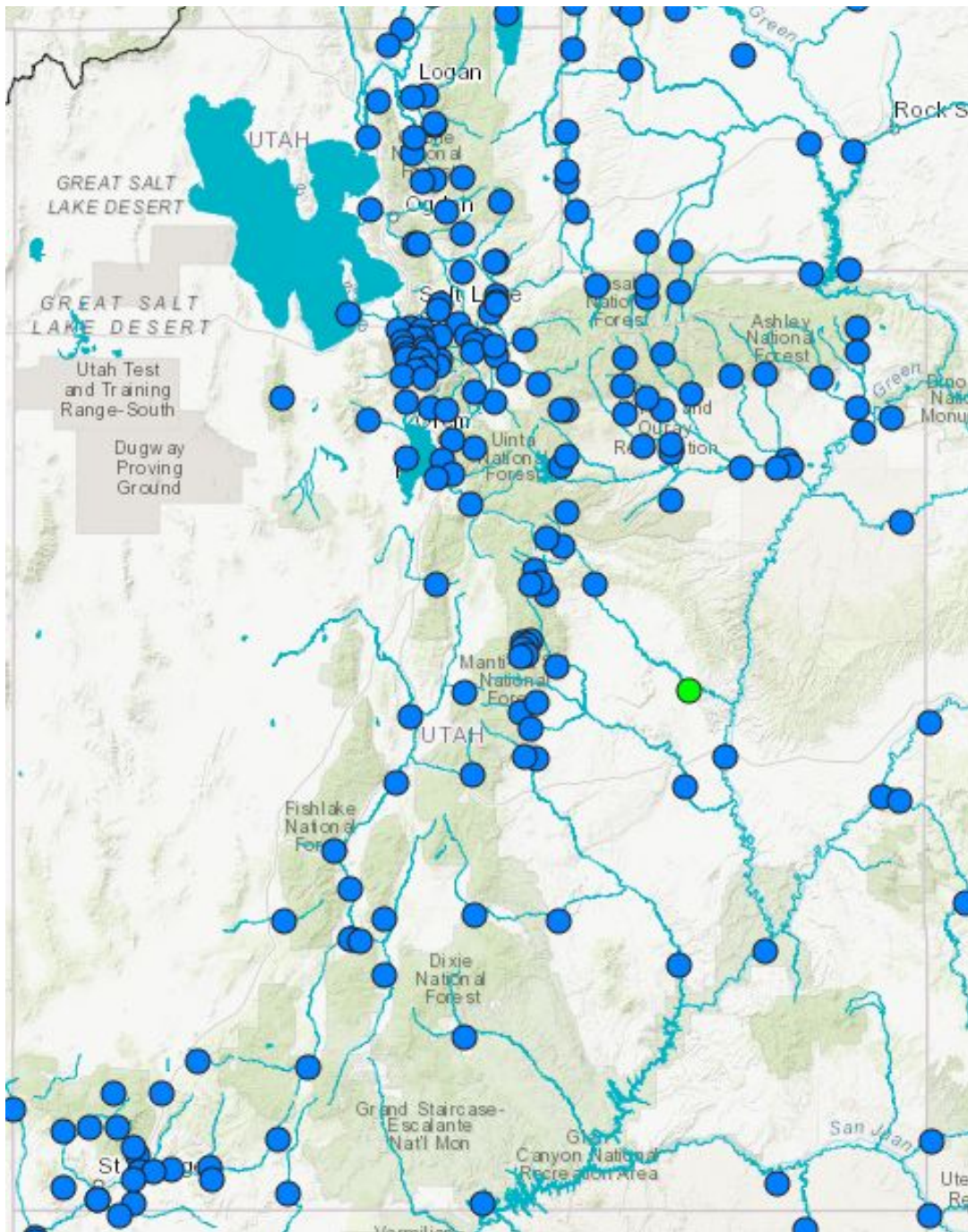
ESP is Unregulated and No Precipitation Forecast Included
 Official 50% Fcst (2024-06-01): 128 kaf (115% Avg, 132% Med), (56% of Yrs Below Fcst, 53 Highest Flow / 119 Tot Yrs)
 ESP 50% Fcst (2024-07-31): 127 kaf (114% Avg, 131% Med), (54% of Yrs Below Fcst, 55 Highest Flow / 119 Tot Yrs)
 Observed Volume: 126 kaf (114% Average, 130% Median)



NOAA / Colorado Basin River Forecast Center / 2024-08-20 15:46Z

Provisional April - July unregulated flow volumes are now available on our website.

Any questions? Please e-mail paul.miller@noaa.gov



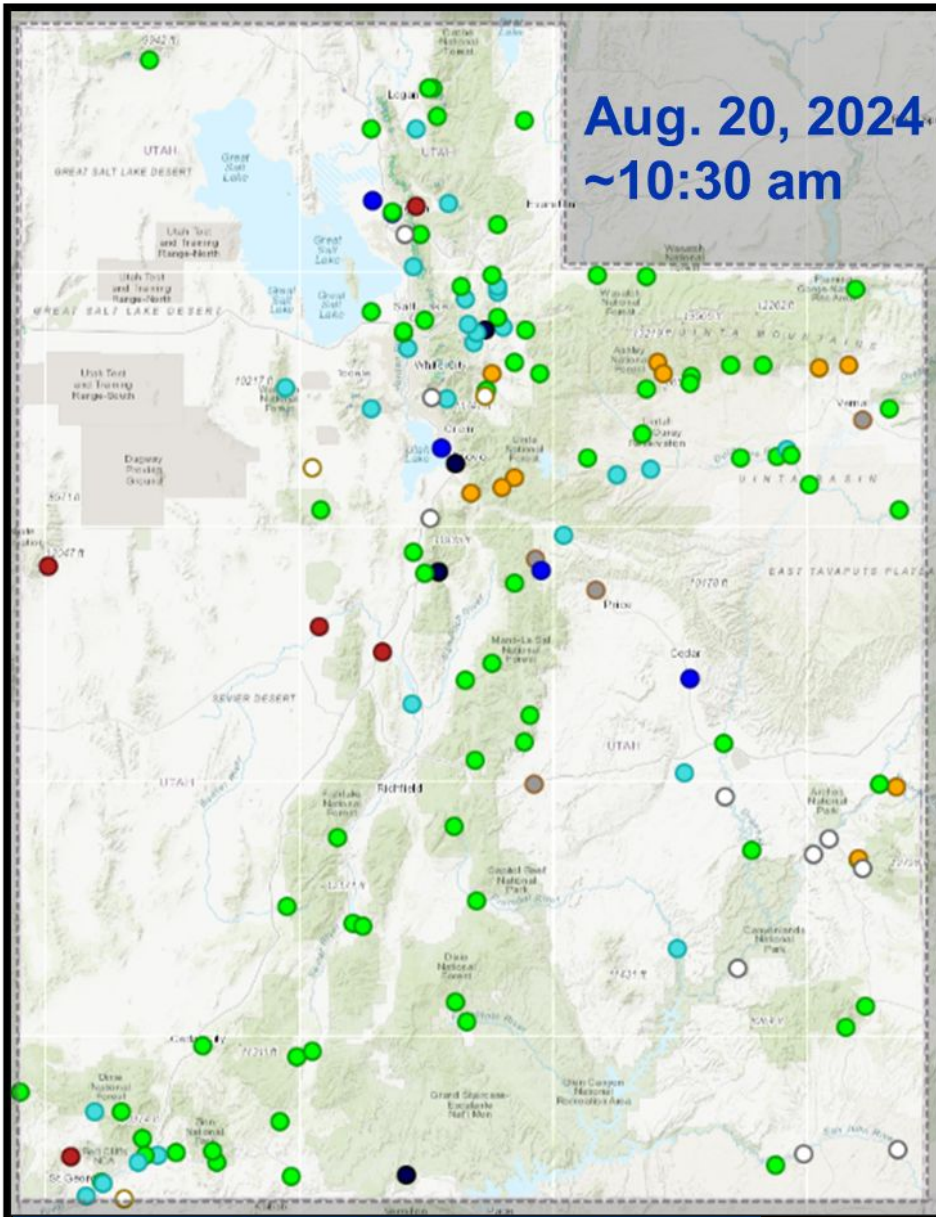
Supporting WFO flash flood operations during latest monsoon events, short term forecast hydrographs may be helpful.

Any questions? Please e-mail paul.miller@noaa.gov

Current Streamflow Conditions

08/06/2024

08/20/2024



Aug. 20, 2024
~10:30 am

Day-of-Year Status	% Gages	% Gages
All-time high for this day-of-year	0.0%	2.8%
Much above normal for this day-of-year	3.5%	3.5%
Above normal for this day-of-year	7.1%	18.3%
Normal for this day-of-year	56.7%	52.8%
Below normal for this day-of-year	12.8%	7.0%
Much below normal for this day-of-year	5.0%	3.5%
All-time low for this day-of-year	0.7%	0.0%
Not ranked - insufficient record	8.5%	9.2%
Not ranked - no measurement	1.4%	0.7%
Not ranked - stream not flowing	2.8%	2.1%

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

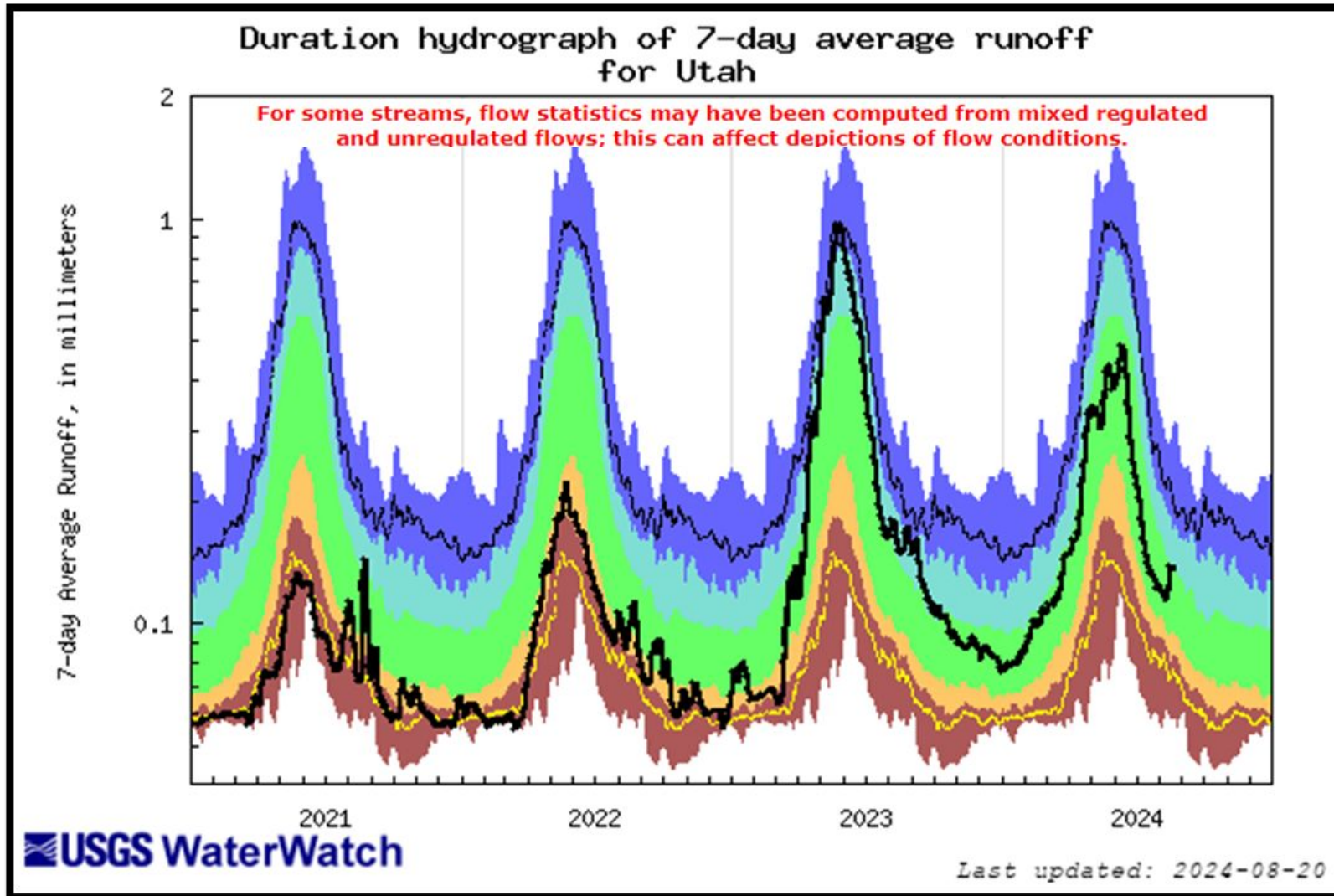
Provisional data, subject to revision

National Water Dashboard

Agency - USGS Utah WSC
Presenter - Ryan Rowland



Utah Area-Based Runoff Duration Hydrograph



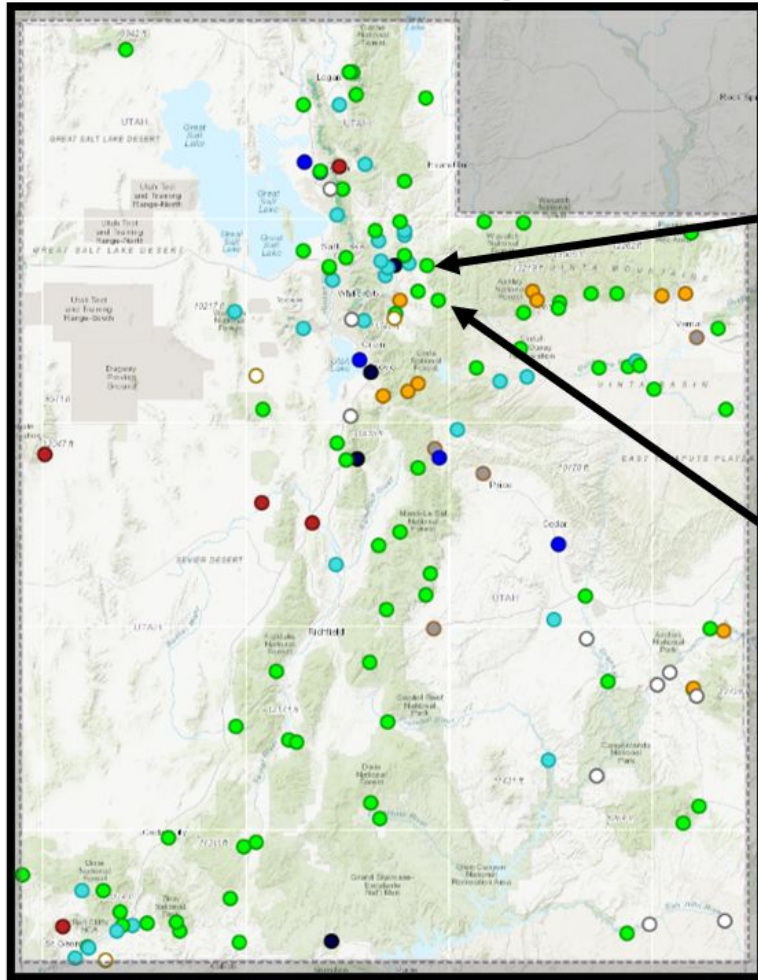
- The Runoff Duration Hydrograph is a graphical presentation of area-based runoff (the black line) calculated as a weighted average of HUC 8-runoff, plotted over the long-term statistics of runoff for each day or month of the year for each area.

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

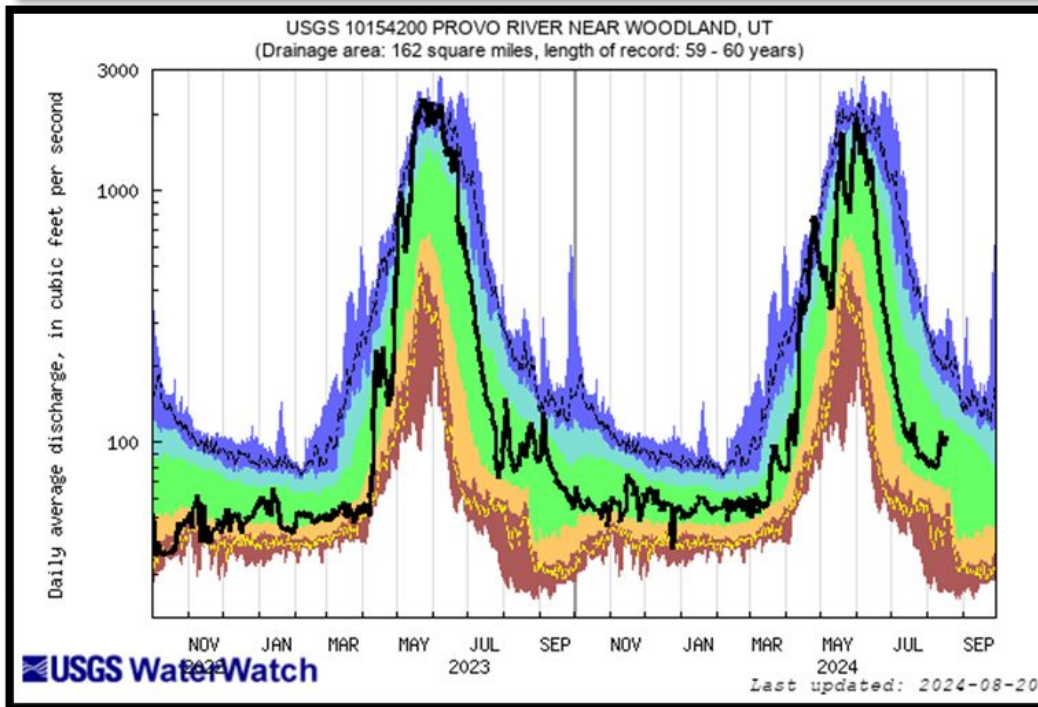
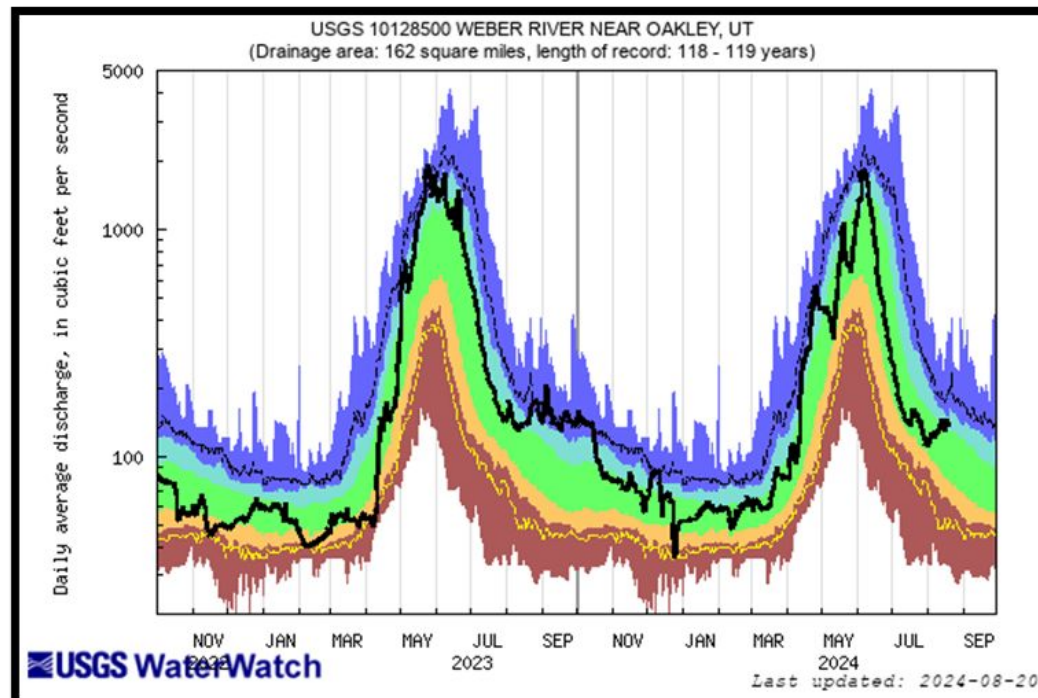
Provisional data, subject to revision

Agency - USGS Utah WSC
Presenter - Ryan Rowland

Streamflow at Selected Gages

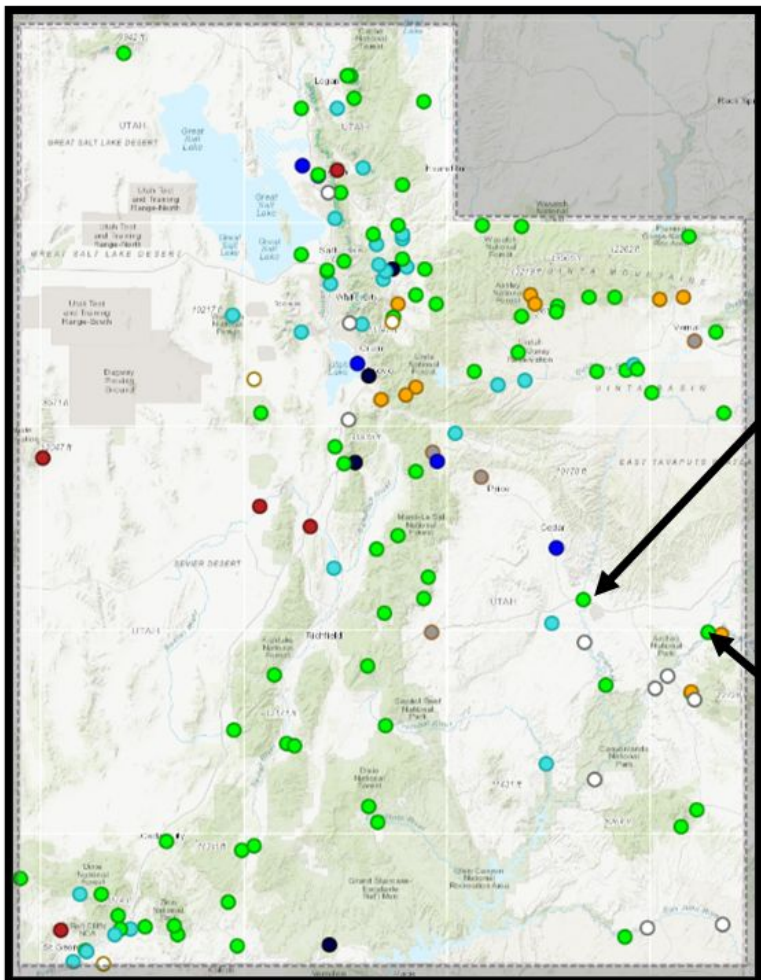


Explanation - Percentile classes					
lowest-10th percentile	5	10-24	25-75	76-90	95 90th percentile-highest
Much below Normal		Below normal	Normal	Above normal	Much above normal

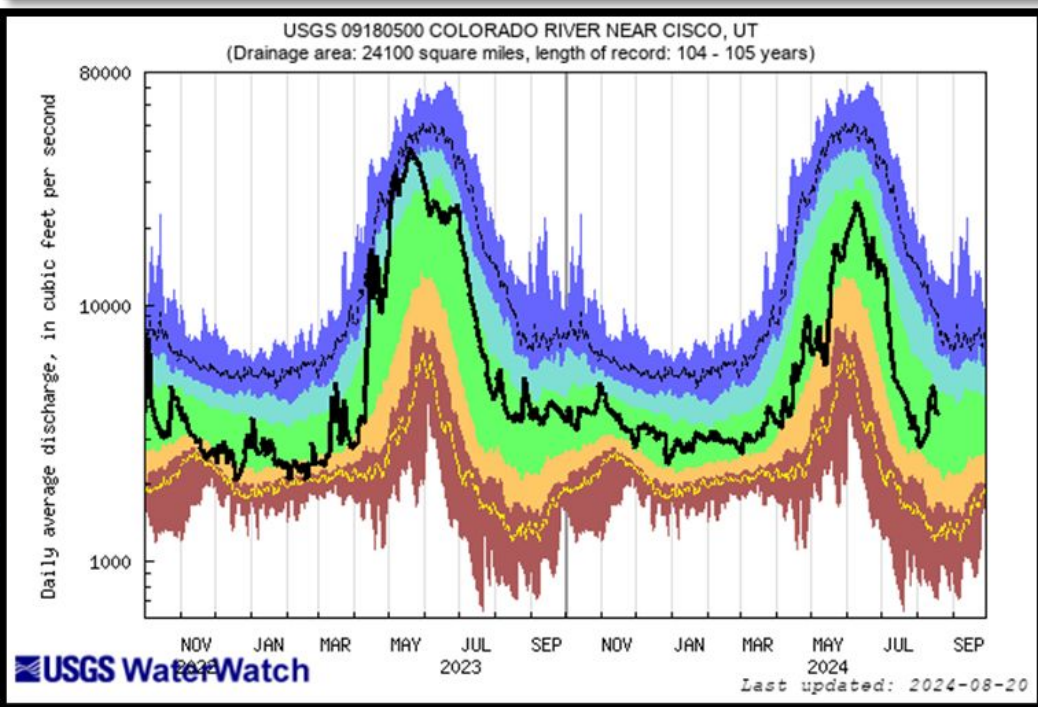
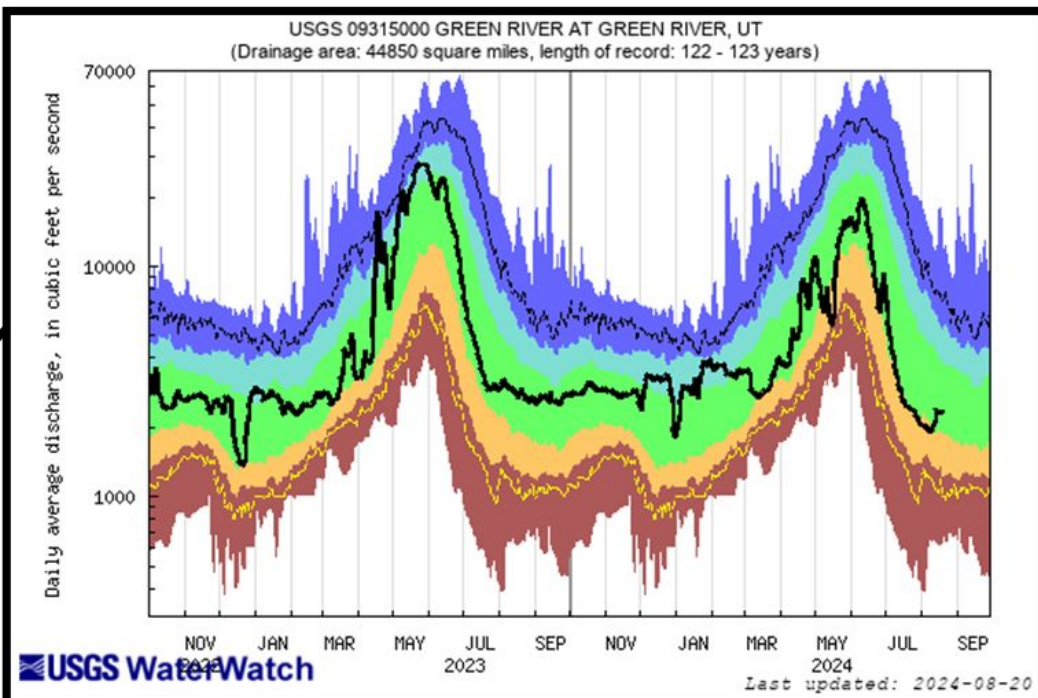


Provisional data, subject to revision

Streamflow at Selected Gages

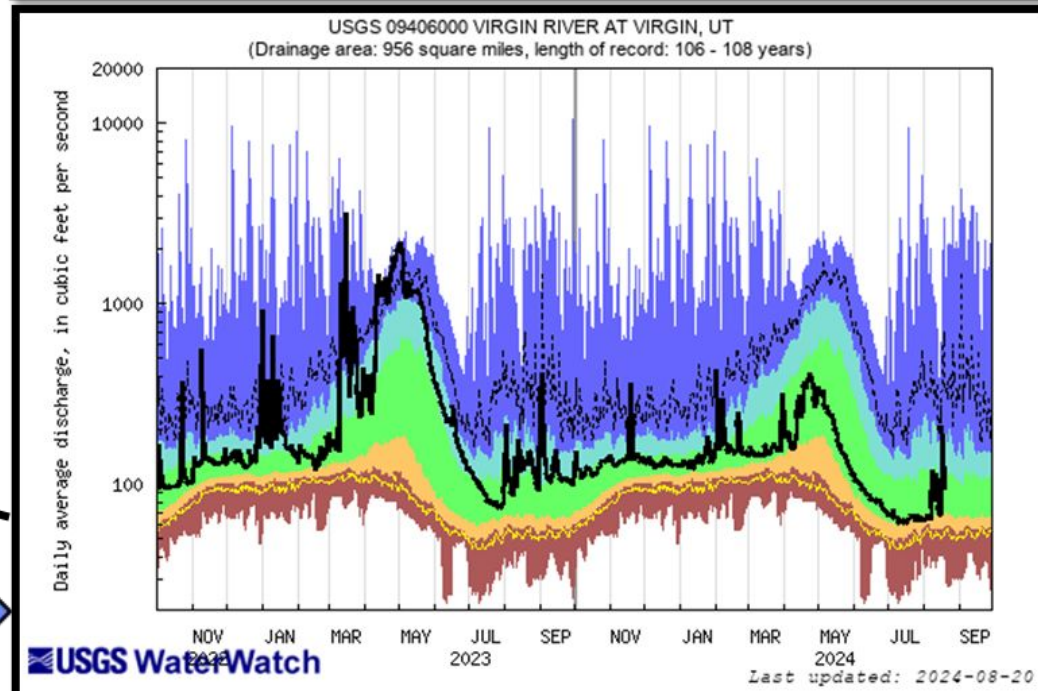
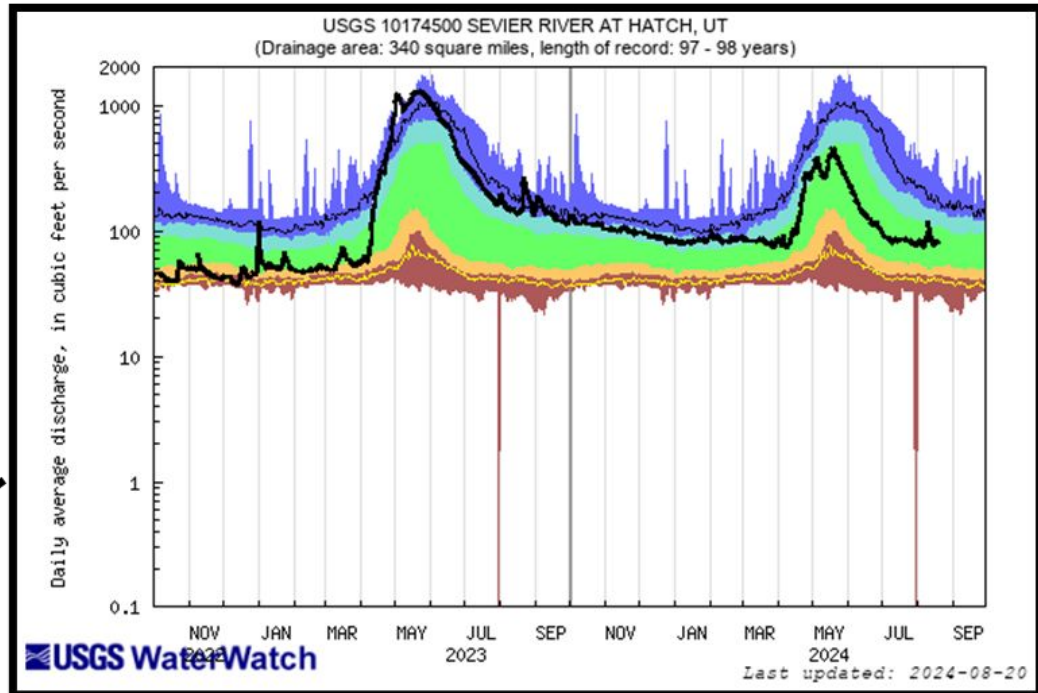
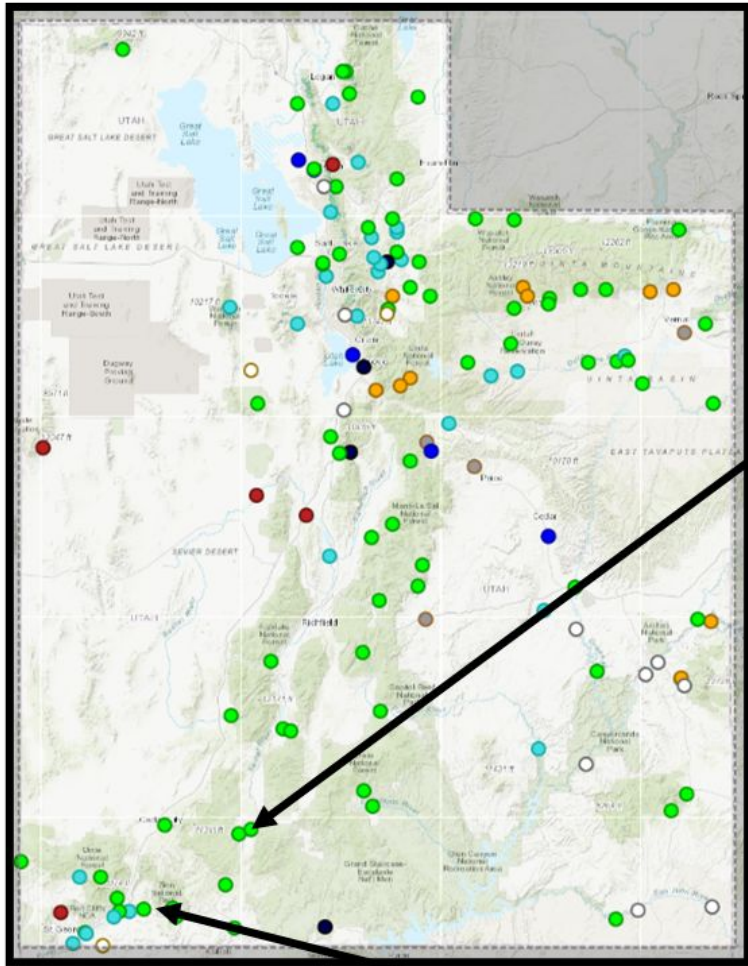


Explanation - Percentile classes						
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile - highest
Much below Normal	Below normal	Normal	Above normal	Much above normal		Flow



Provisional data, subject to revision

Streamflow at Selected Gages

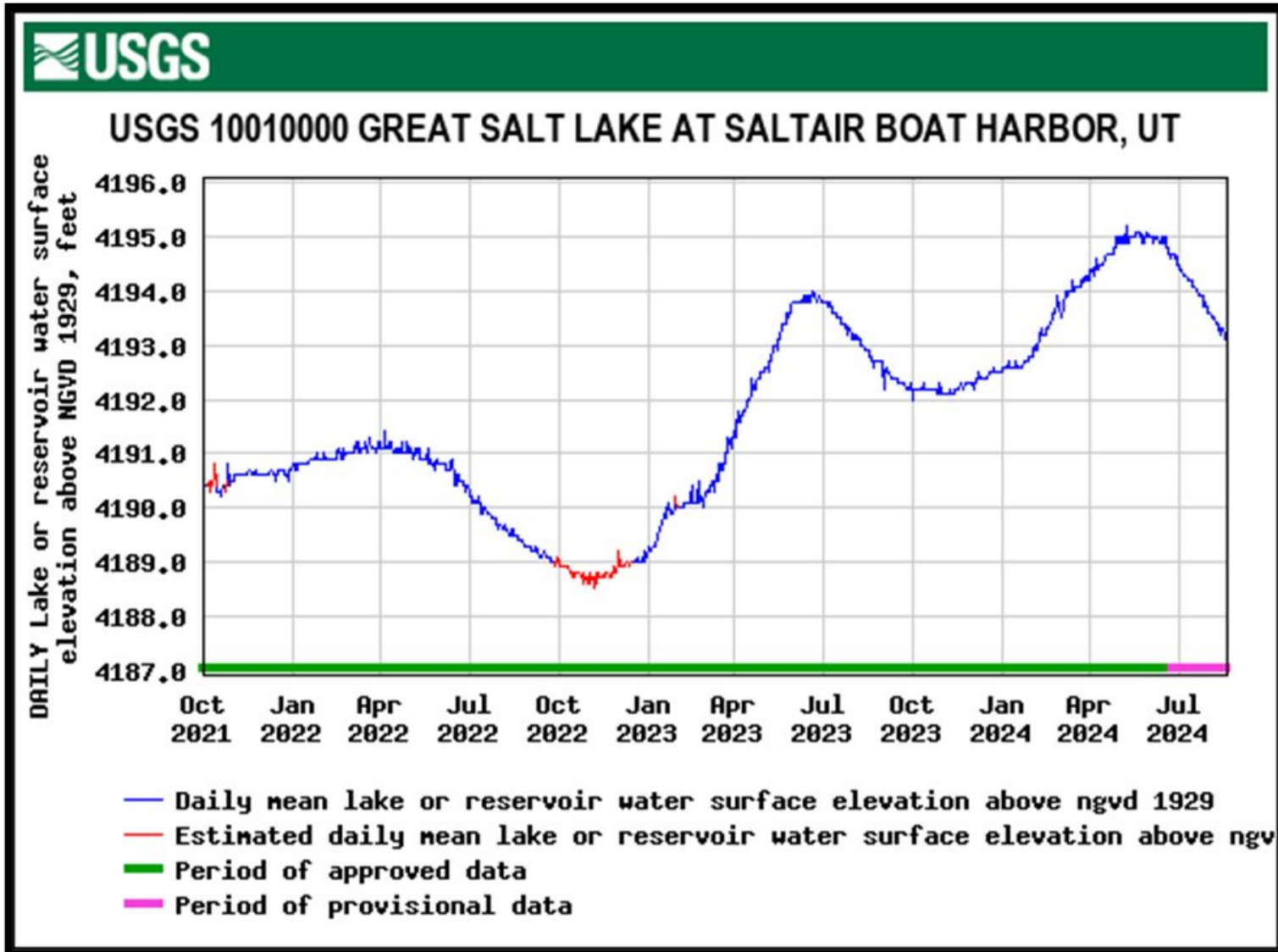


Explanation - Percentile classes

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

Provisional data, subject to revision

Great Salt Lake Water Surface Elevation-South Arm

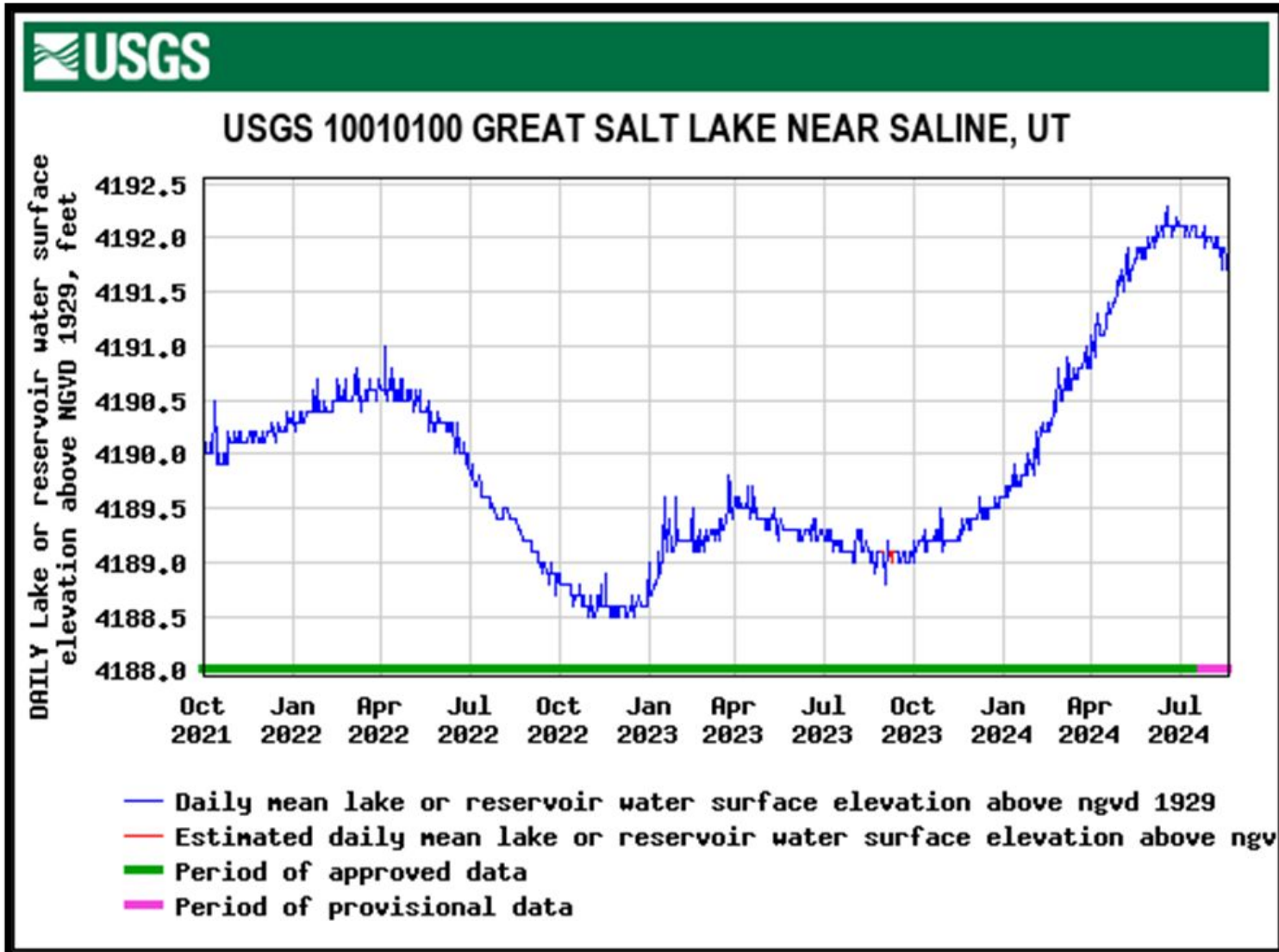


□ Daily value
8/19/2024 =
4,193.2'

□ Daily value
8/5/2024 =
4,193.5'

□ Down 2.0' since
Seasonal peak
on 5/7/2024

Great Salt Lake Water Surface Elevation-North Arm



- ❑ Daily value 8/19/2024 = 4,191.8'
- ❑ Daily value 8/5/2024 = 4,192.0'
- ❑ Down 0.5' since Seasonal peak on 6/17/2024

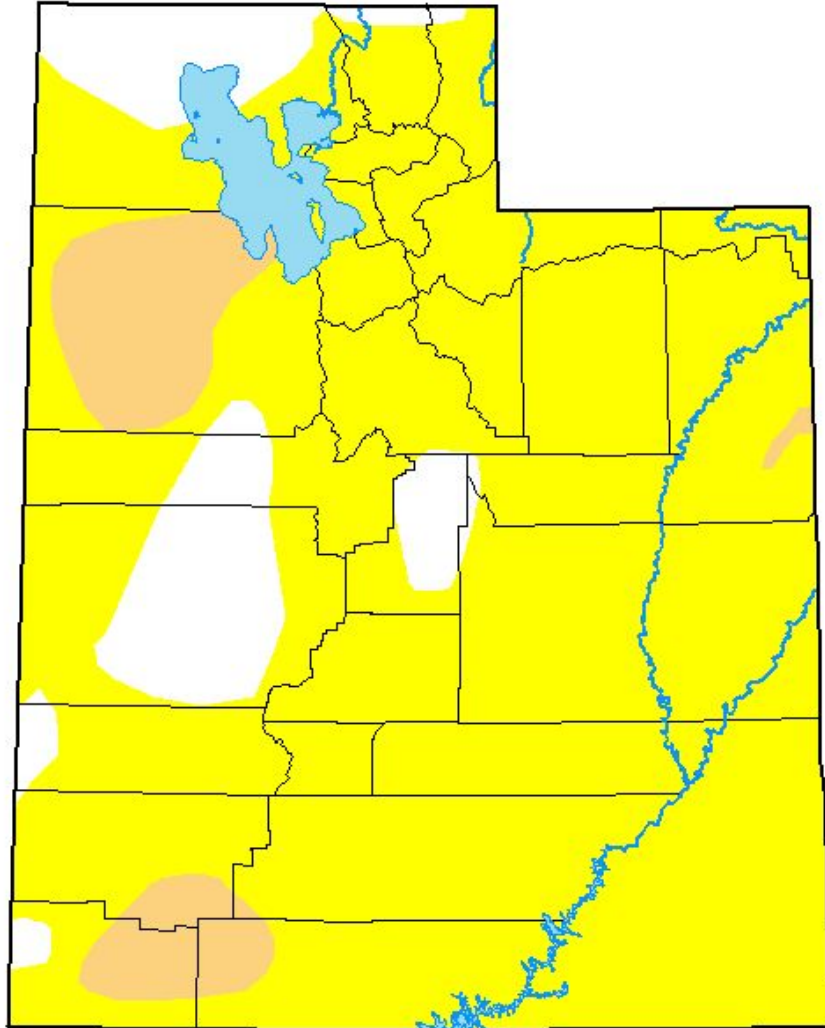
U.S. Drought Monitor

Utah







August 13, 2024

(Released Thursday, Aug. 15, 2024)

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:

Curtis Riganti
National Drought Mitigation Center



droughtmonitor.unl.edu

To report on conditions between meetings:

Submit a report on CMOR drought website

Email Lhaskell@utah.gov

email drought@utah.gov