



Utah Water Assessment & Conditions Monitoring (Drought Webinar)

The meeting will begin shortly



Thank you to our contributors



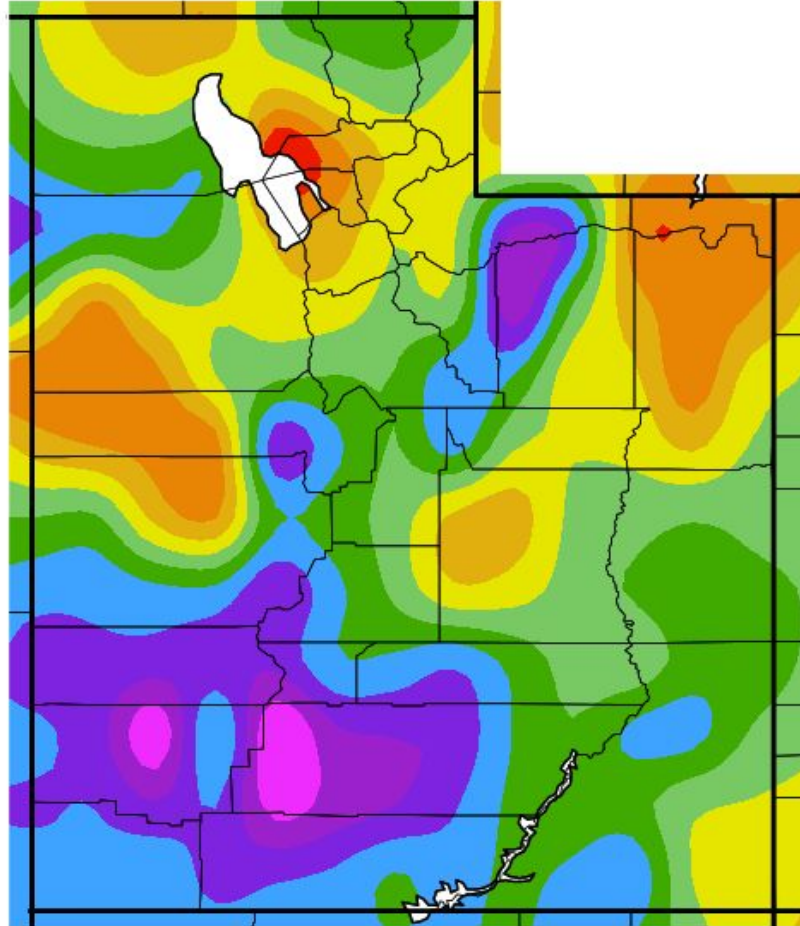


Utah Water Assessment & Conditions Monitoring Webinar

August 23, 2022

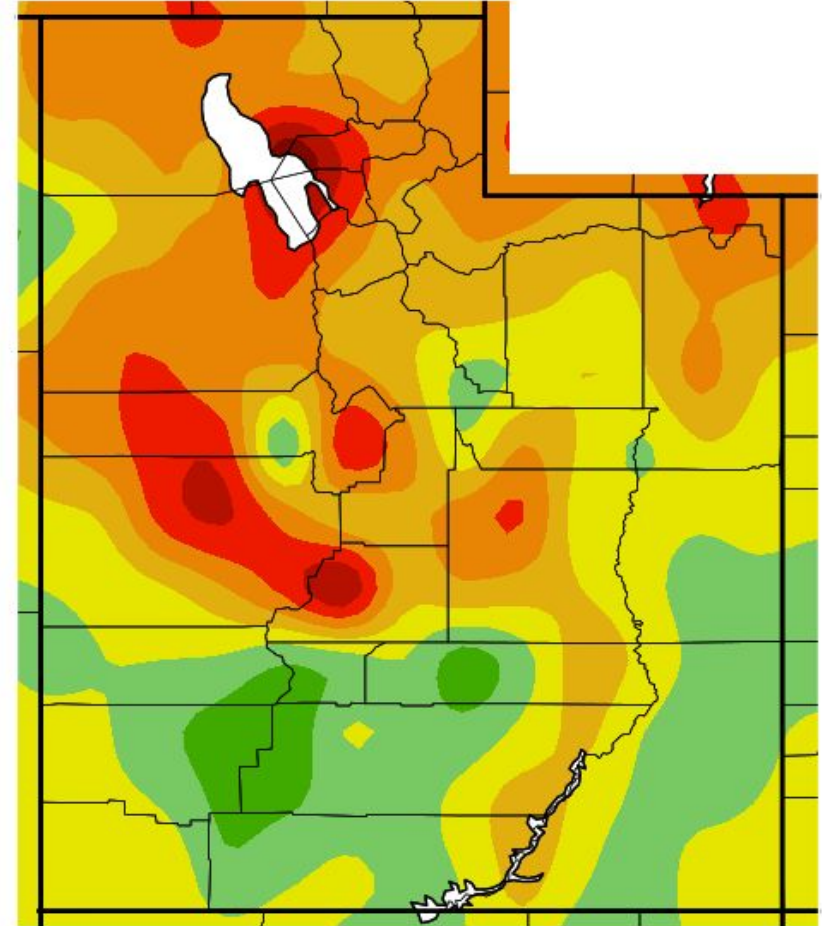
Daily Max. Temperature Anomaly (14-day & 60-day)

Av. Max. Temperature dep from Ave (deg F)
8/9/2022 – 8/22/2022



Generated 8/23/2022 at WRCC using provisional data.
NOAA Regional Climate Centers

Av. Max. Temperature dep from Ave (deg F)
6/24/2022 – 8/22/2022

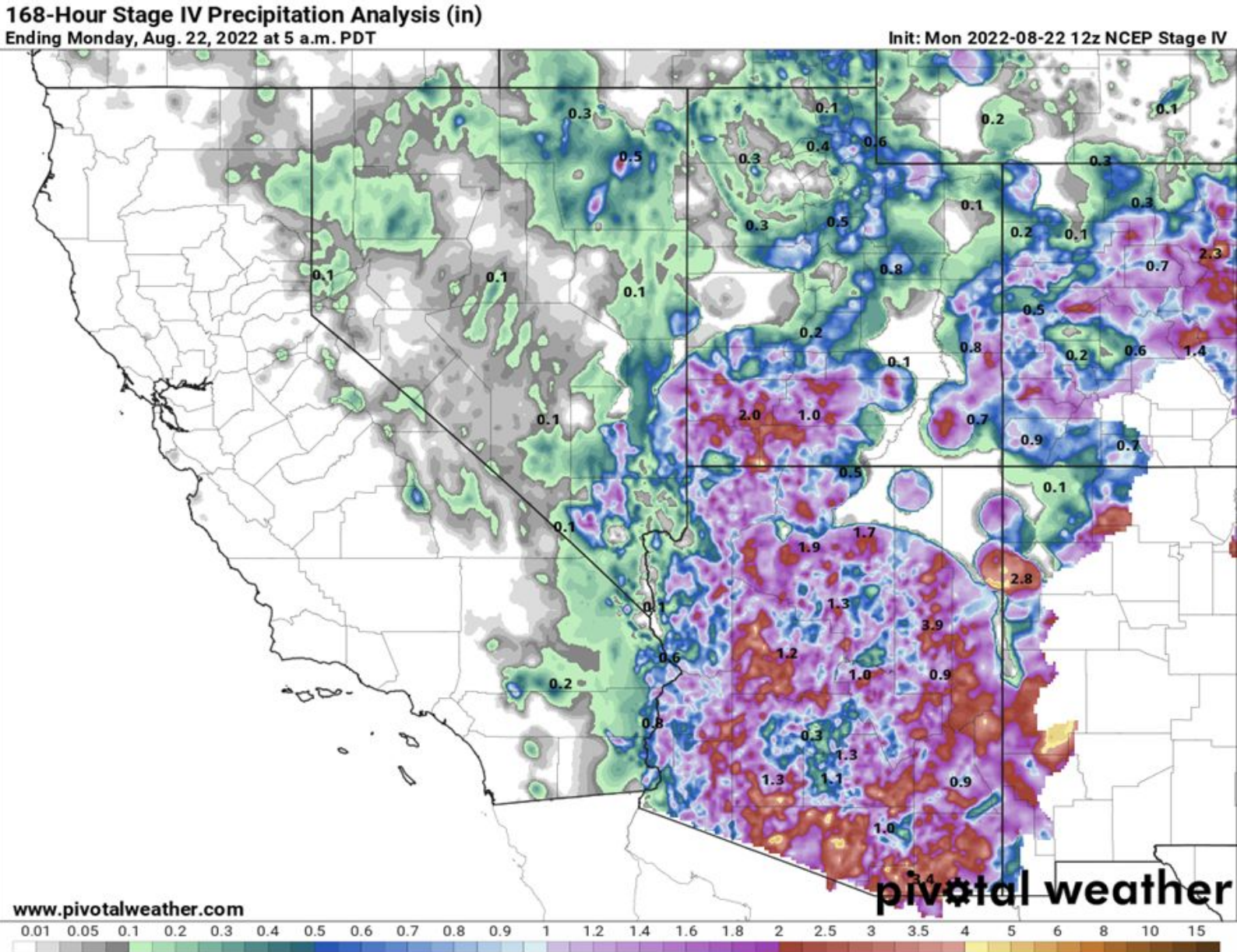


Generated 8/23/2022 at WRCC using provisional data.
NOAA Regional Climate Centers

Agency - Utah Climate Center

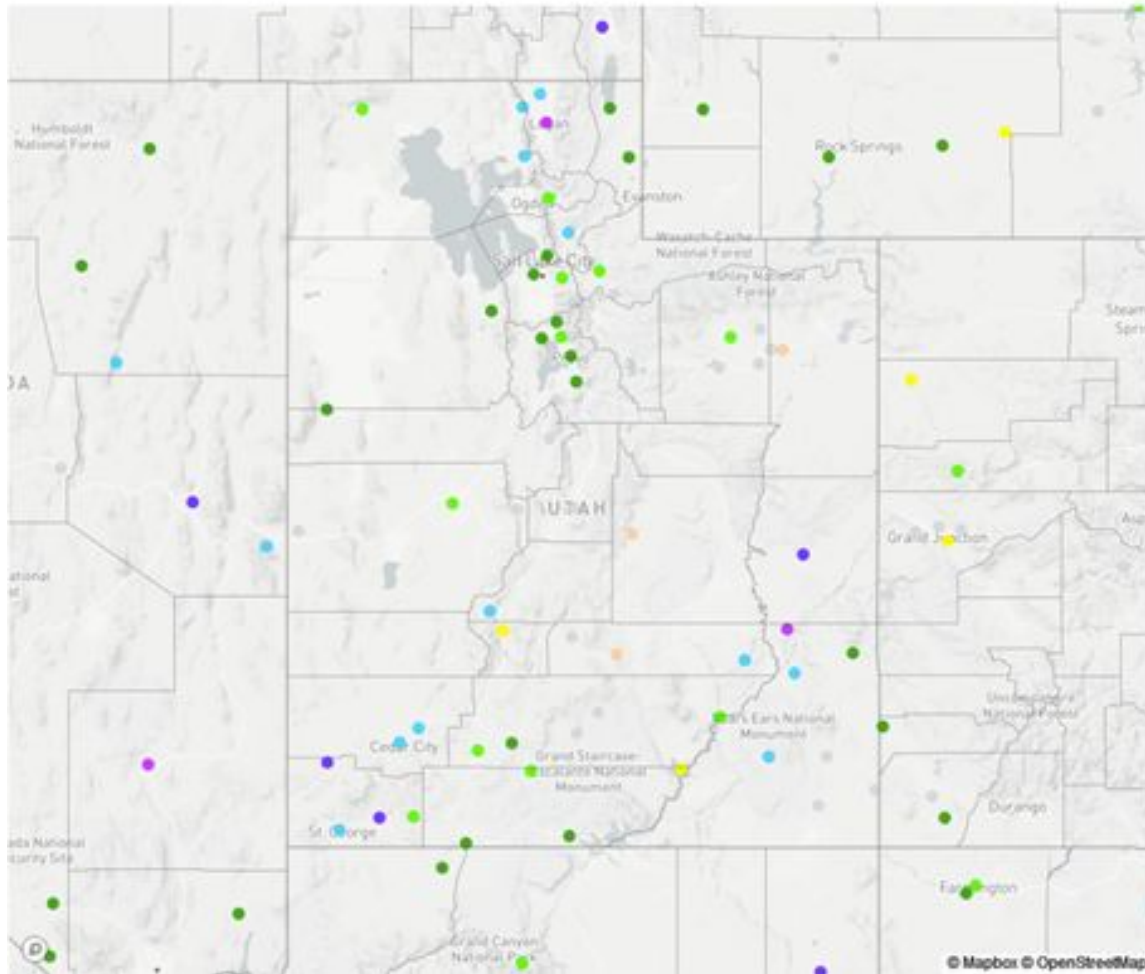
Presenter - Jon Meyer

Precipitation 7 day history

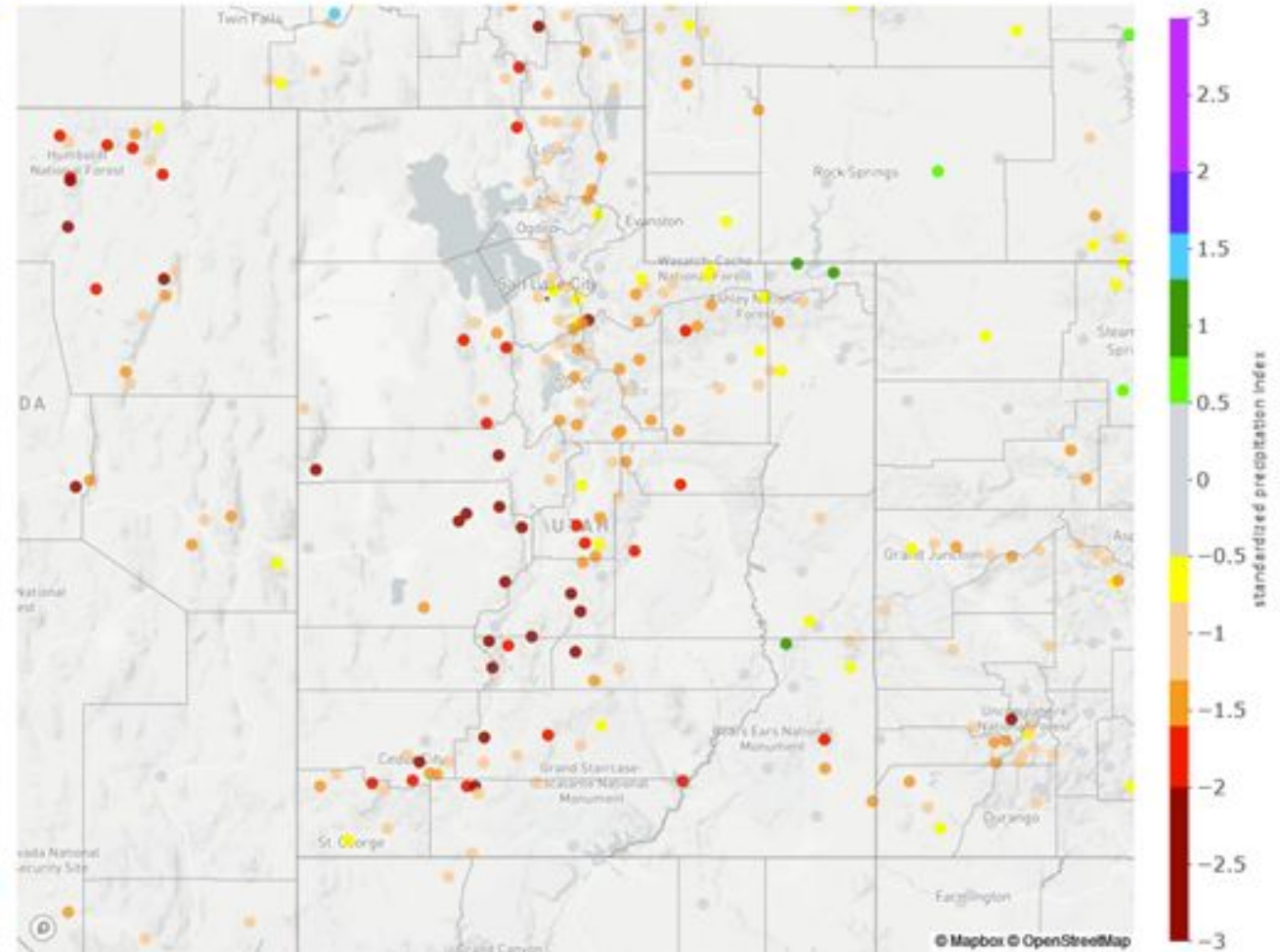


Standardized Precipitation Index (30 day & Year-to-Date)

30-day Standardized Precipitation Index: 2022/07/23 - 2022/08/21



Year-to-date Standardized Precipitation Index: 2022/01/01 - 2022/08/21

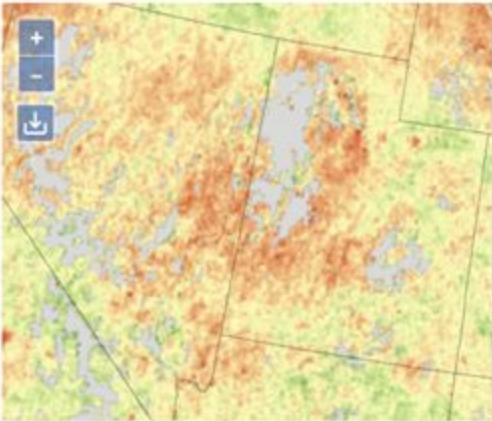


Evaporative Stress Index (ESI) and Evaporative Drought Demand Index (EDDI)

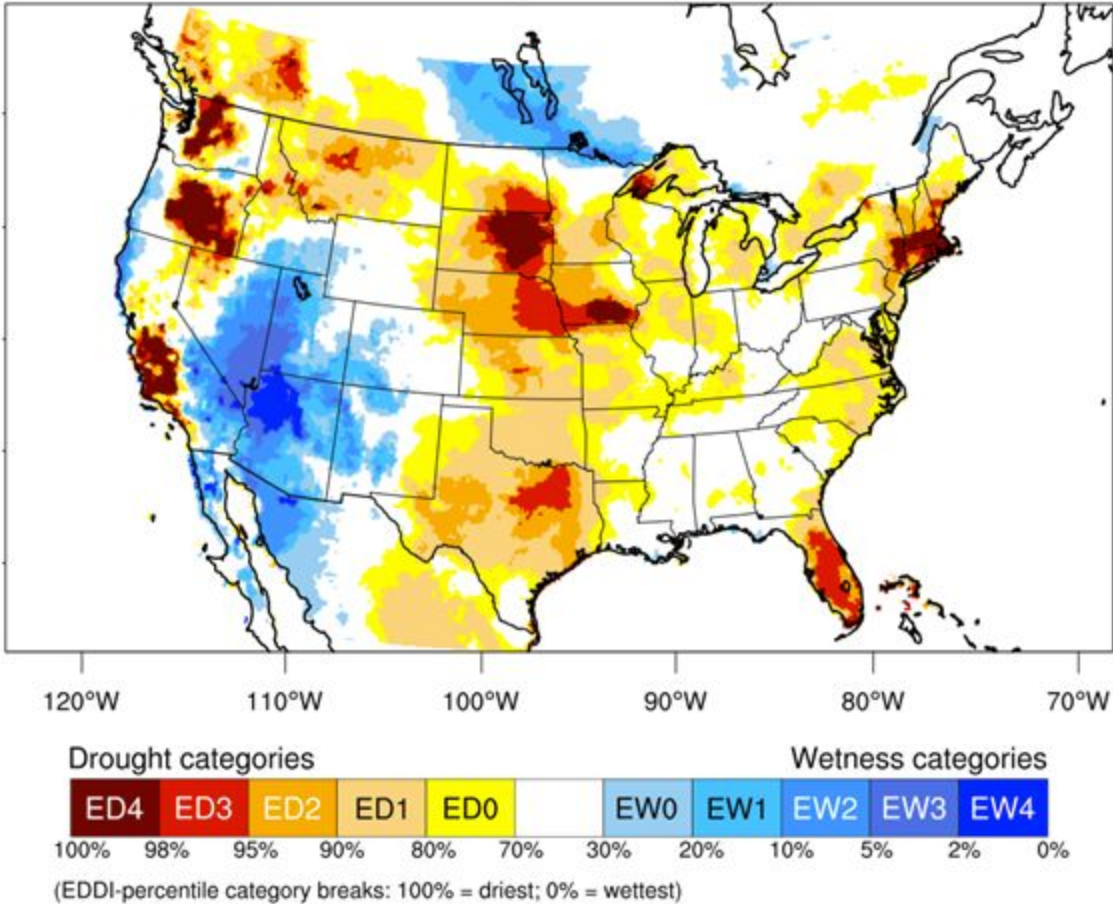
[Evaporative Stress Index](#) [VegDRI](#) [Vegetation Health Index](#)

The Evaporative Stress Index (ESI) describes temporal anomalies in evapotranspiration (ET), highlighting areas with anomalously high or low rates of water use across the land surface. The ESI also demonstrates capability for capturing early signals of "flash drought," brought on by extended periods of hot, dry, and windy conditions leading to rapid soil moisture depletion. [Learn more.](#)

Standardized ET/PET Anomalies

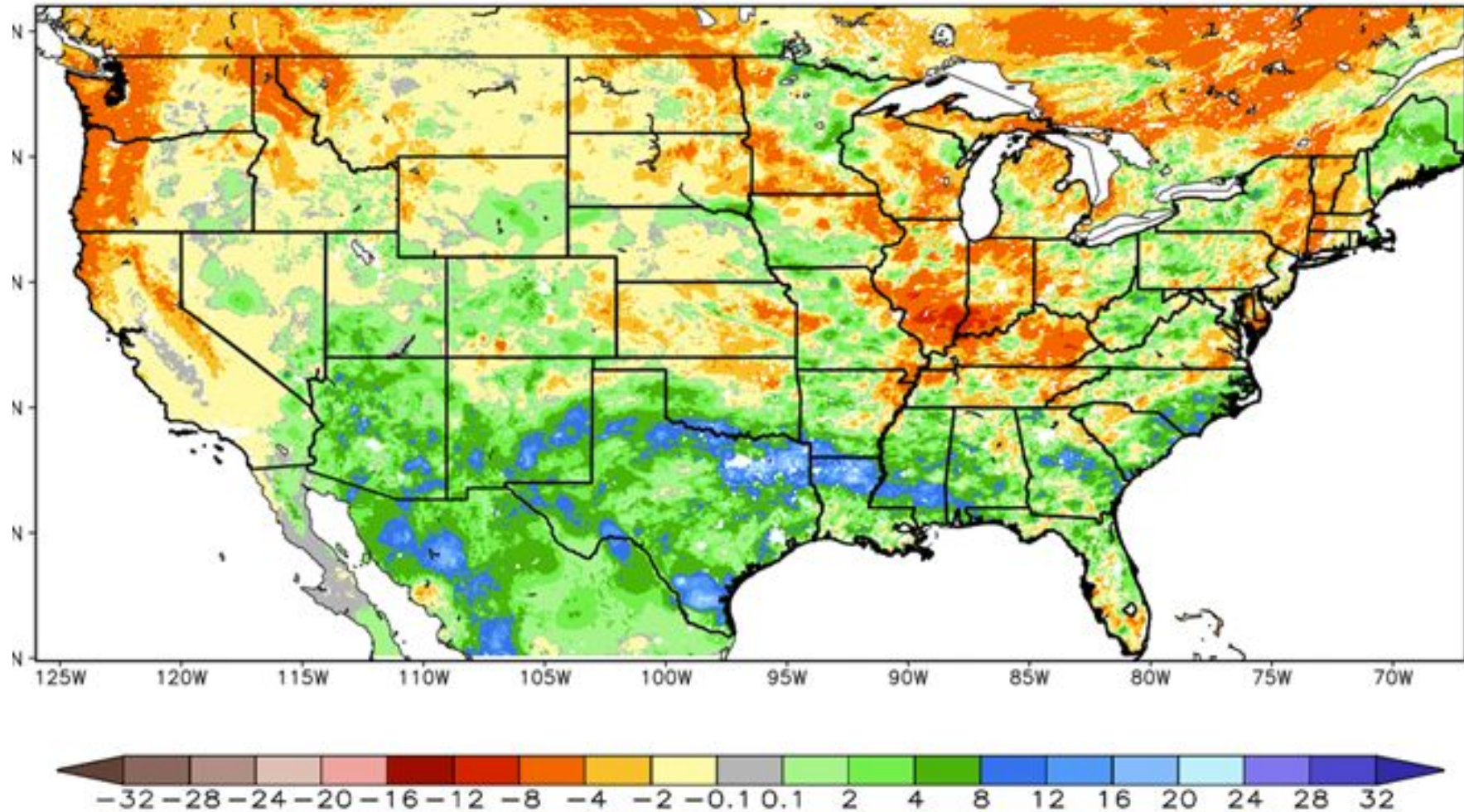


1-month EDDI categories for August 18, 2022



Soil Moisture Change (2-week)

2-Week Difference in Column Relative Soil Moisture (%) valid 00z 23 Aug 2022



Agency - Utah Climate Center

Presenter - Jon Meyer

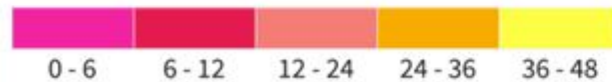
Vegetation Health Index (VHI) & VegDRI

Vegetation Condition

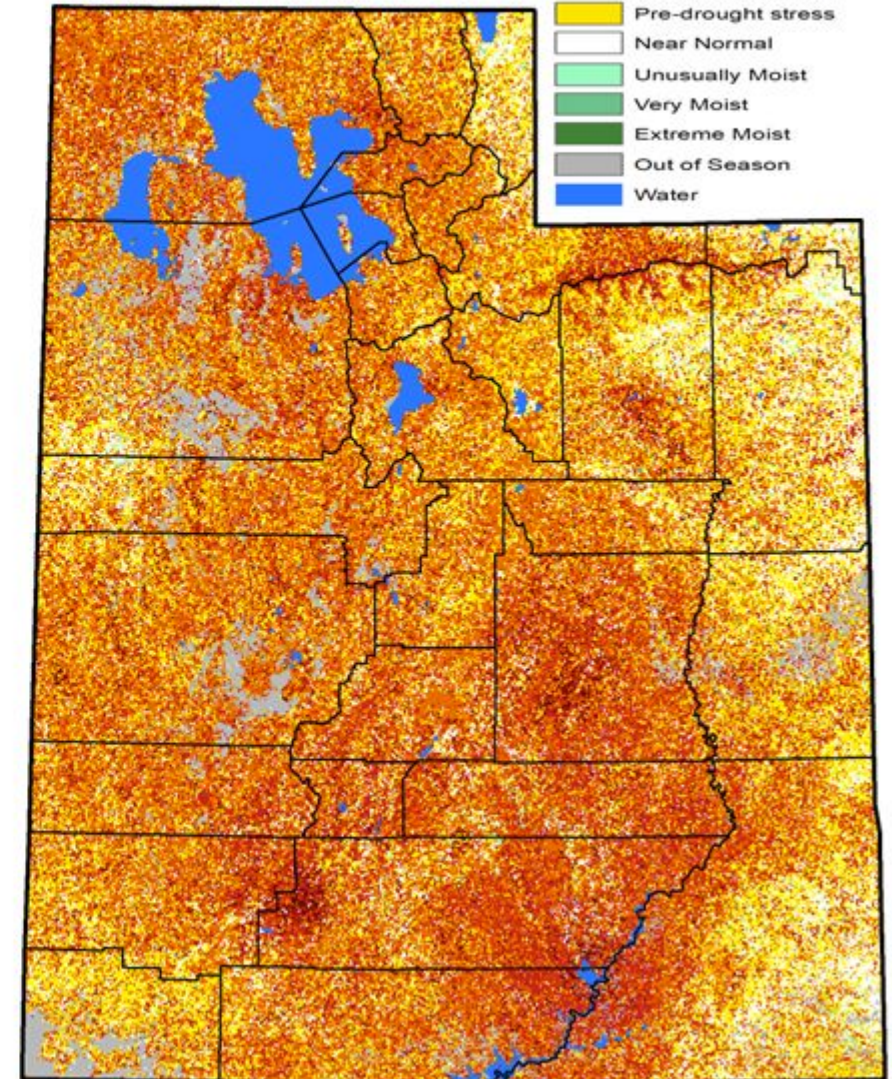
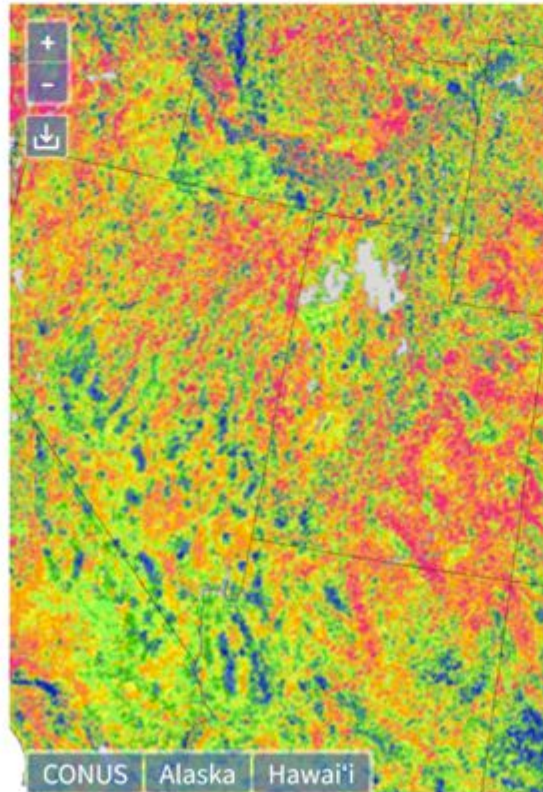
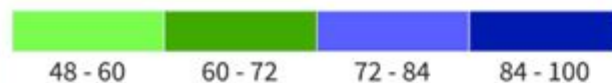


NOAA's Center for Satellite Applications and Research produces satellite-based global vegetation health products, including the vegetation health index (VHI). VHI is a proxy characterizing vegetation health or a combined estimation of moisture and thermal conditions. Vegetation health is often used to estimate crop condition and anticipated yield. If the indices are below 40, indicating different levels of vegetation stress, losses of crop and pasture production might be expected; if the indices above 60 (favorable conditions), plentiful production might be expected. [Learn more.](#)

Unfavorable Conditions



Favorable Conditions

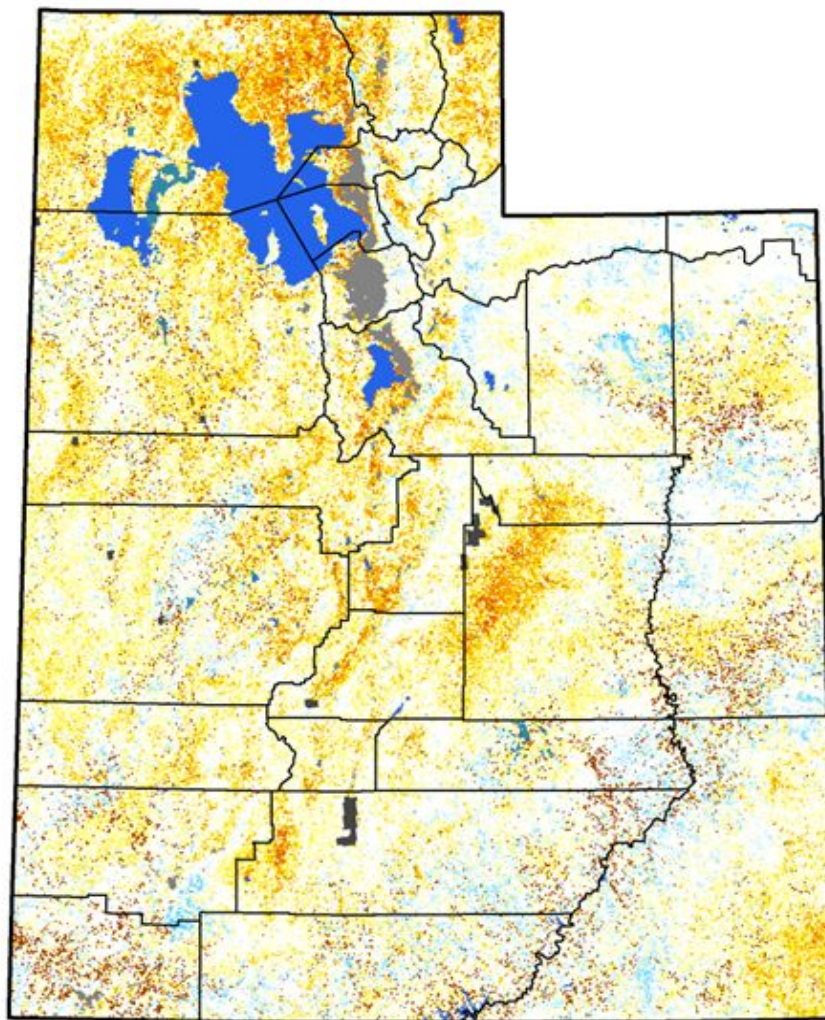


Quick Drought Response Index

Utah

July 31, 2022
(Week 31)

Conditions Relative to
4-Week Historical Average



CALMIT
University of Nebraska - Lincoln
Center for Advanced Land Management Information Technologies



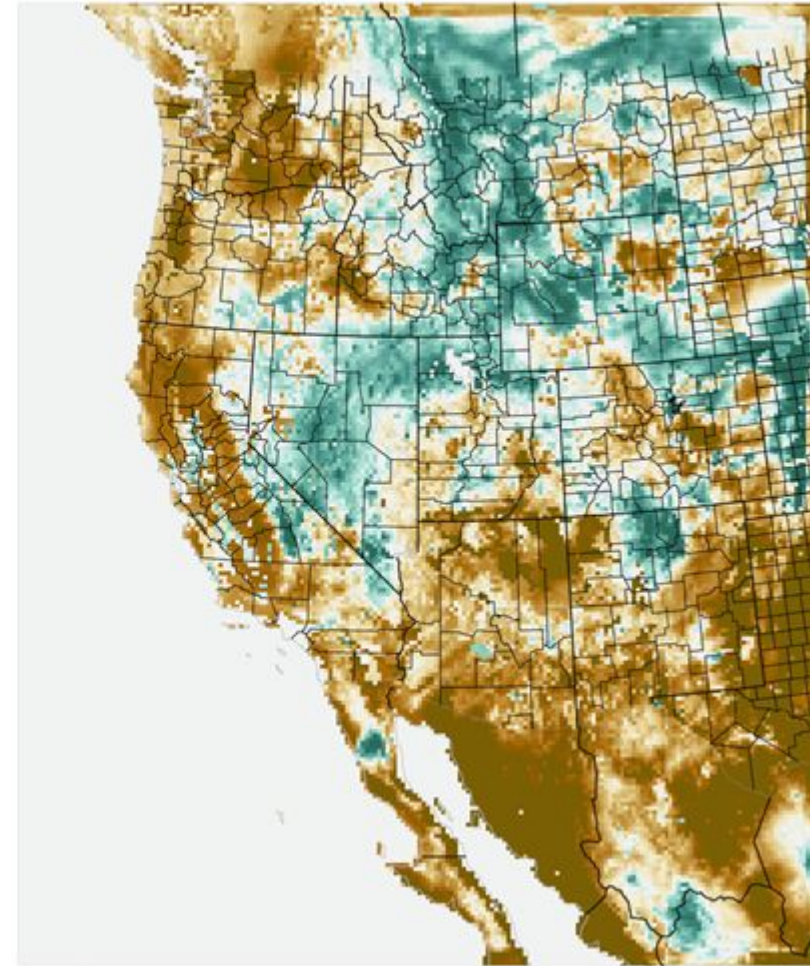
Agency - Utah Climate Center
Presenter - Jon Meyer

UCC Soil Moisture Forecast

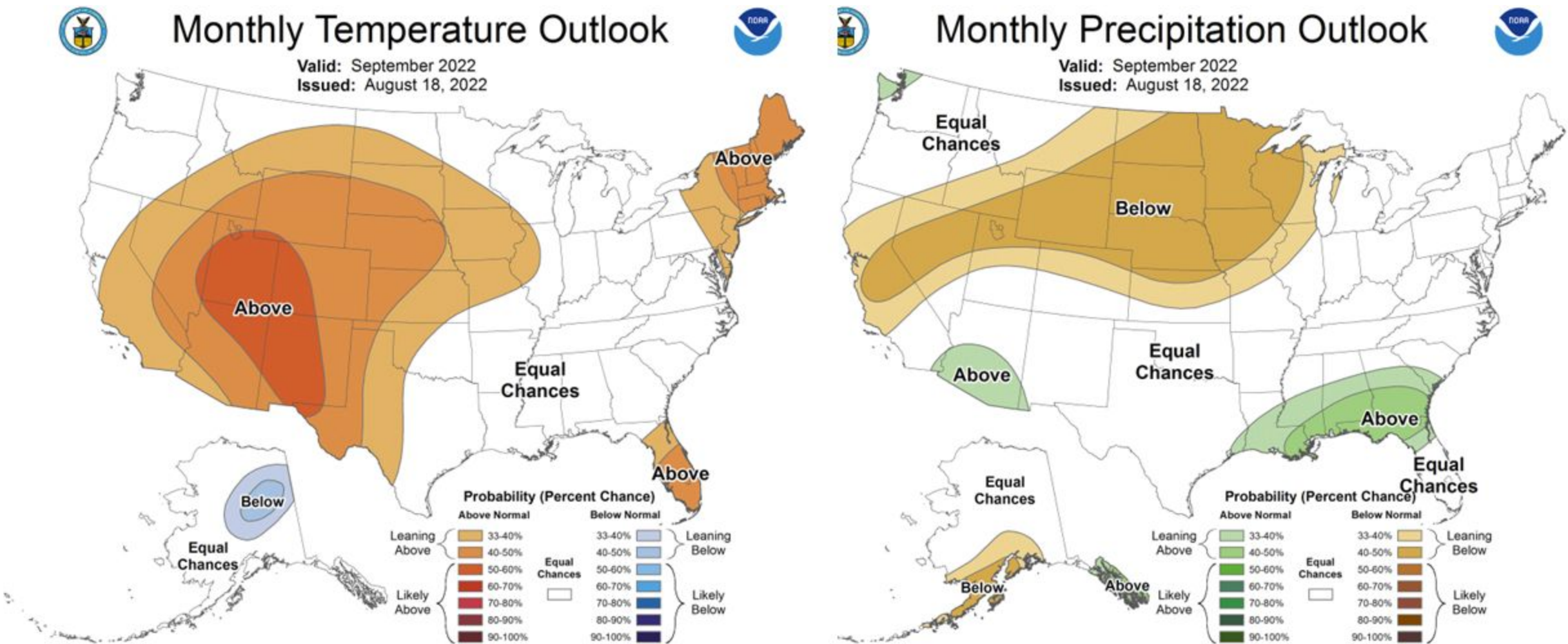
Change in Soil Moisture Since Initialization (%)
F372 Valid Tue 2022-09-06 00z
Init: Sun 2022-08-21 12z



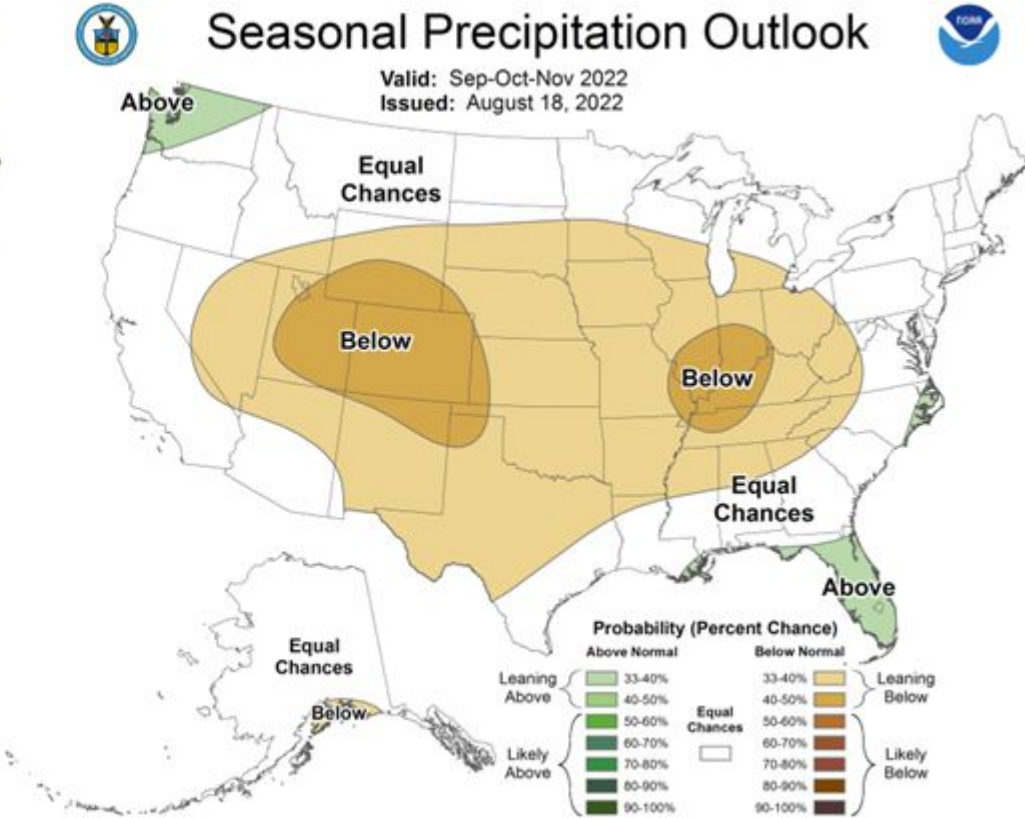
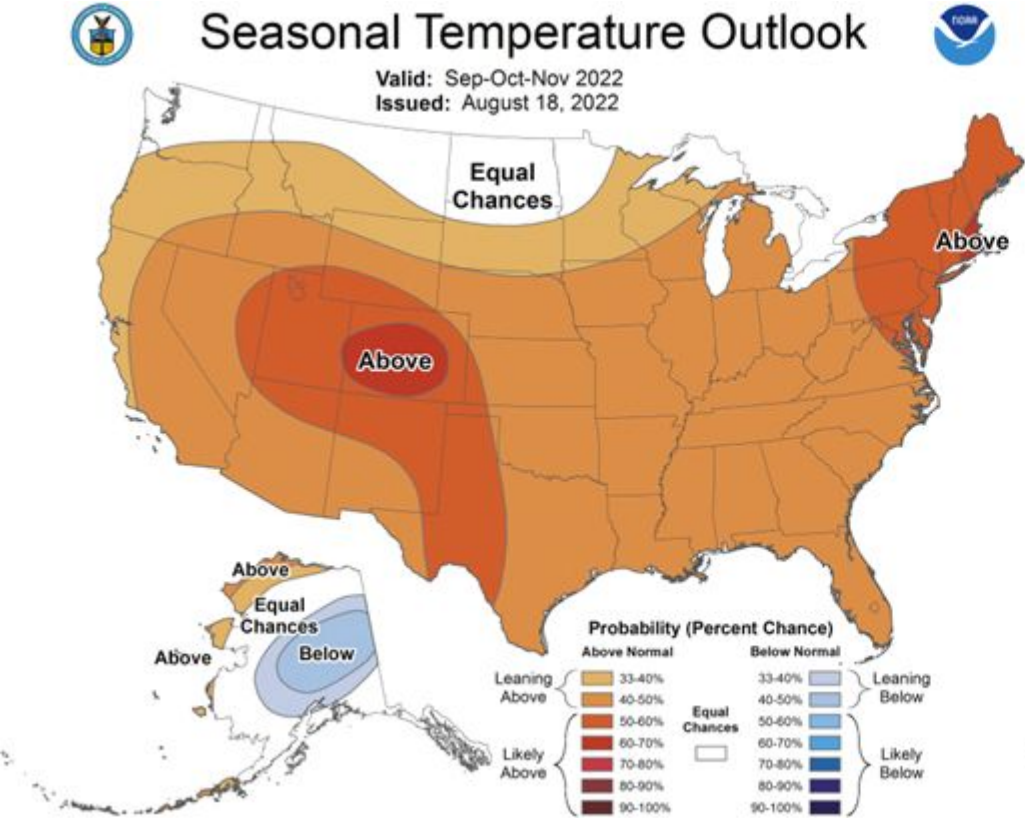
Change in Soil Moisture Since Initialization (%)
F636 Valid Sat 2022-09-17 00z
Init: Sun 2022-08-21 12z

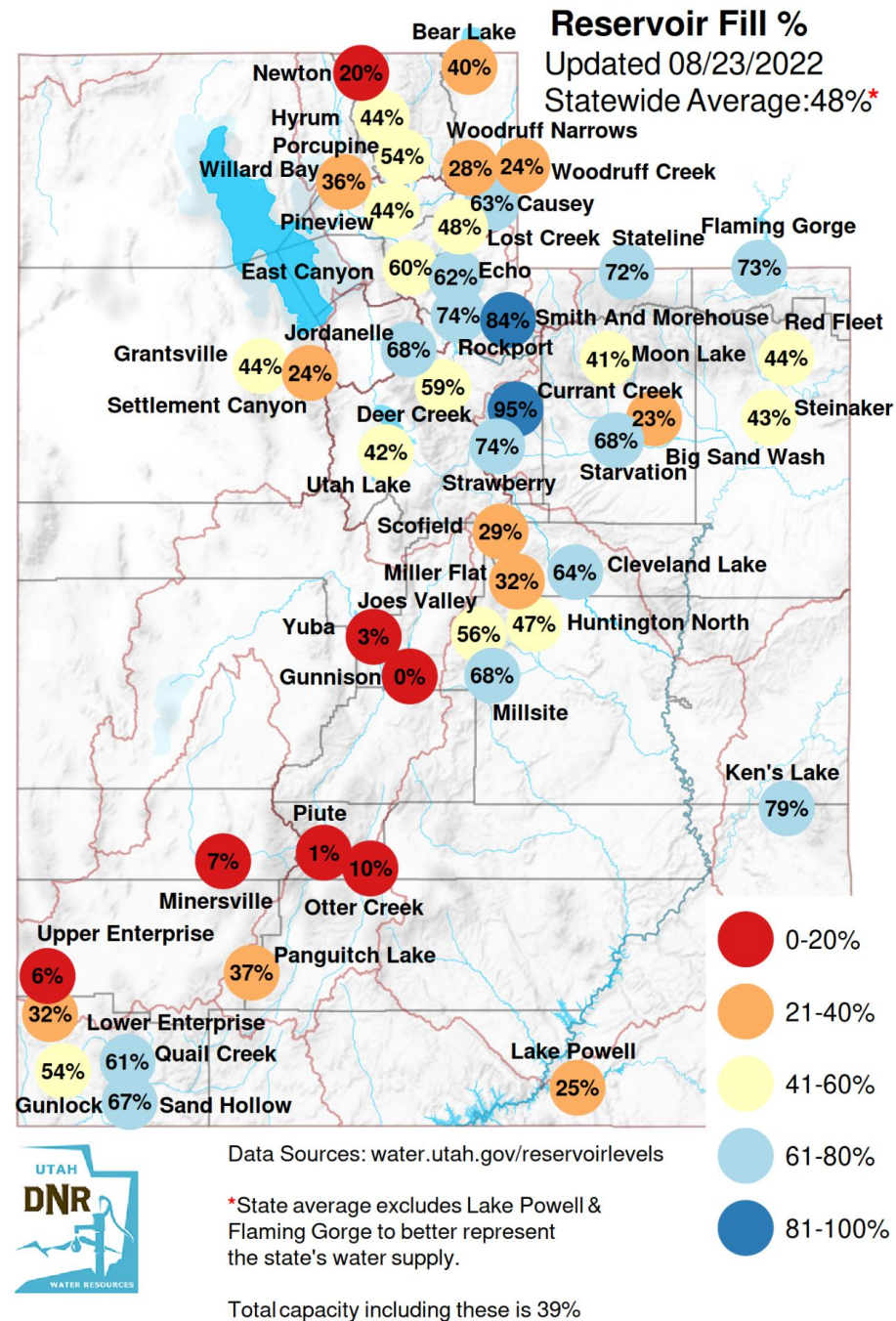


CPC September Outlook

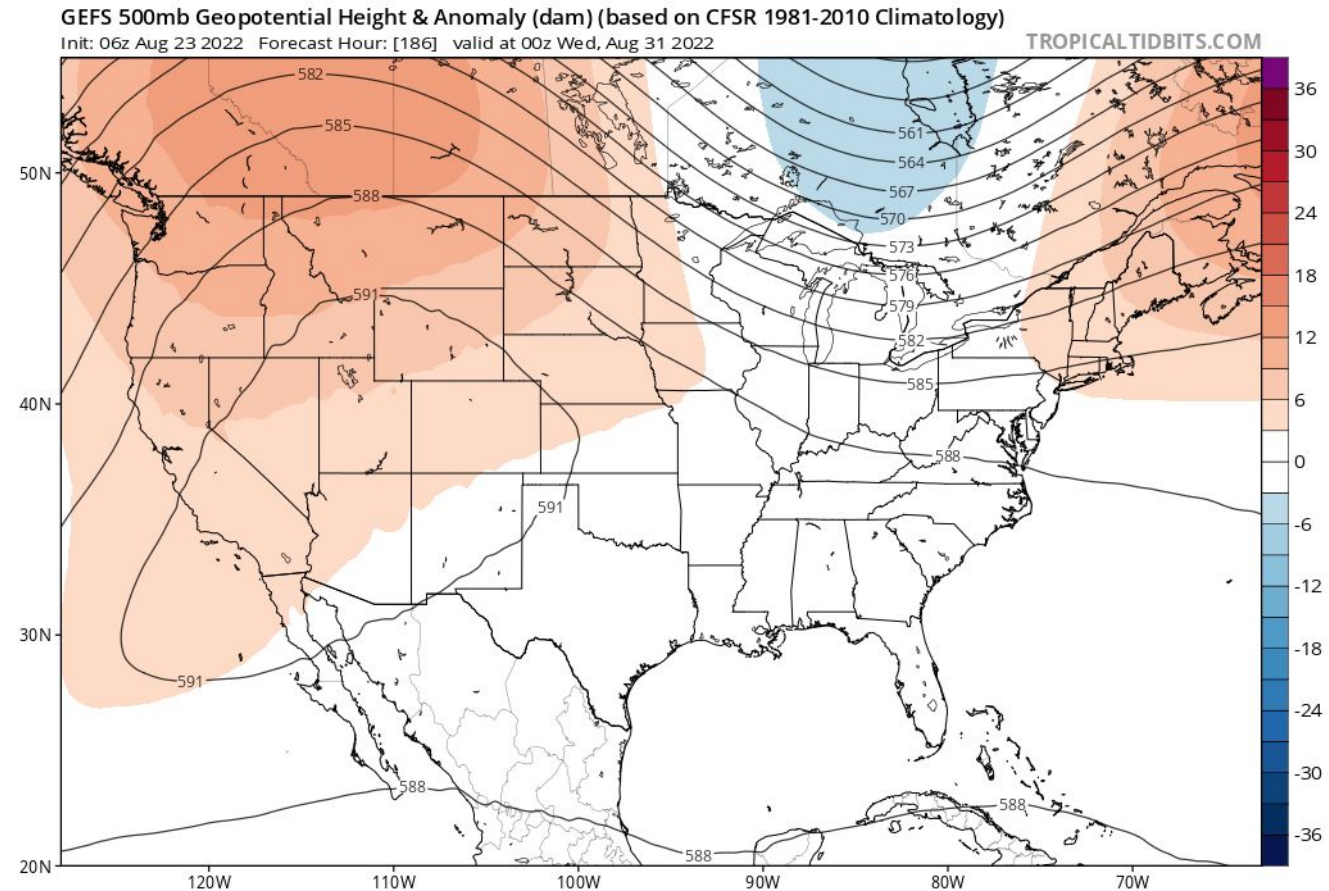
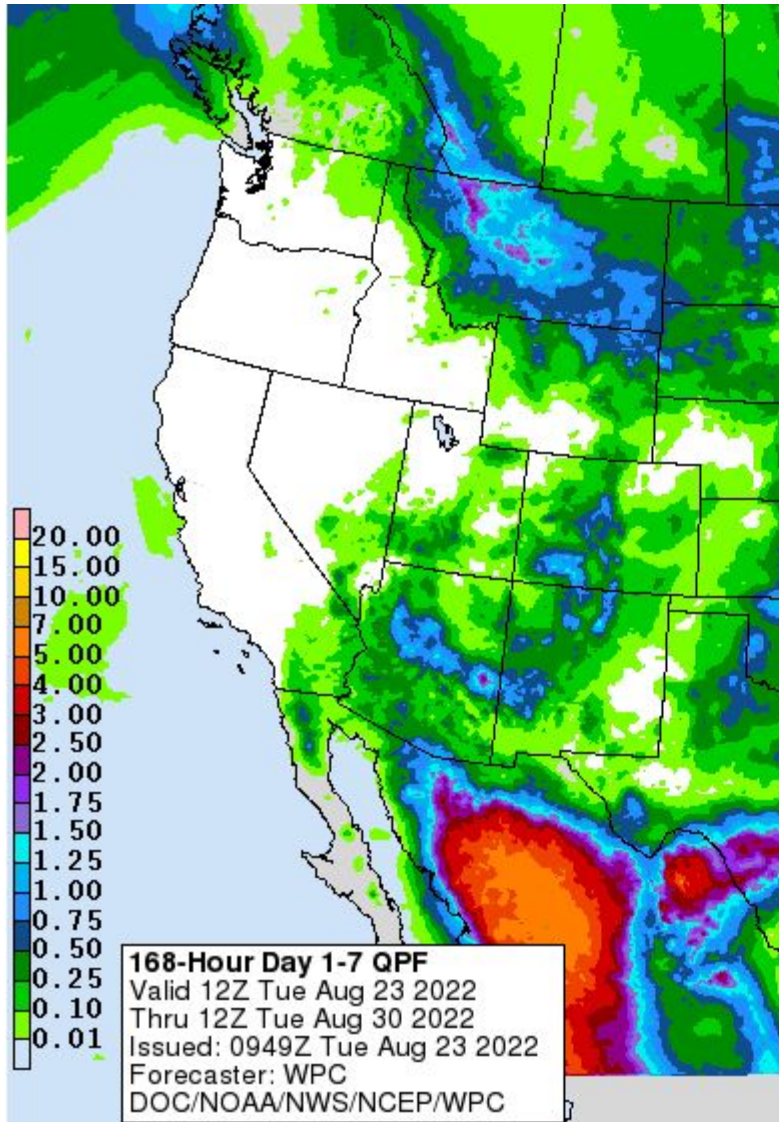
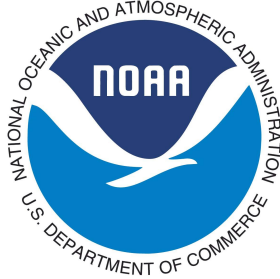


CPC September-November Outlook





Weather Forecast Office Utah Day 1-7 Outlook

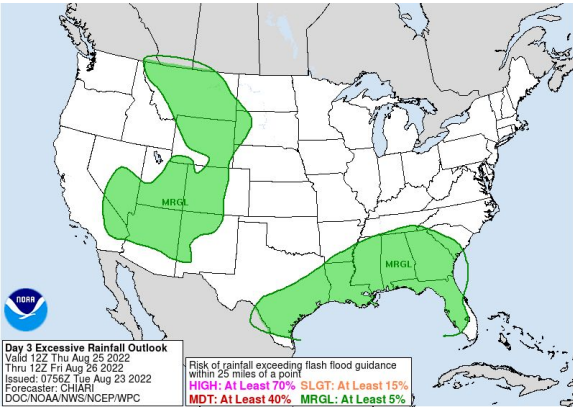
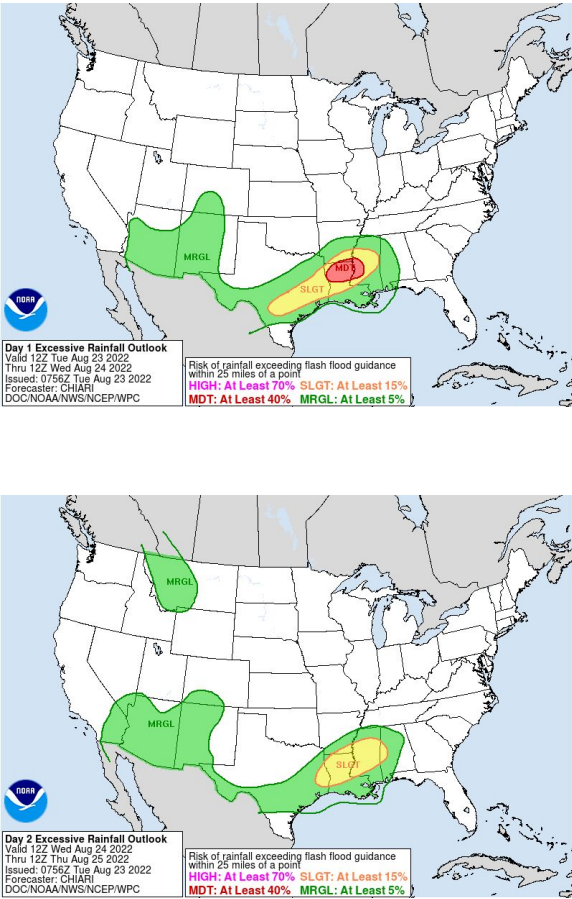
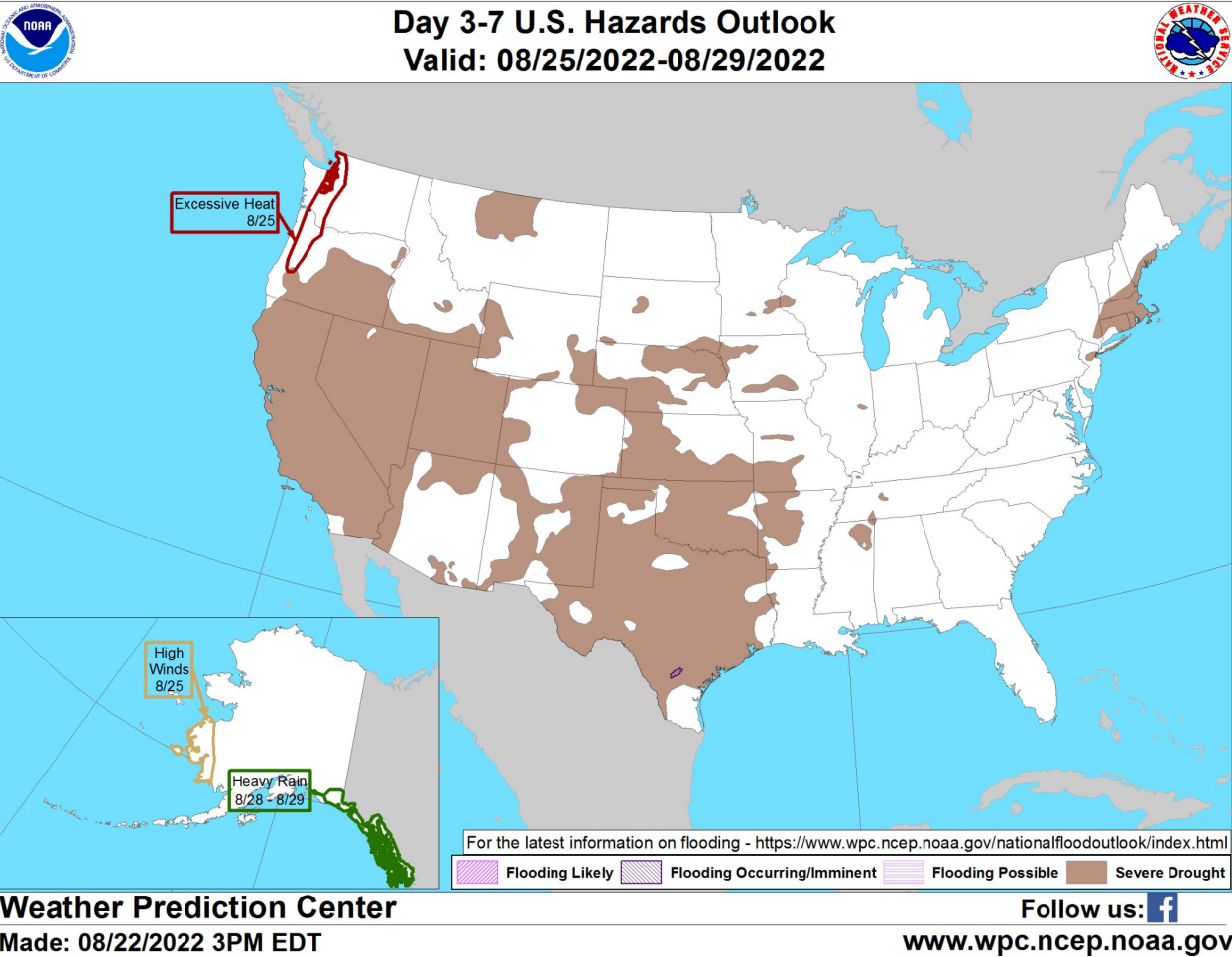
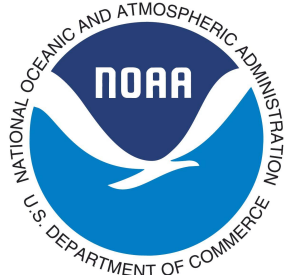


- Monsoonal moisture returns to the state Wednesday. Diurnal showers/storms possible through Saturday, namely southern Utah and the higher terrain.
- Growing confidence in a drying trend heading into early next week.
- Temperatures slightly above normal

Agency - National Weather Service Weather Forecast Office

Presenter - Glen Merrill

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



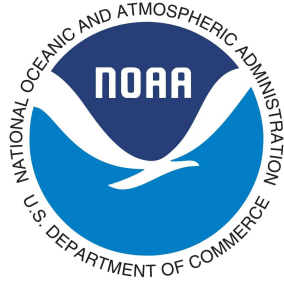
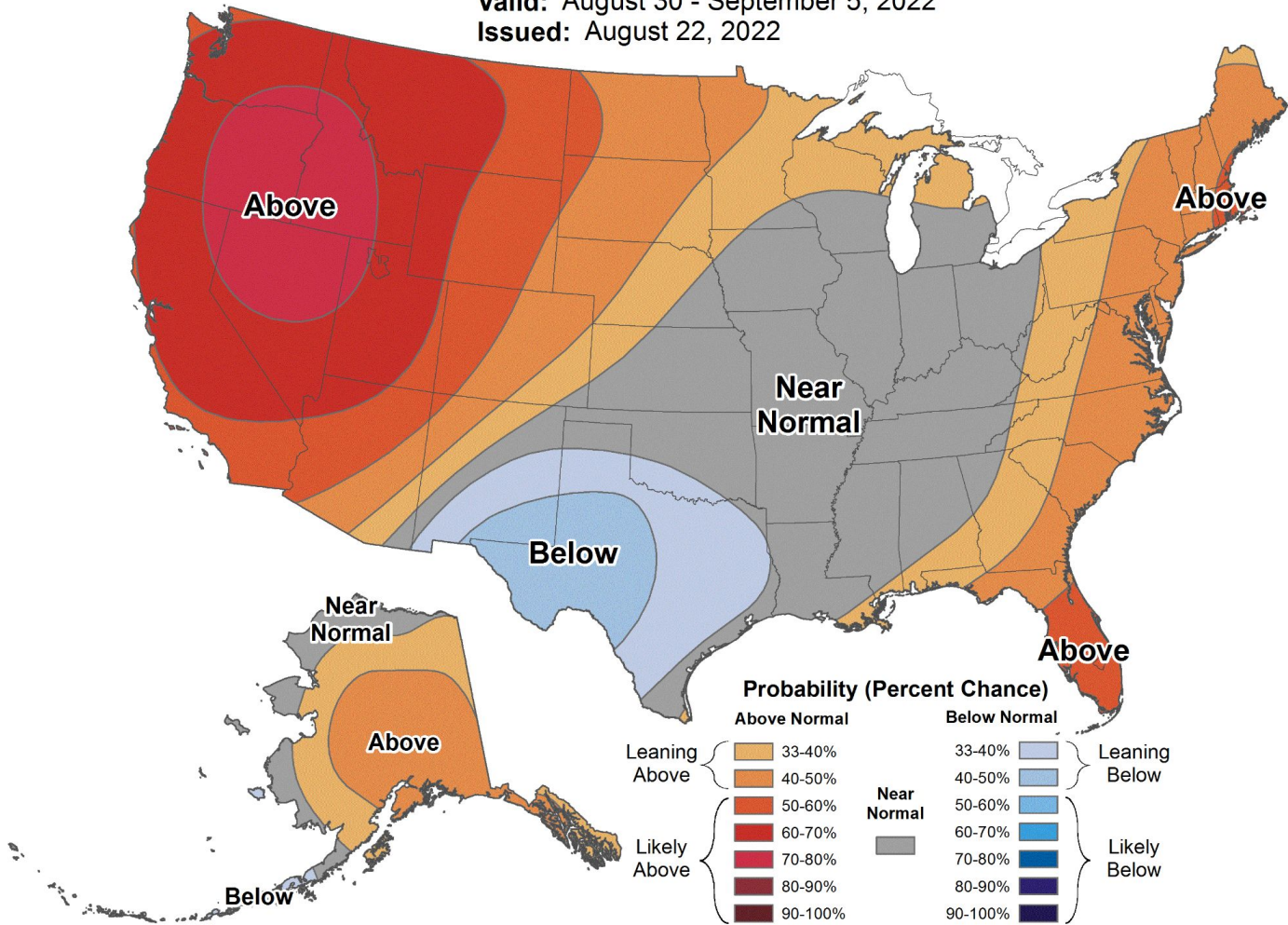
Climate Prediction Center 8 to 14 Day Outlooks - Temperature



8-14 Day Temperature Outlook

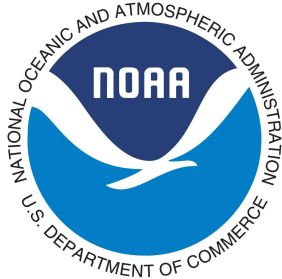


Valid: August 30 - September 5, 2022
Issued: August 22, 2022

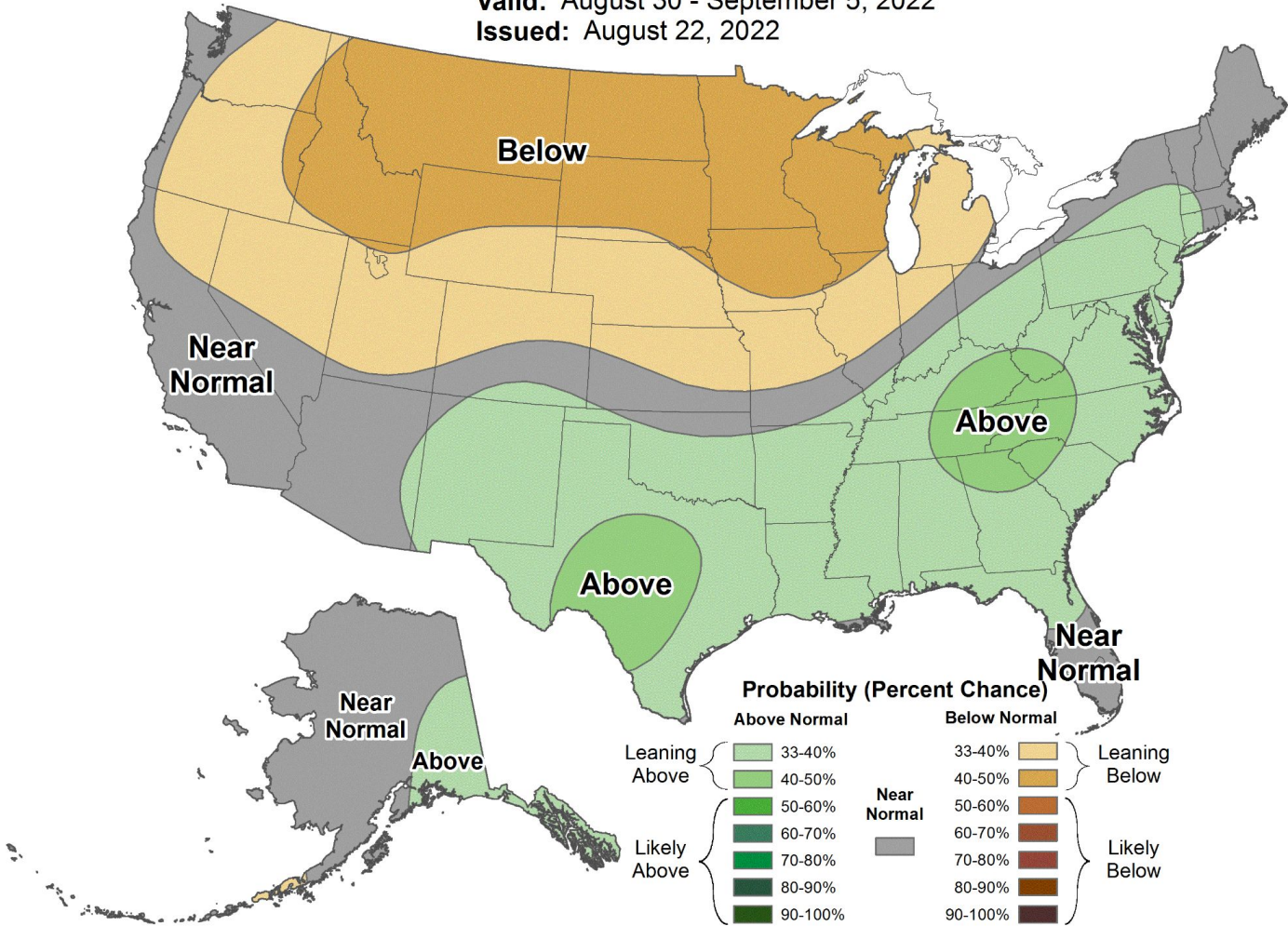


Climate Prediction Center 8 to 14 Day Outlooks - Precipitation

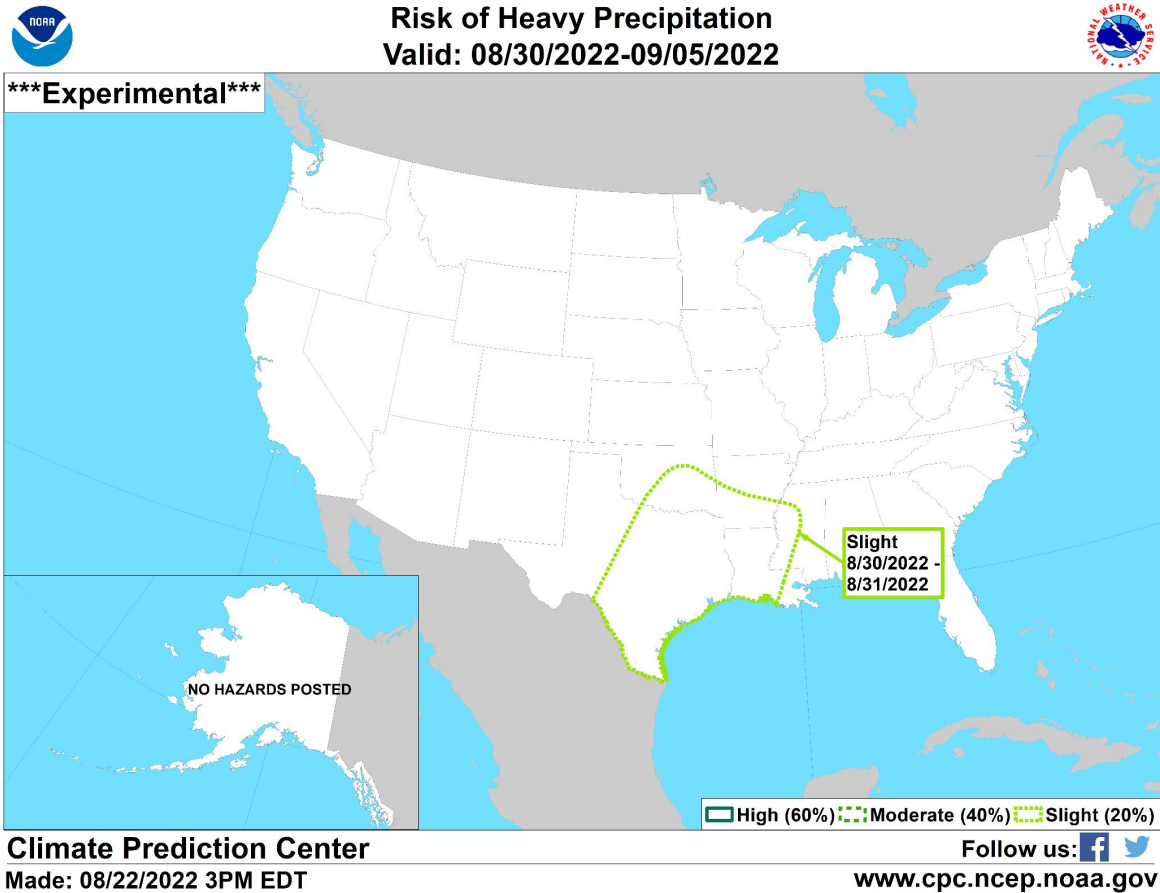
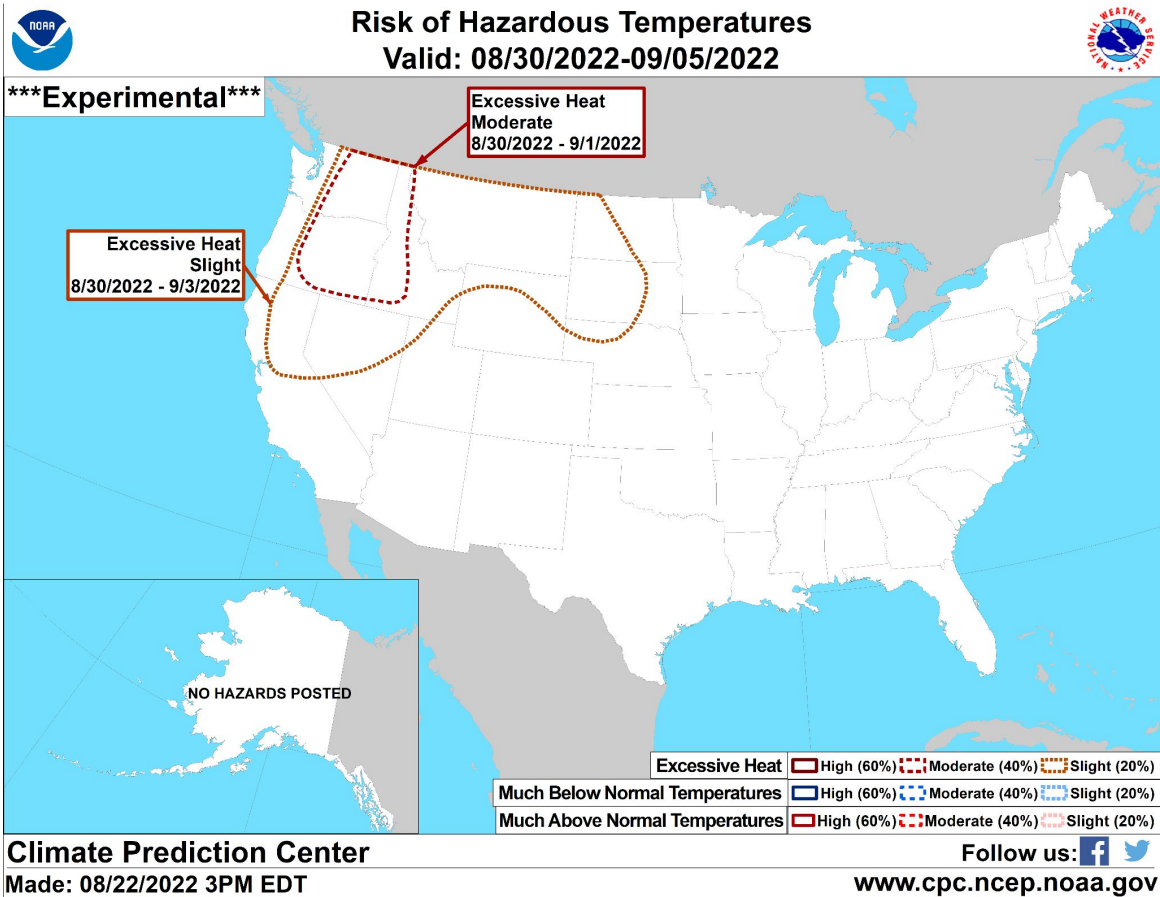
8-14 Day Precipitation Outlook

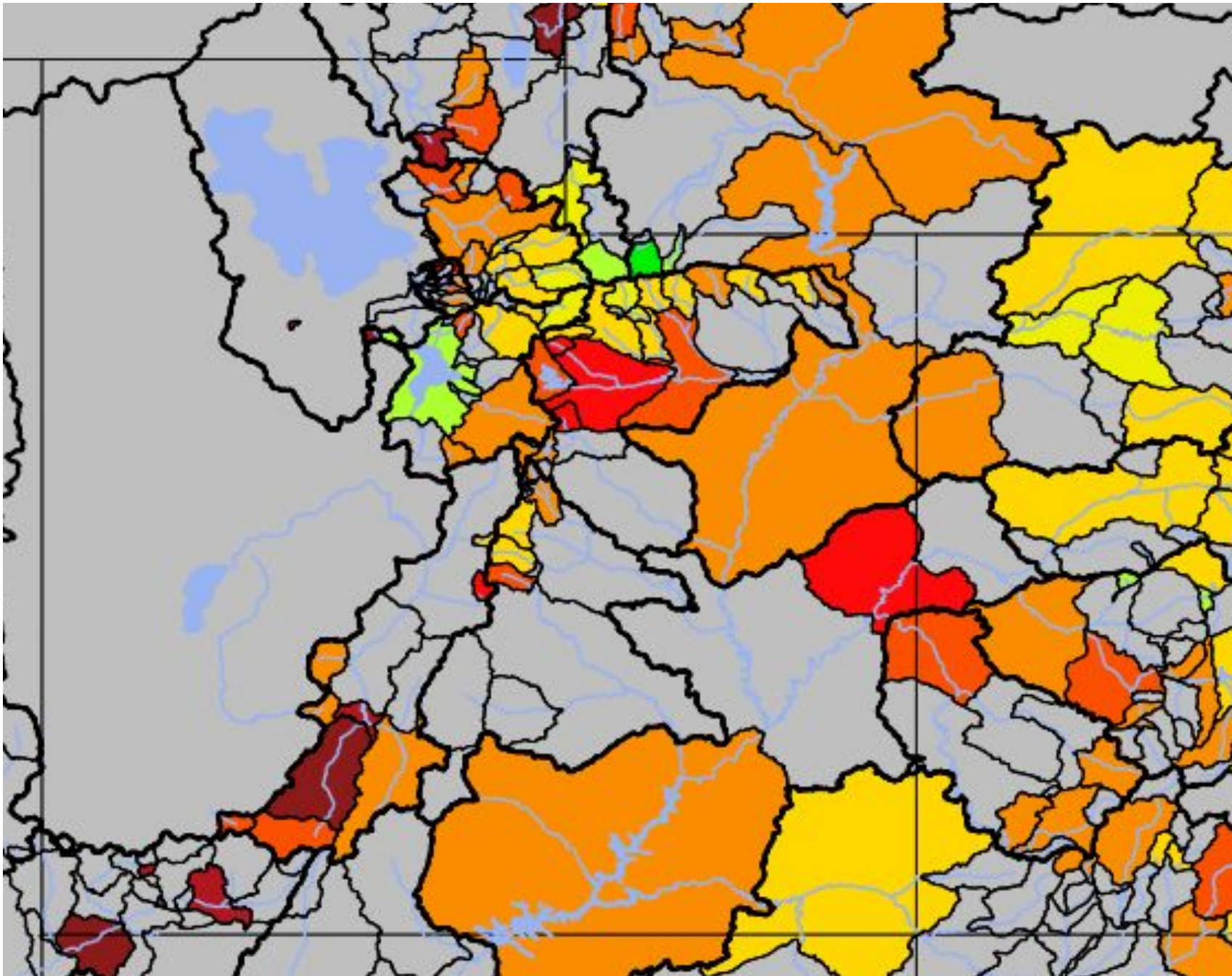
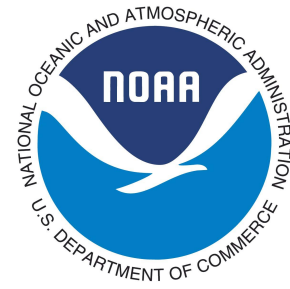


Valid: August 30 - September 5, 2022
Issued: August 22, 2022



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



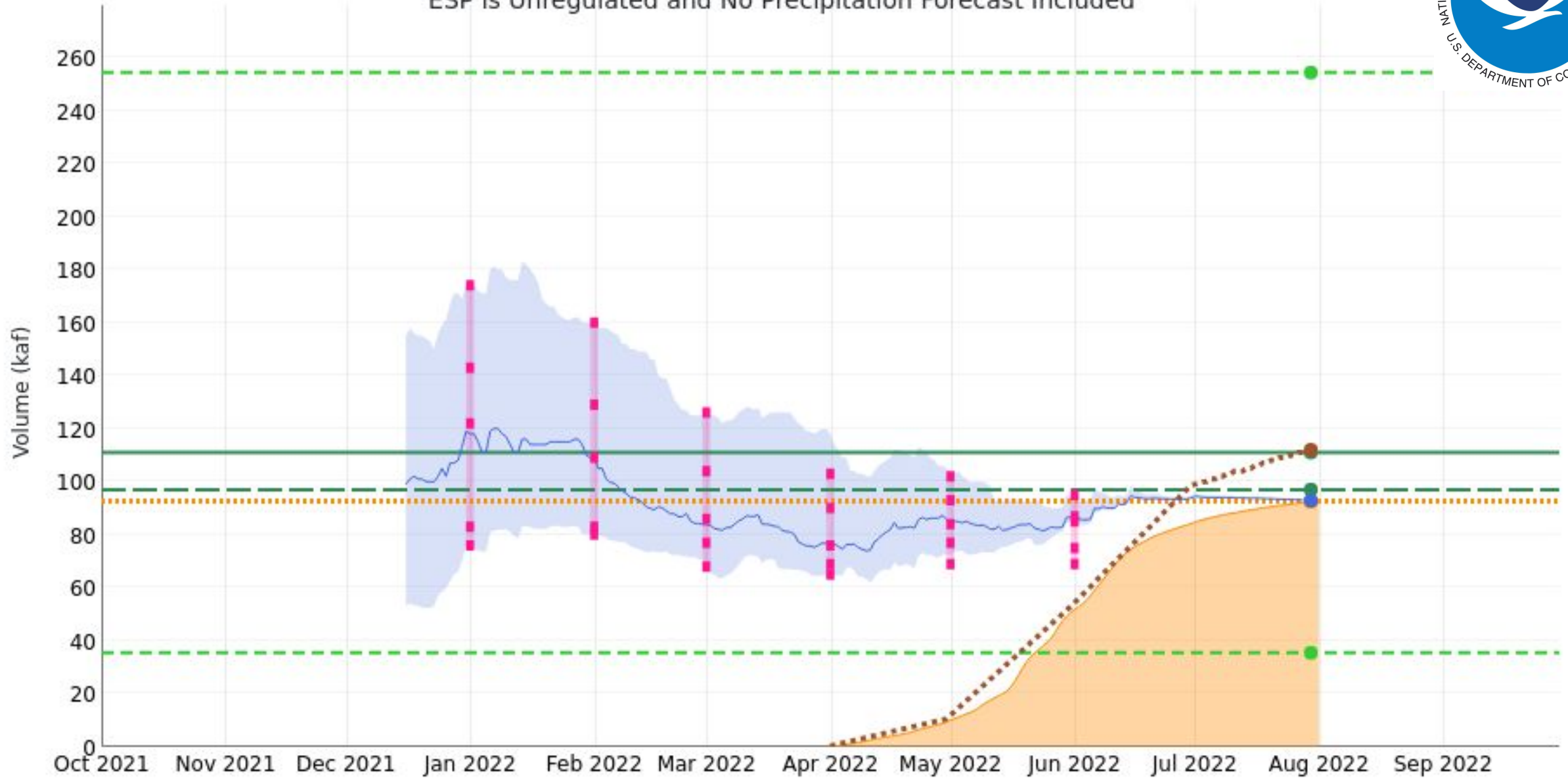
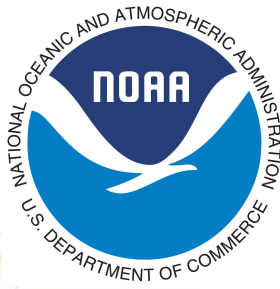


Seasonal observed data over Utah ranged from approximately 80% of average in the northern portions of the Bear and Weber Basins to 40% of average in the Virgin River Basin. Unregulated inflow into Lake Powell is 59% of average (3.75 MAF).

Weber - Oakley, Nr (OAWU1)

Period: Apr-Jul, Observed Volume: 92.6 kaf (83% Average, 95% Median)

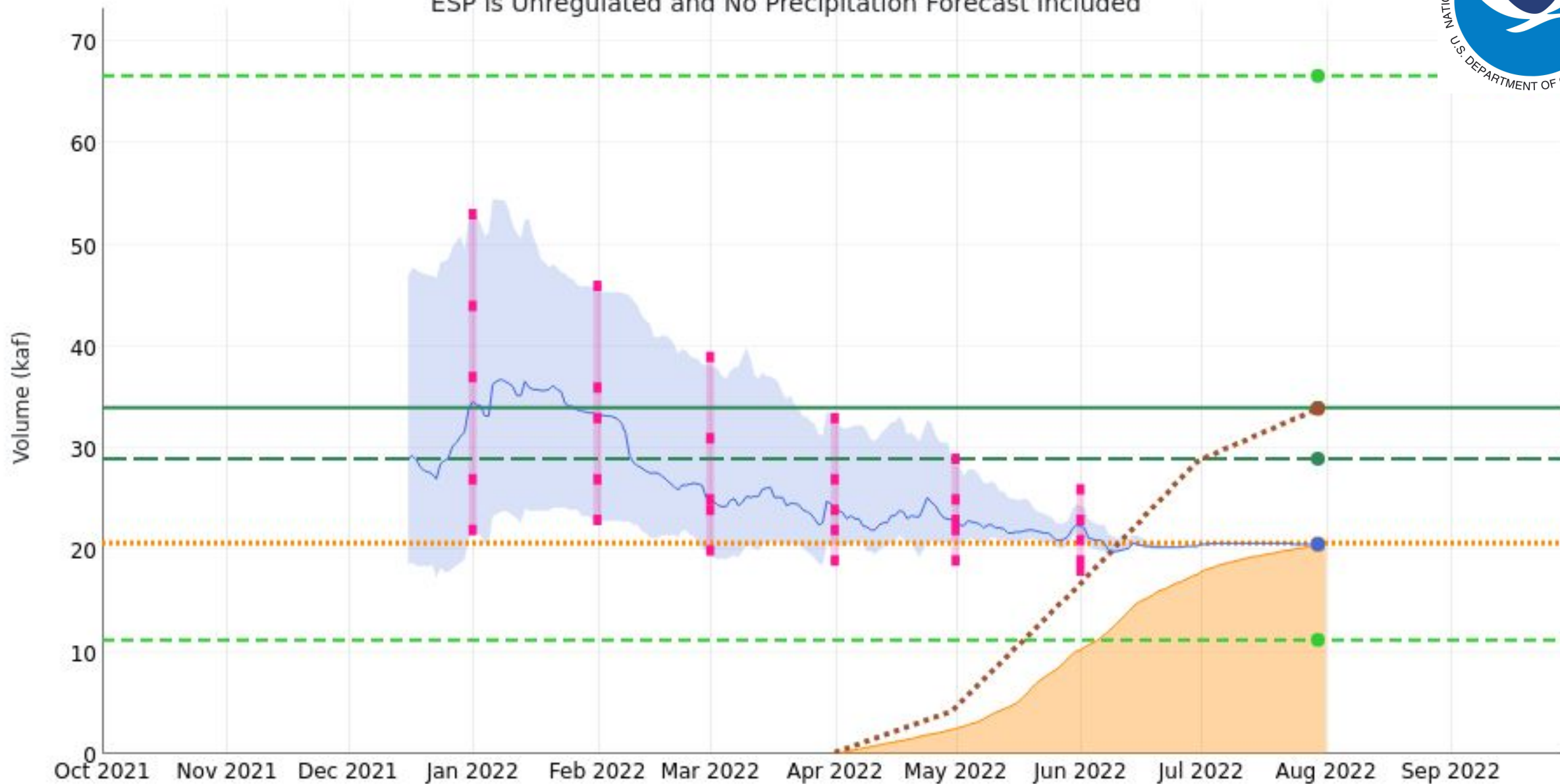
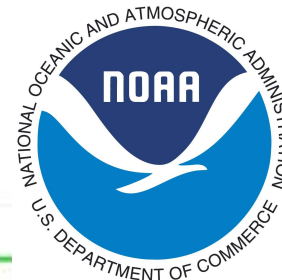
ESP is Unregulated and No Precipitation Forecast Included



Big Cottonwood Ck - Salt Lake City, Nr (BCTU1)

Period: Apr-Jul, Observed Volume: 20.7 kaf (61% Average, 71% Median)

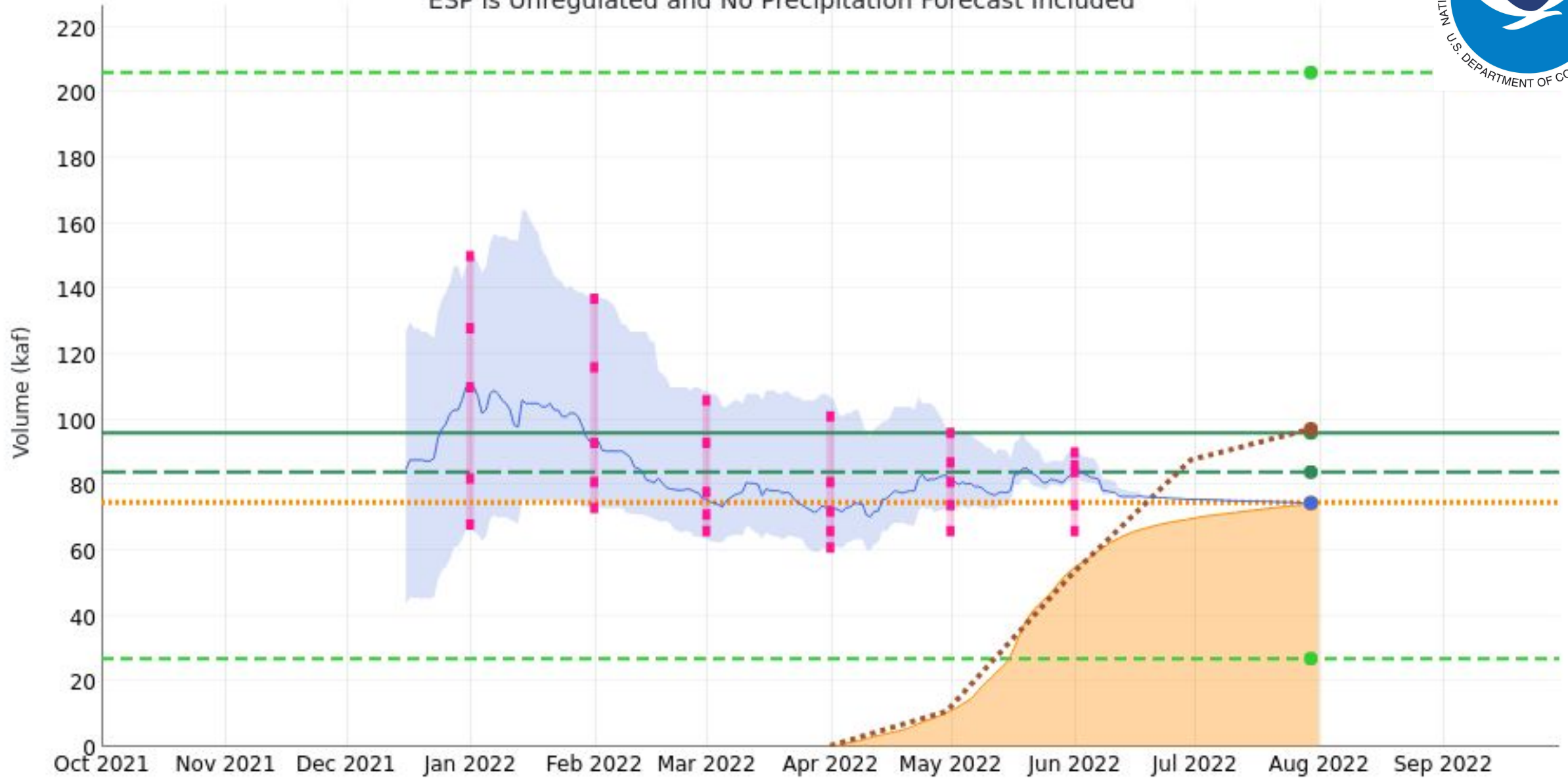
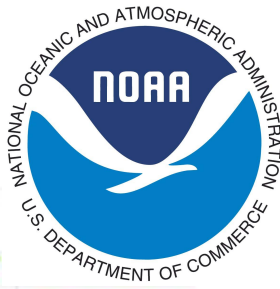
ESP is Unregulated and No Precipitation Forecast Included



Provo - Woodland, Nr (WOOU1)

Period: Apr-Jul, Observed Volume: 74.7 kaf (78% Average, 89% Median)

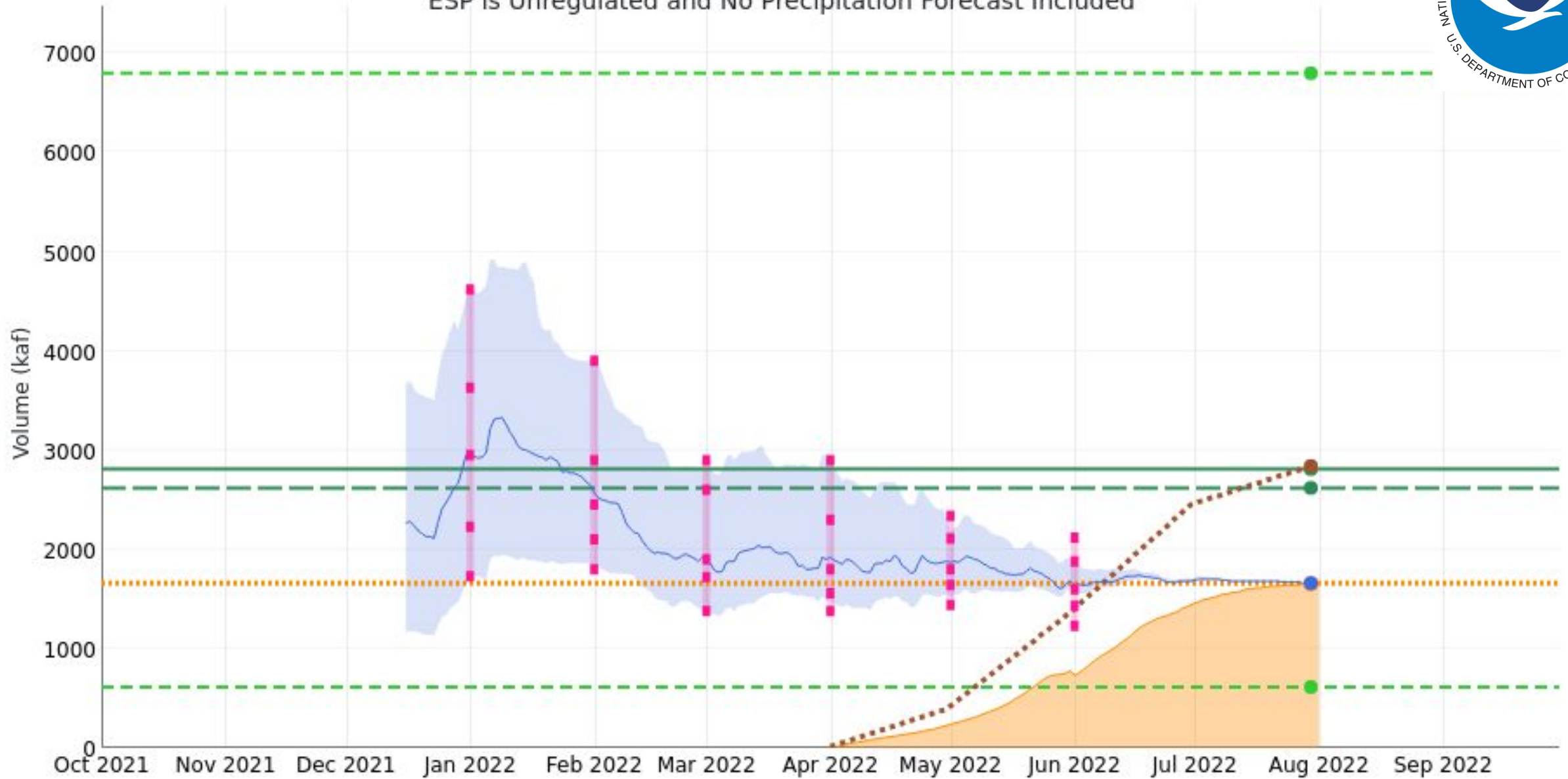
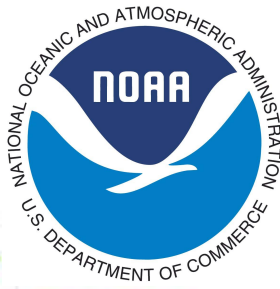
ESP is Unregulated and No Precipitation Forecast Included



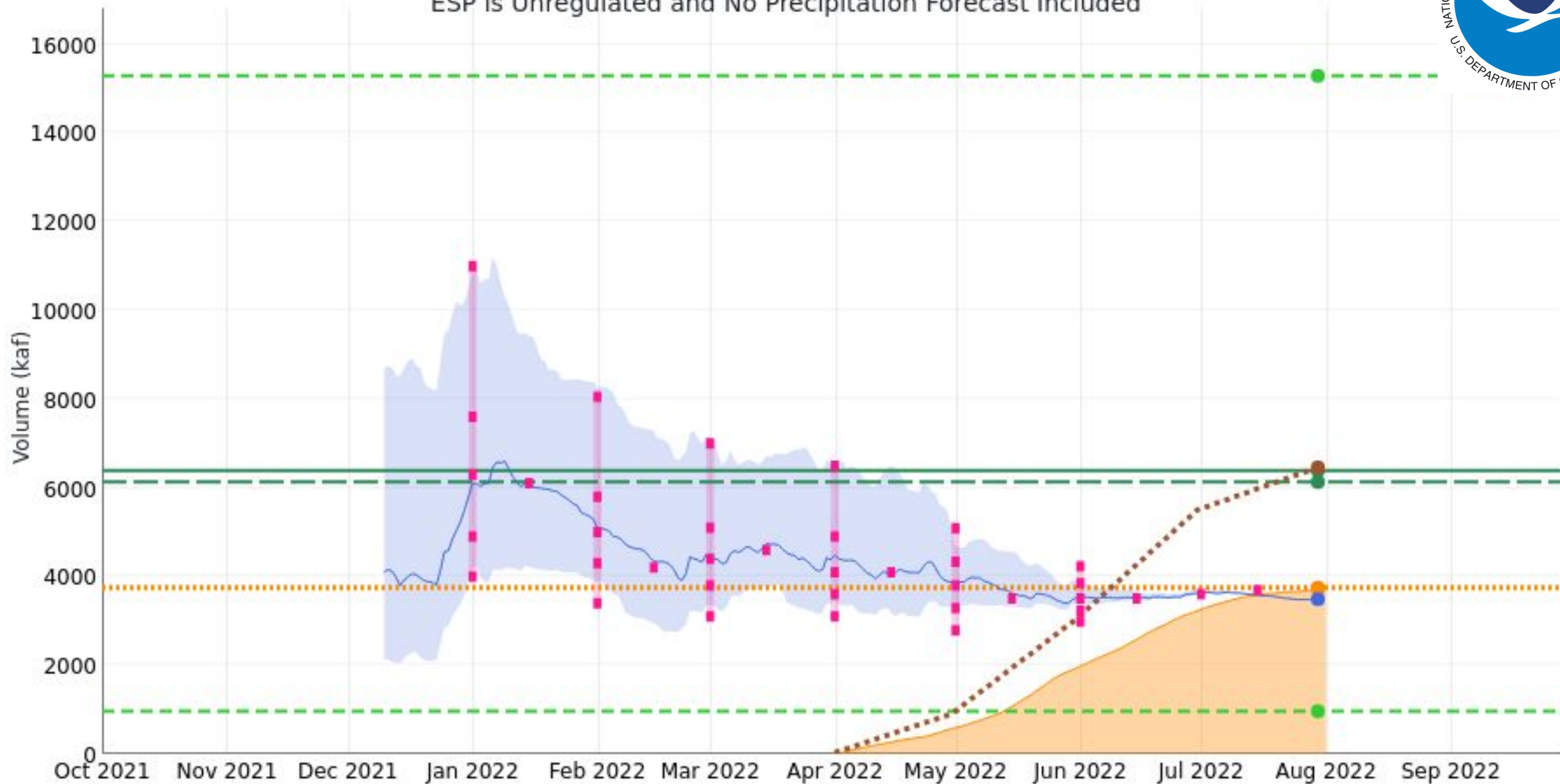
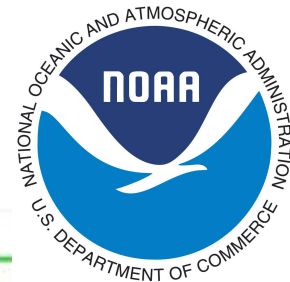
Green - Green River, Ut (GRVU1)

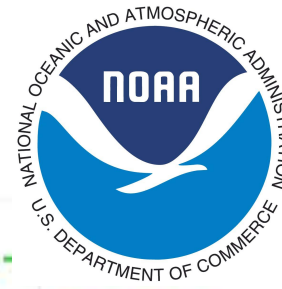
Period: Apr-Jul, Observed Volume: 1660 kaf (59% Average, 63% Median)

ESP is Unregulated and No Precipitation Forecast Included



Colorado - Lake Powell, Glen Cyn Dam, At (GLDA3)
Period: Apr-Jul, Observed Volume: 3750 kaf (59% Average, 61% Median)
ESP is Unregulated and No Precipitation Forecast Included

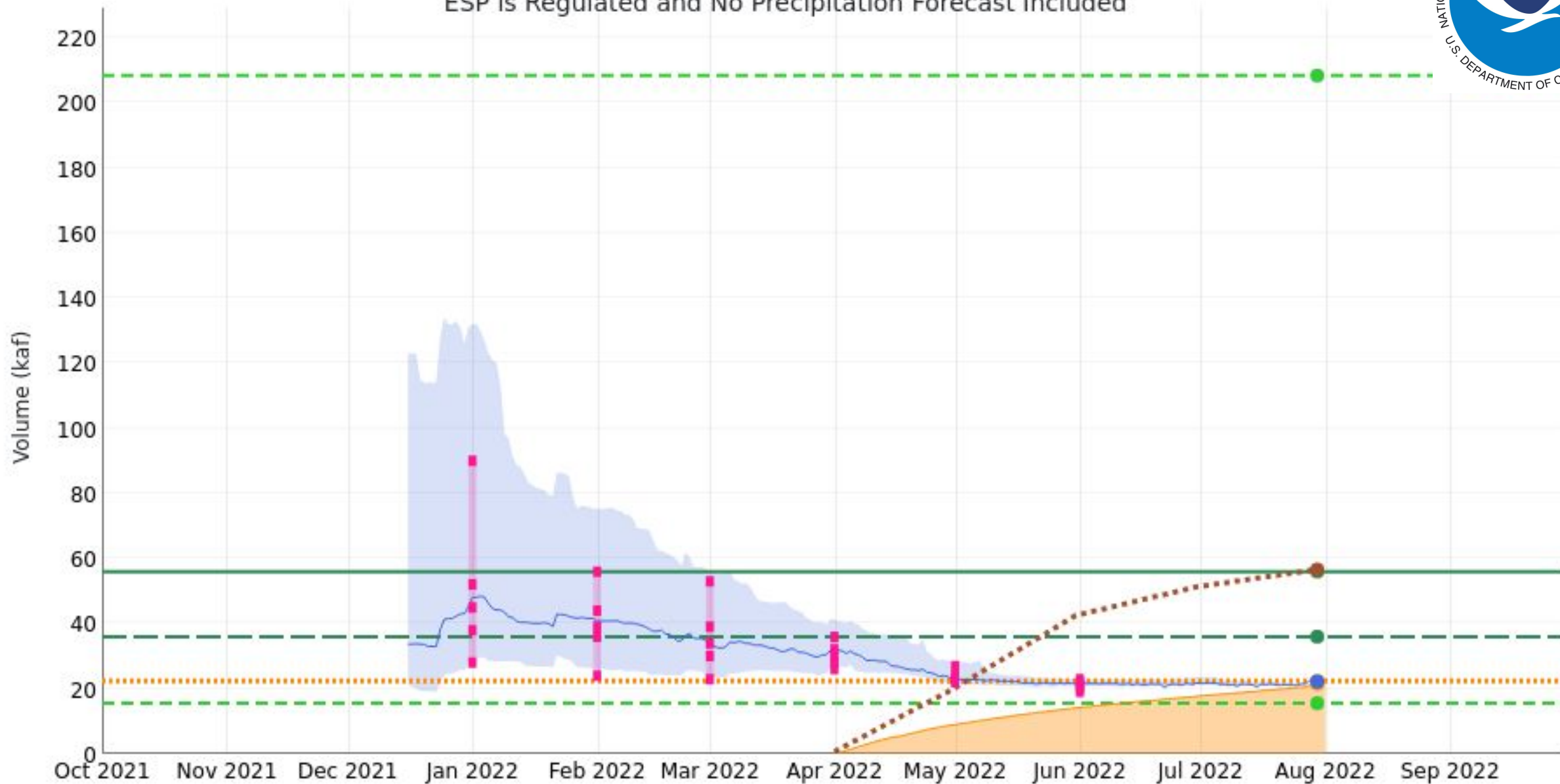




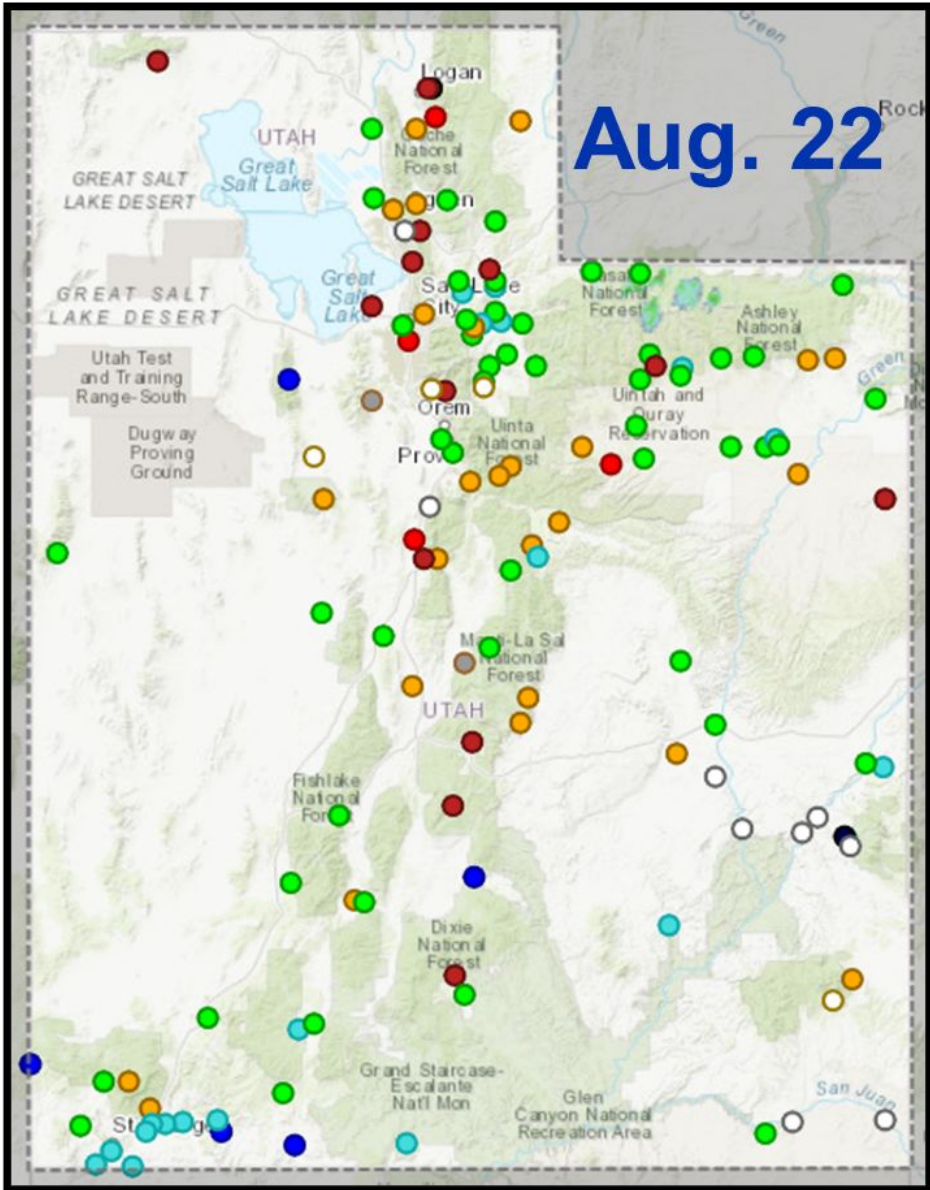
Virgin - Virgin (VIRU1)

Period: Apr-Jul, Observed Volume: 22.4 kaf (40% Average, 62% Median)
















ESP is Regulated and No Precipitation Forecast Included









August 22 Streamflow Conditions



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

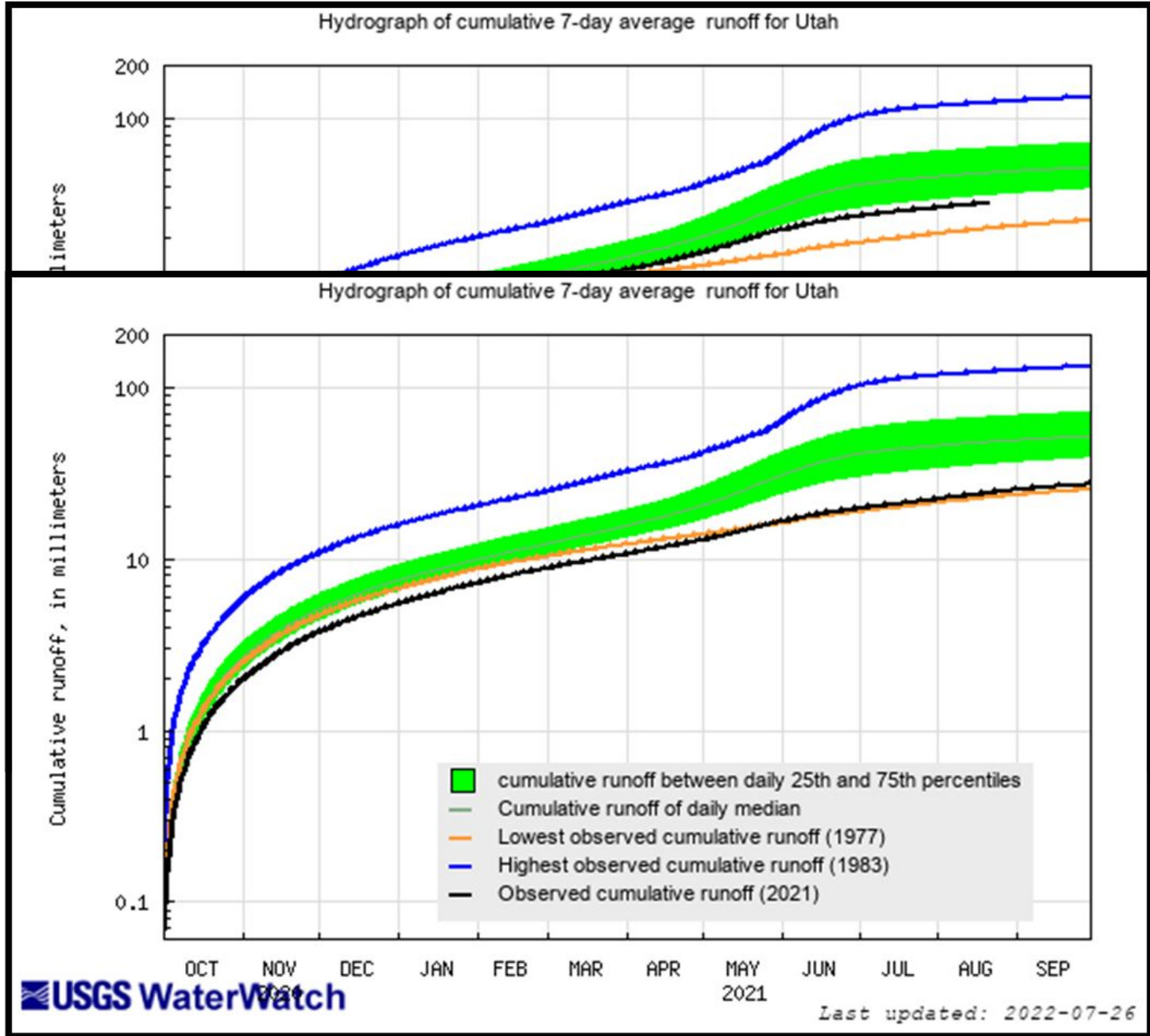
| Day-of-Year Status | % Gages | % Gages |
|--|---|---|
| All-time high for this day-of-year | 0.0% | 0.7% |
| Much above normal for this day-of-year | 2.2%  | 3.6%  |
| Above normal for this day-of-year | 2.9%  | 15.3%  |
| Normal for this day-of-year | 40.1%  | 37.2%  |
| Below normal for this day-of-year | 24.8%  | 19.0%  |
| Much below normal for this day-of-year | 13.1%  | 9.5%  |
| All-time low for this day-of-year | 4.4%  | 2.9%  |
| Not ranked - insufficient record | 7.3%  | 7.3%  |
| Not ranked - stream not flowing | 4.4%  | 2.2% |

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

Agency - USGS Utah WSC
Presenter - Laura Haskell on behalf of
Ryan Rowland

Area Based Cumulative Runoff for Utah

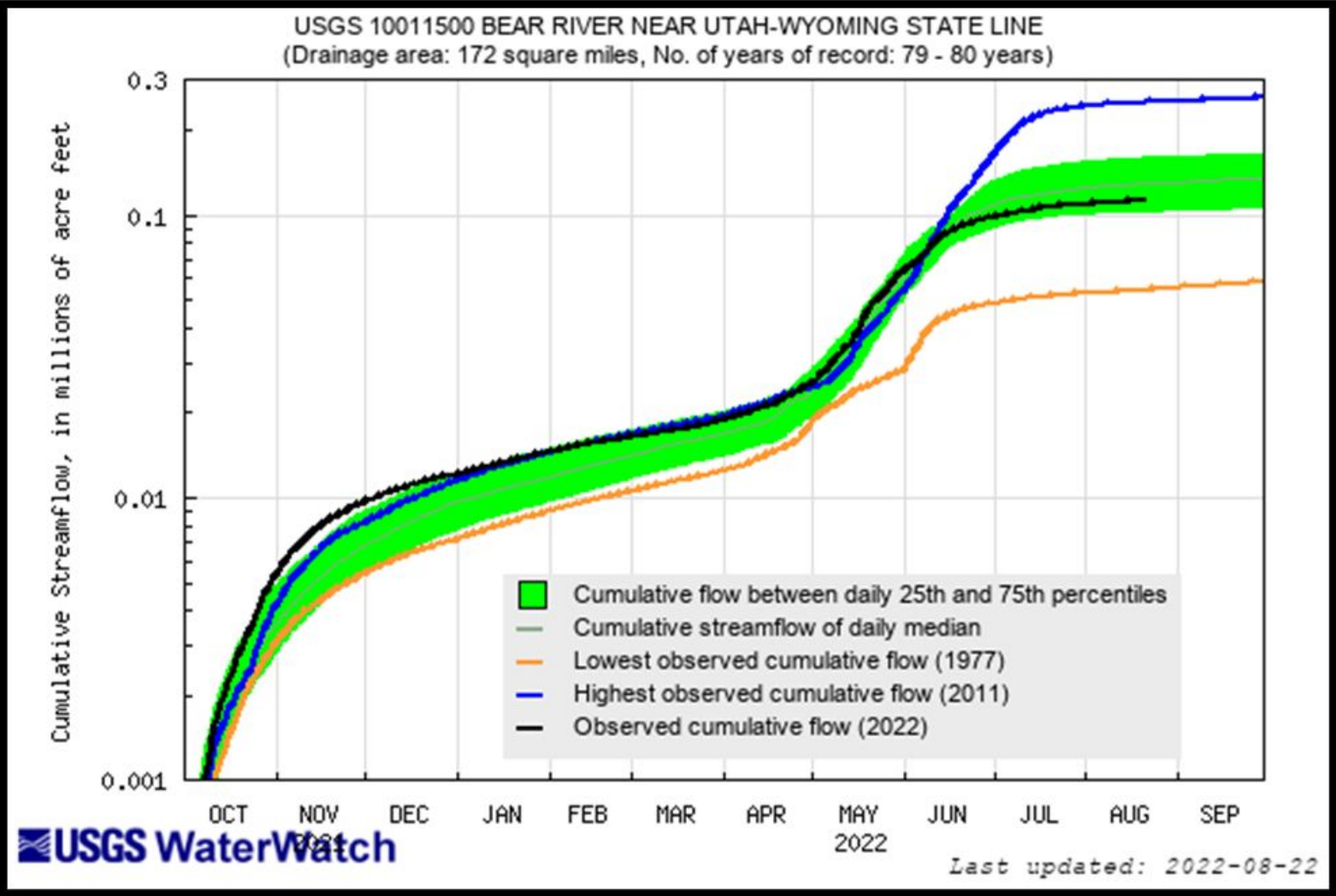
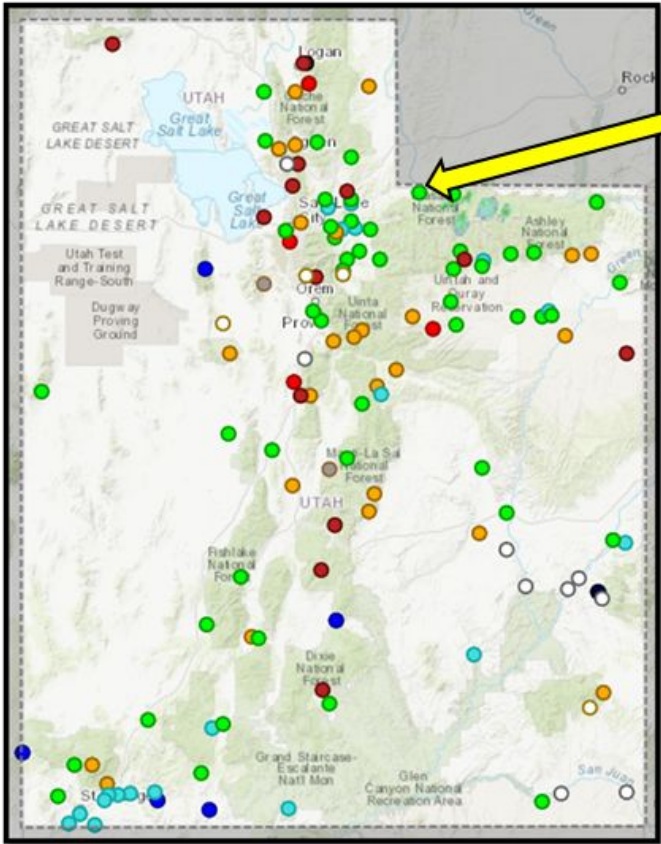


- Area based runoff computed from mixed regulated and unregulated streamflows
- WY2022 higher than WY2021, still below normal

Agency - USGS Utah WSC
Presenter - Laura Haskell on behalf of Ryan Rowland



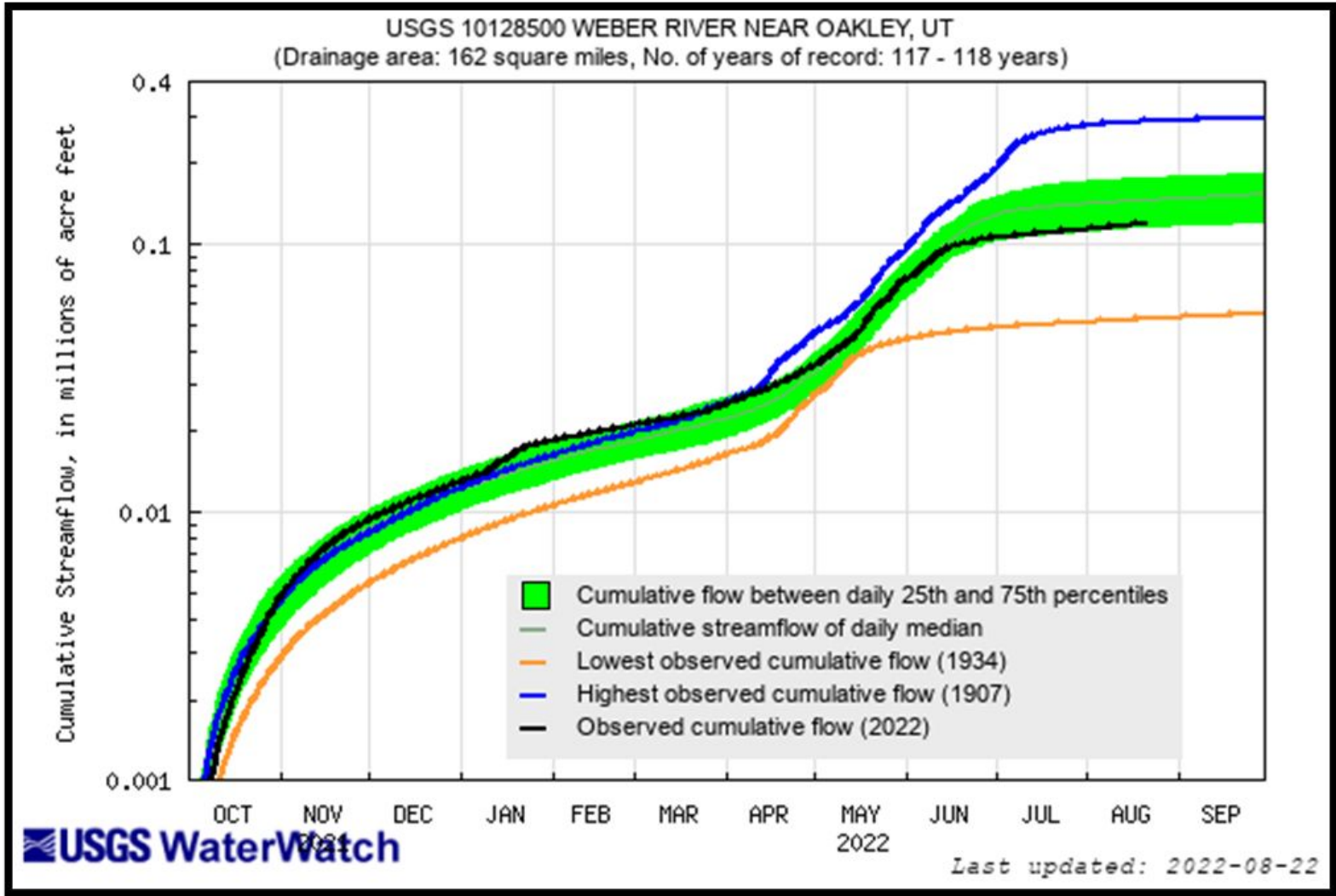
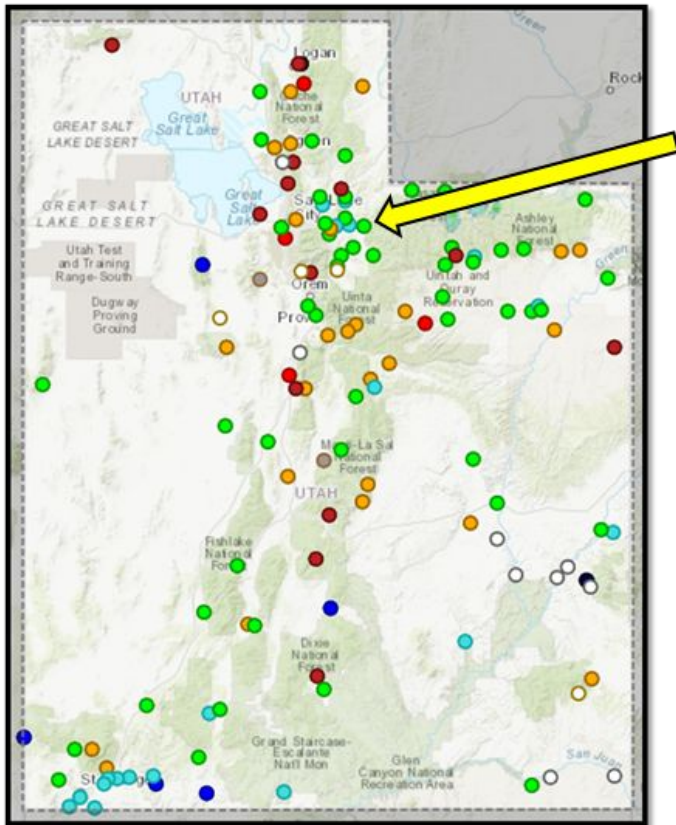
Cumulative Streamflow at Selected Gages



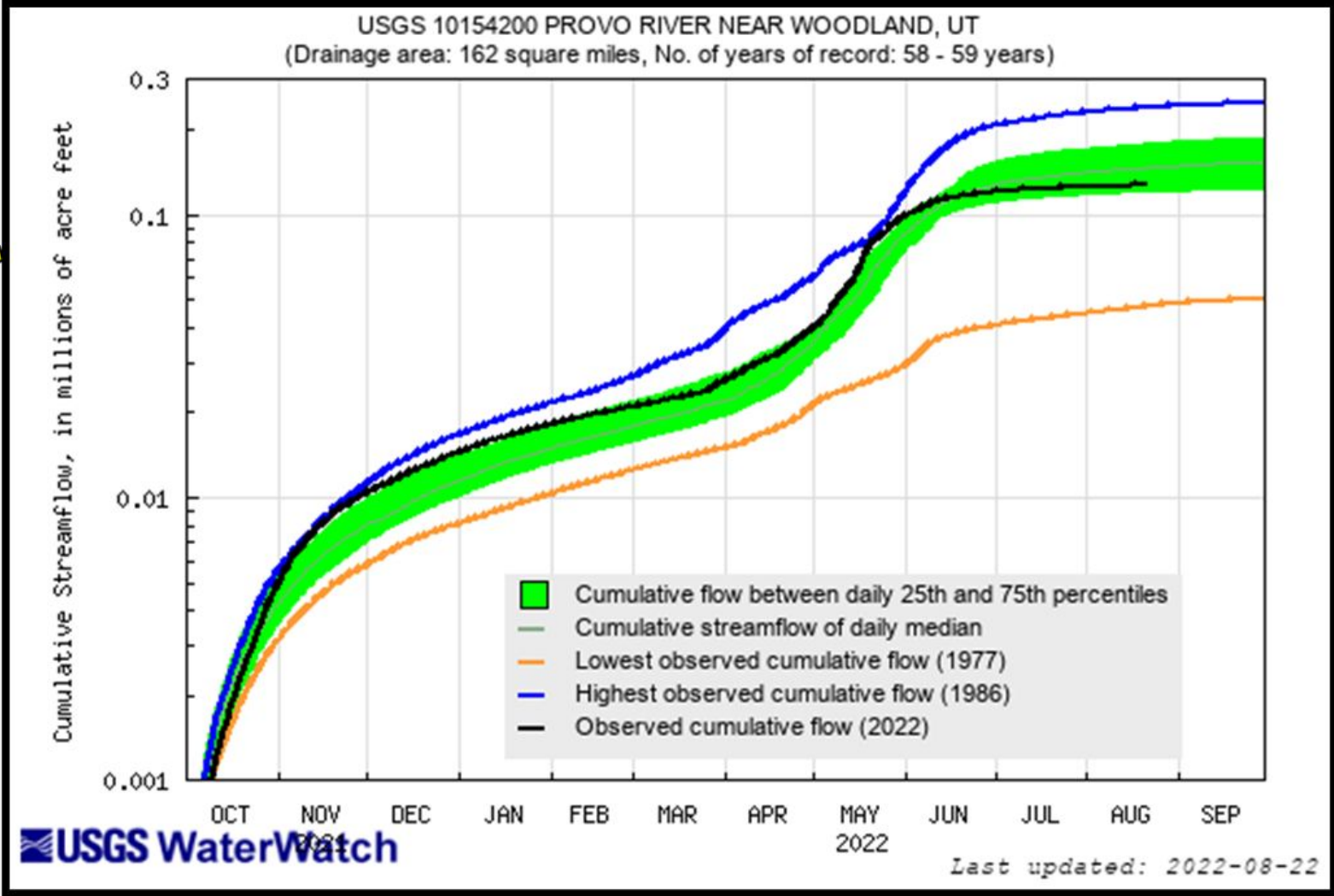
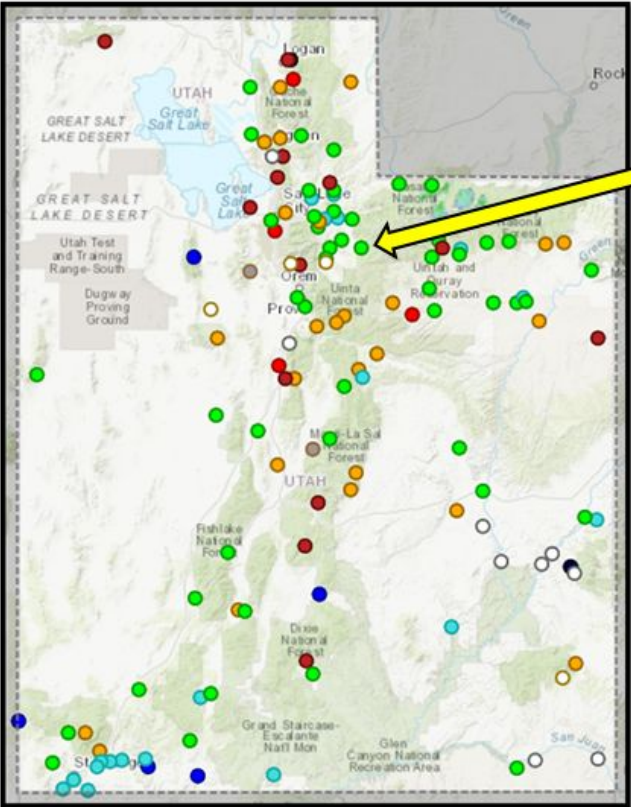
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Cumulative Streamflow at Selected Gages



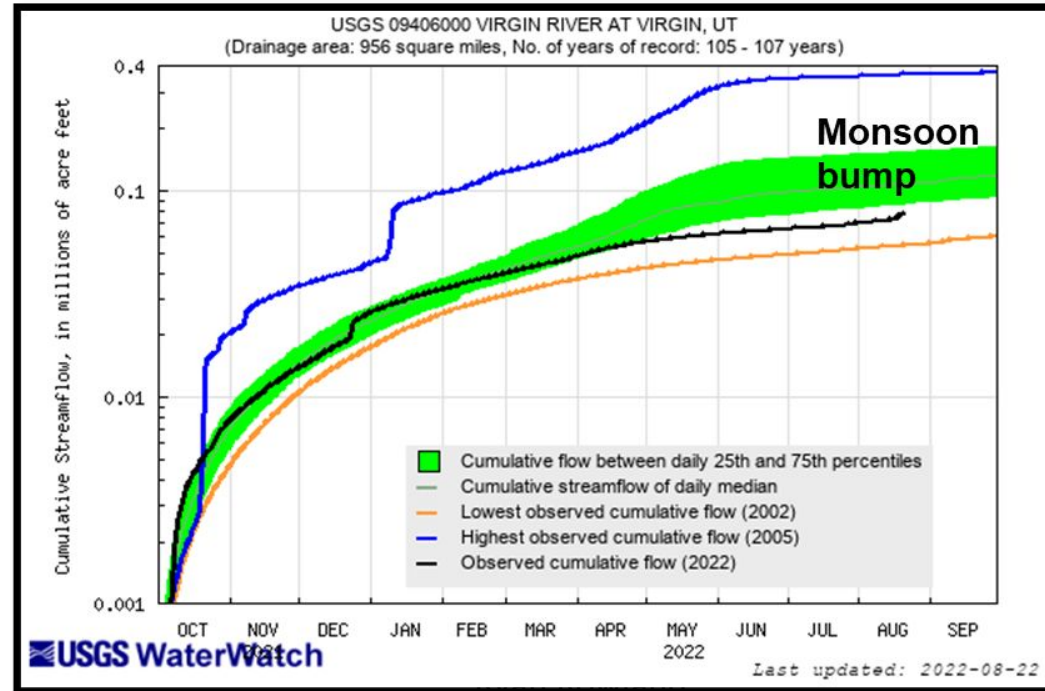
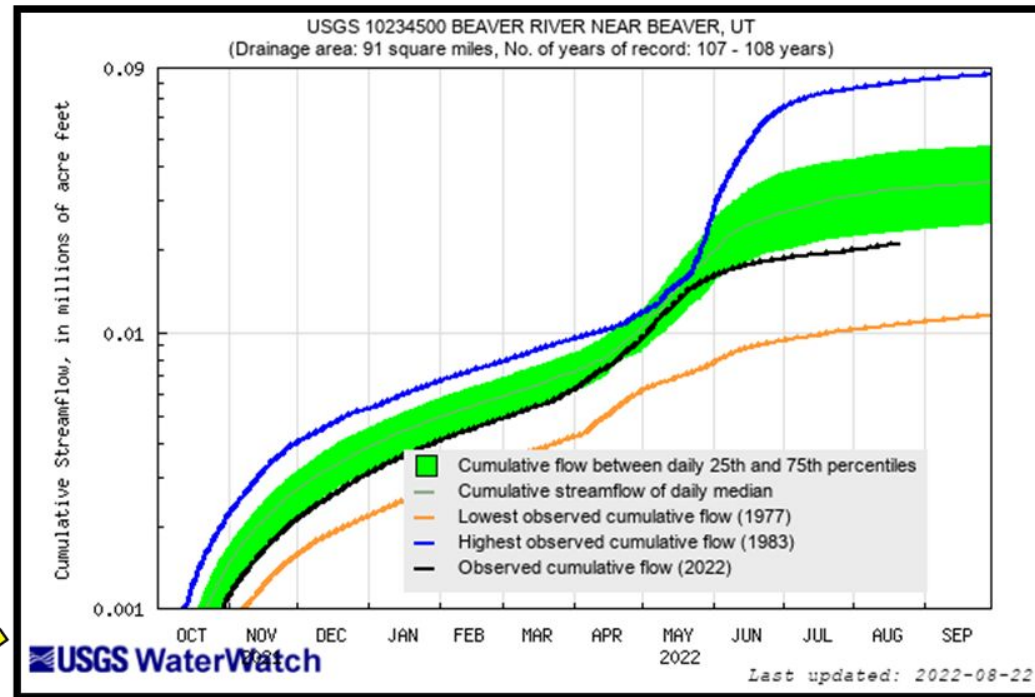
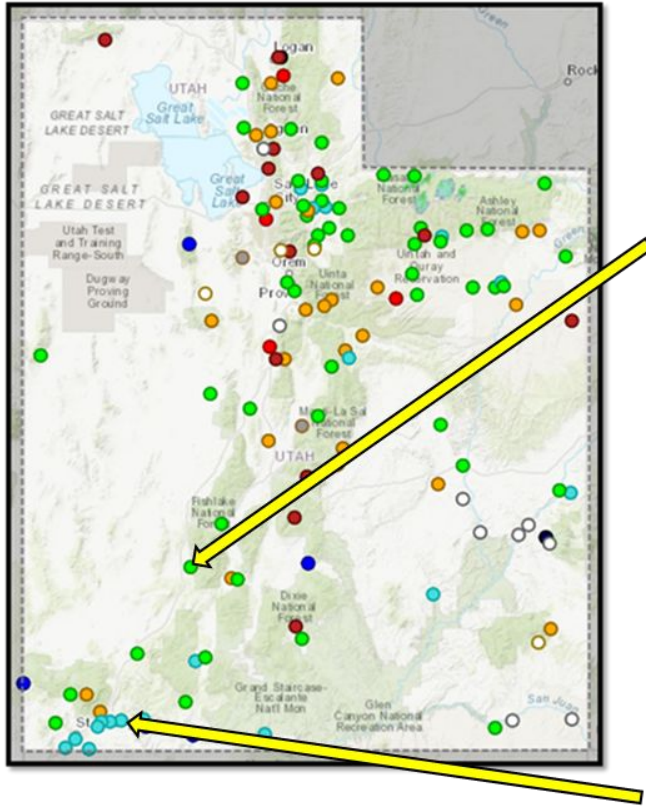
Cumulative Streamflow at Selected Gages



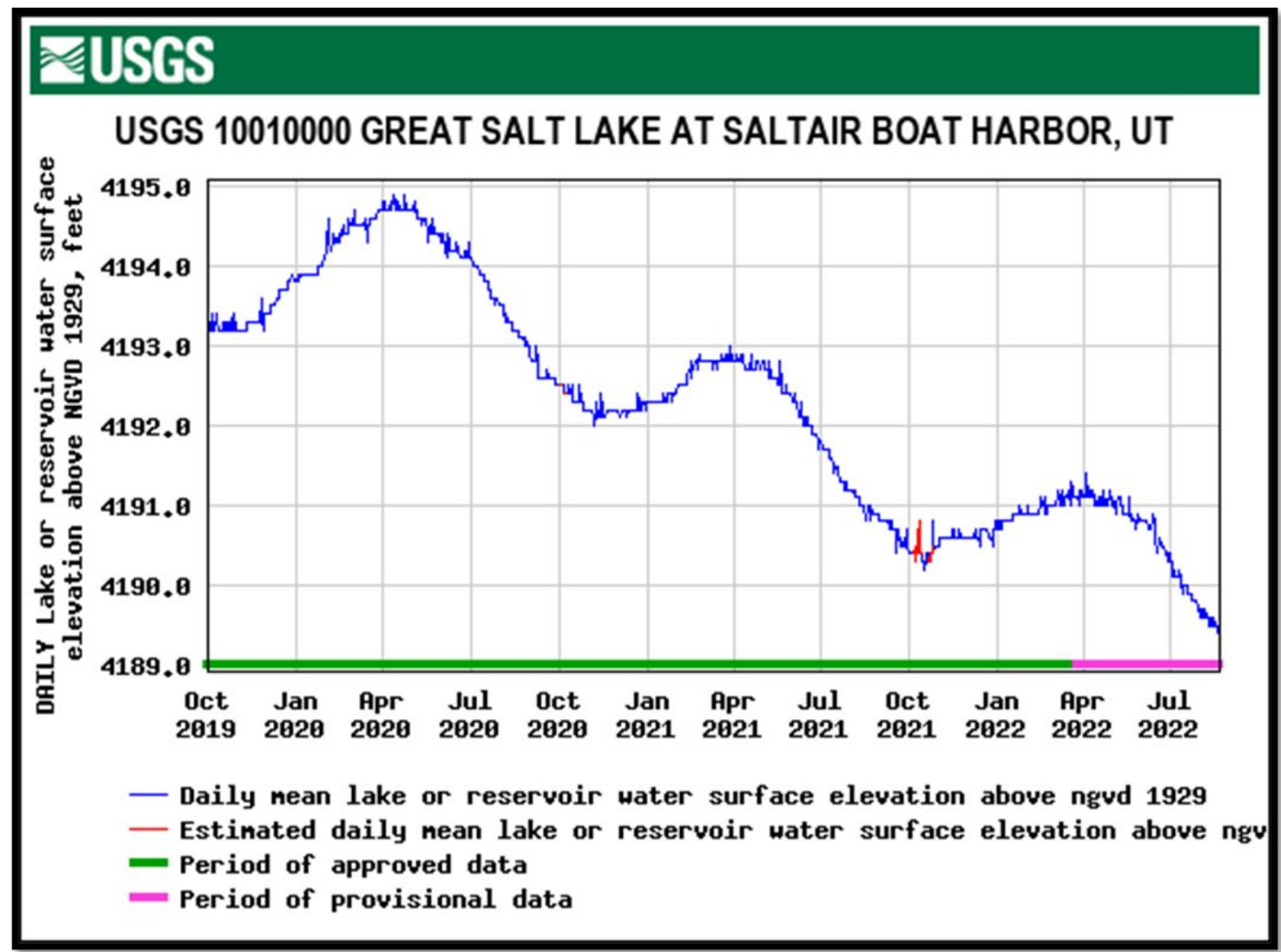
Agency - USGS Utah WSC
Presenter - Laura Haskell on behalf of
Ryan Rowland



Cumulative Streamflow at Selected Gages



Great Salt Lake Water Surface Elevation

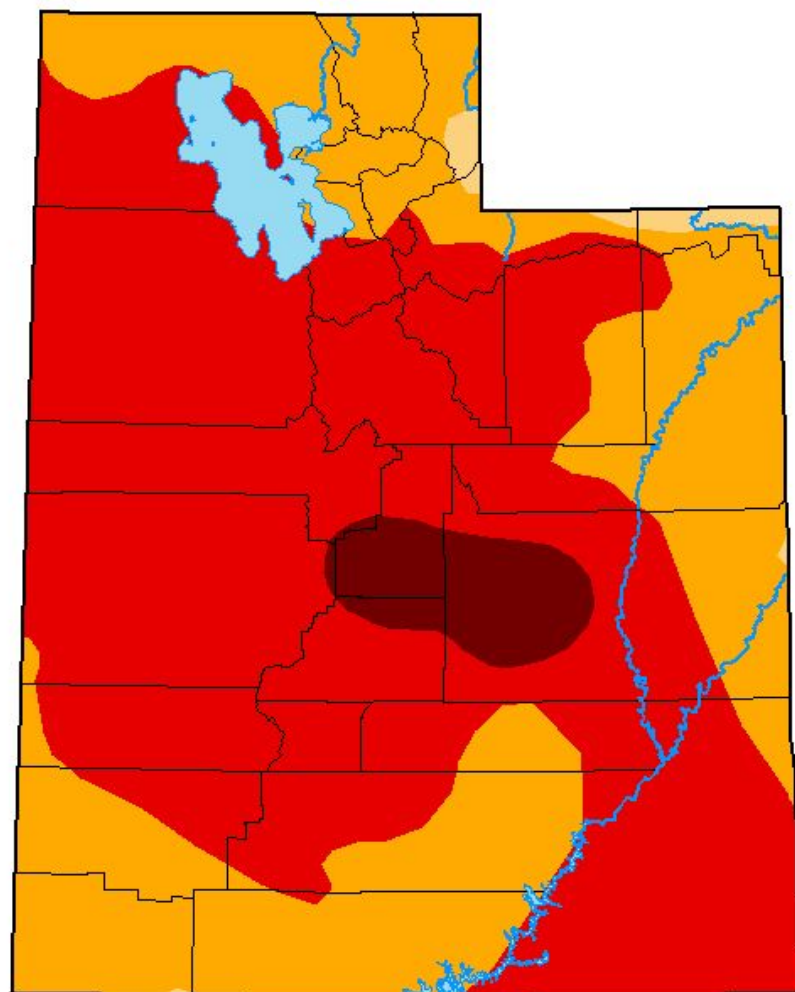


- ❑ Mean daily value 8/21/2022 = 4,189.4' (record lows continue)
- ❑ Mean daily value 8/8/2022 = 4,189.6'
- ❑ Running out of water at gage location. Will switch soon to gage on the south side of RR causeway

U.S. Drought Monitor

Utah

August 16, 2022
(Released Thursday, Aug. 18, 2022)
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:

Richard Tinker
CPC/NOAA/NWS/NCEP



droughtmonitor.unl.edu

to-date Standardized Precipitation Index: 2022/01/01 - 2022/08/21

