



Utah Water Assessment & Conditions Monitoring (Drought Webinar)

The meeting will begin shortly



Thank you to our contributors

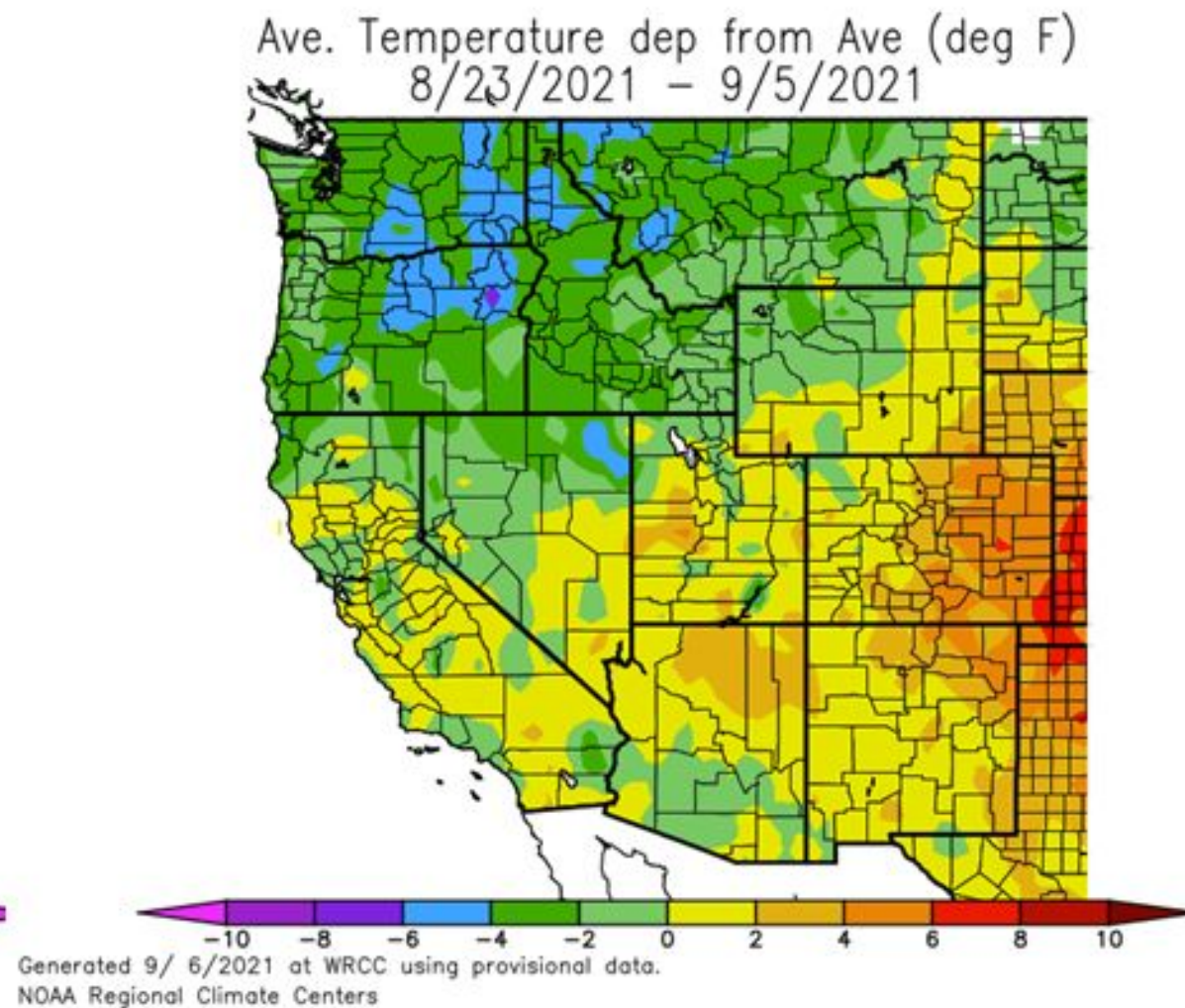
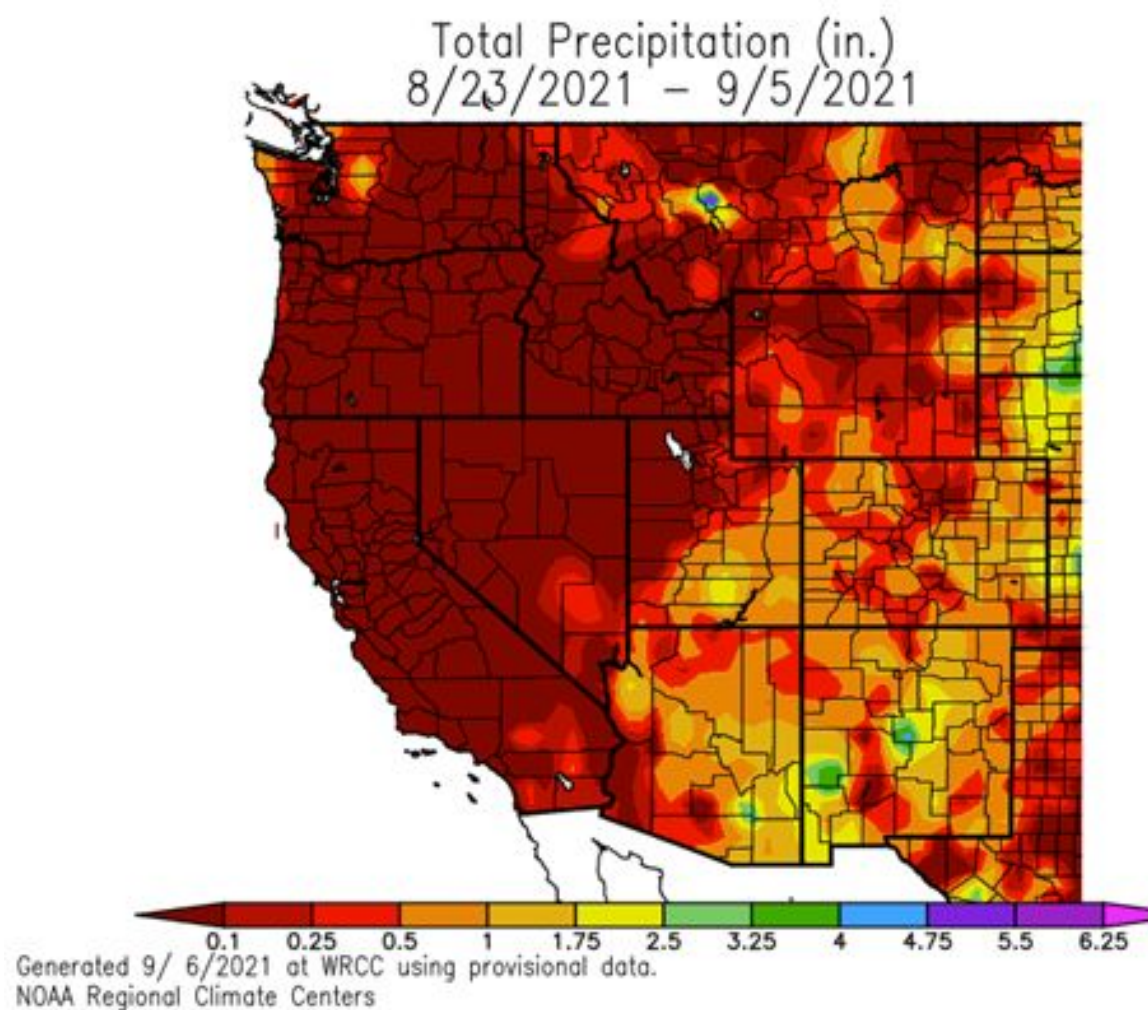




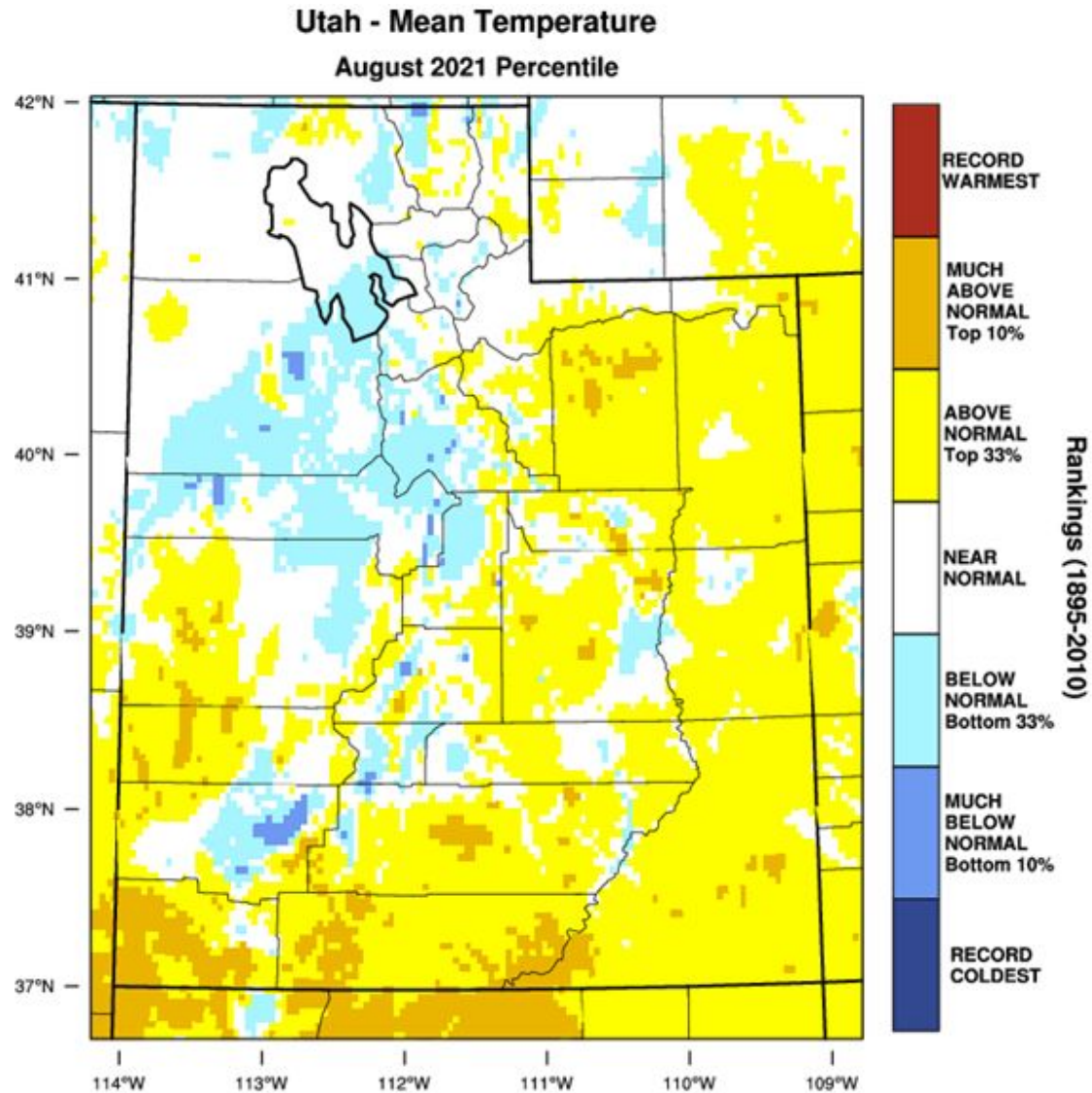
Utah Water Assessment & Conditions Monitoring Webinar

September 7, 2021

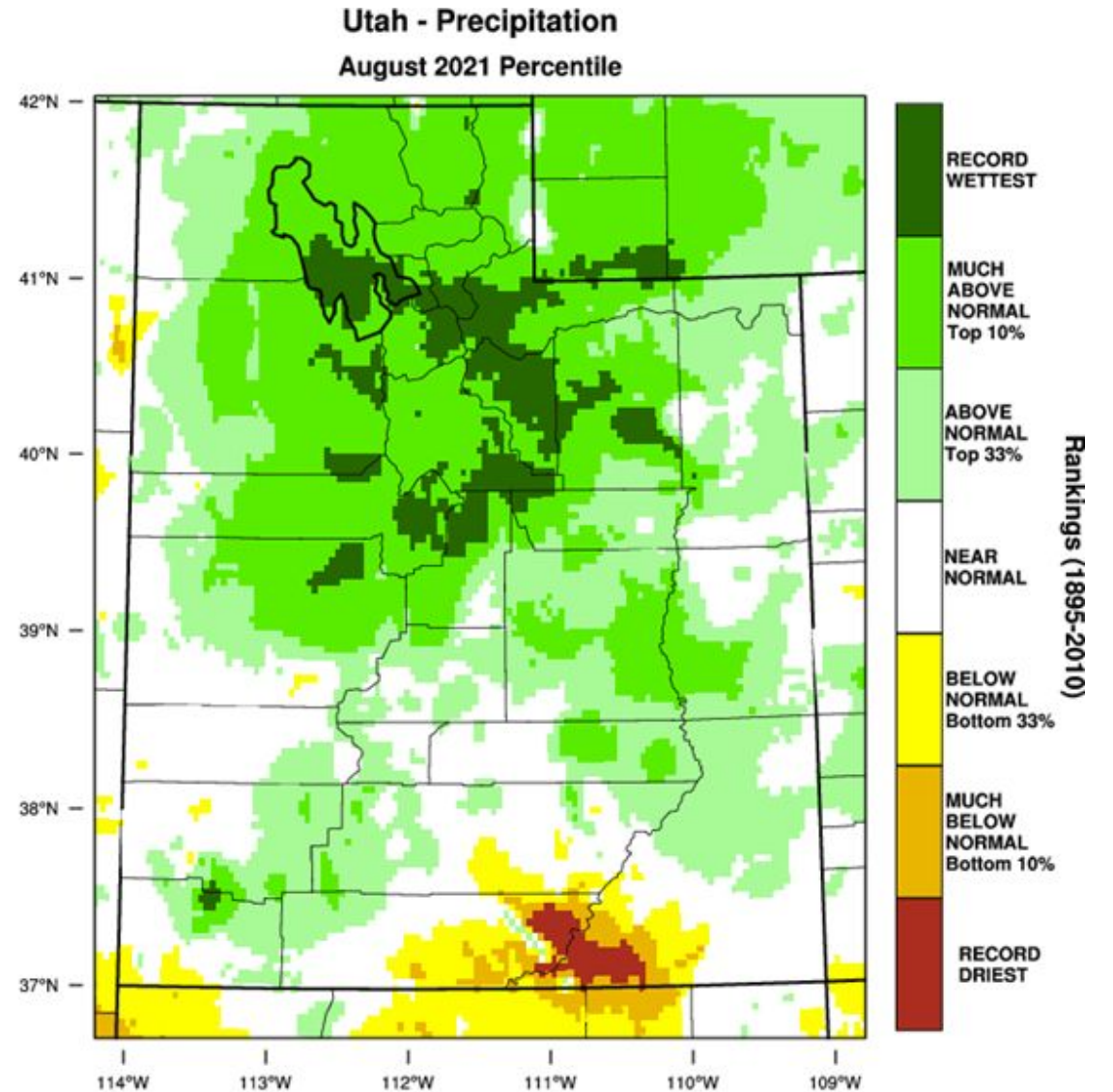
Two-Week Climate Summary



August's Climate Summary



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 5 SEP 2021

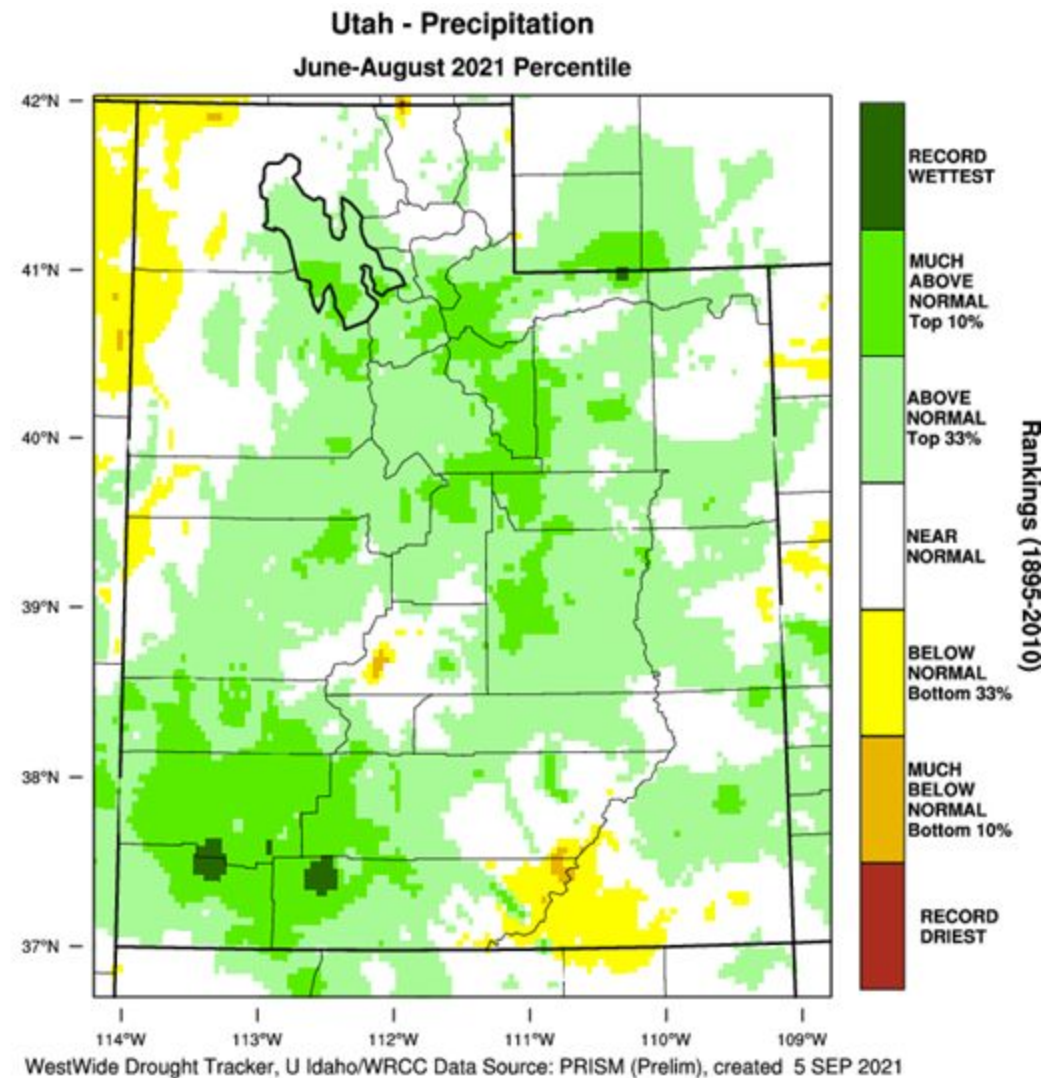
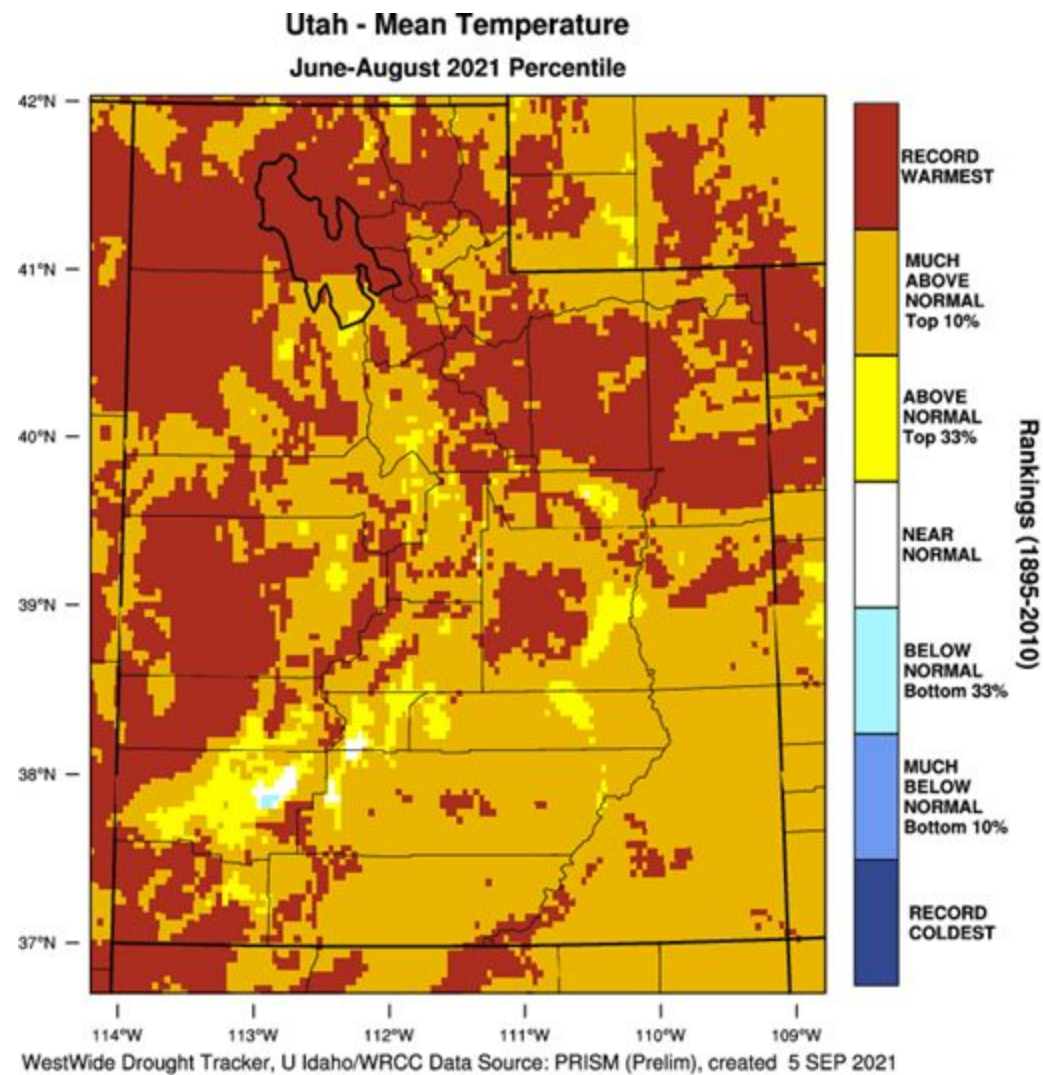


WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 5 SEP 2021

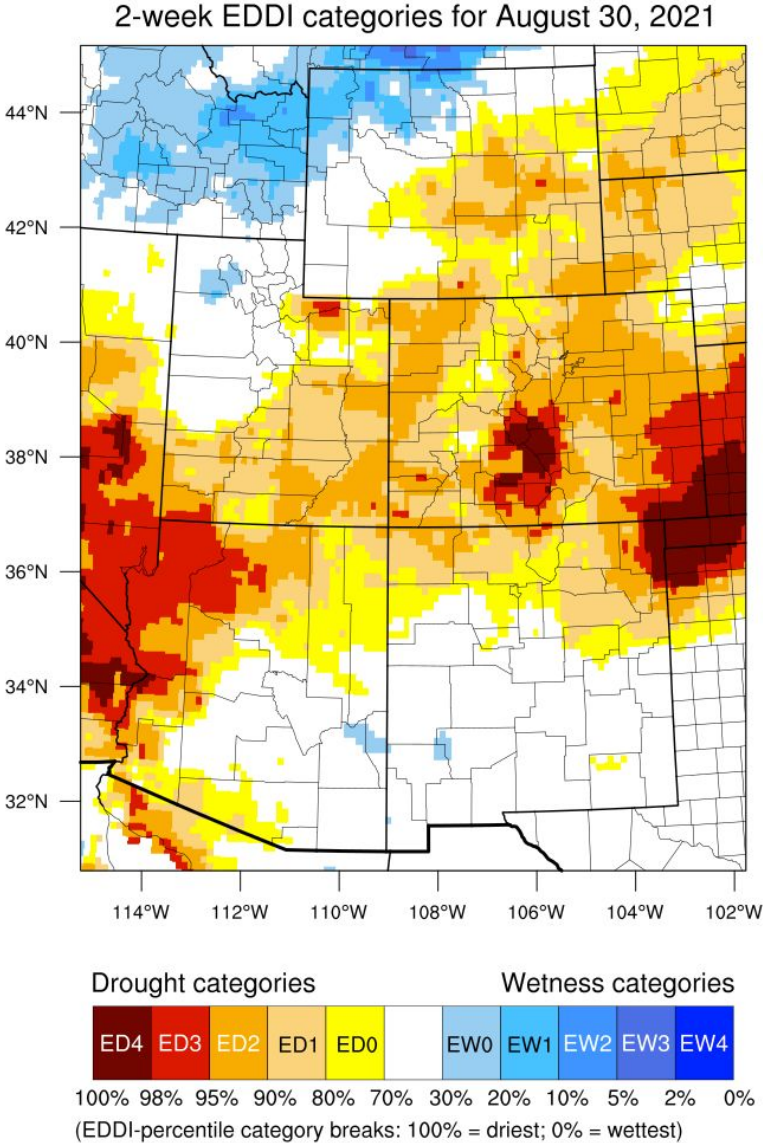
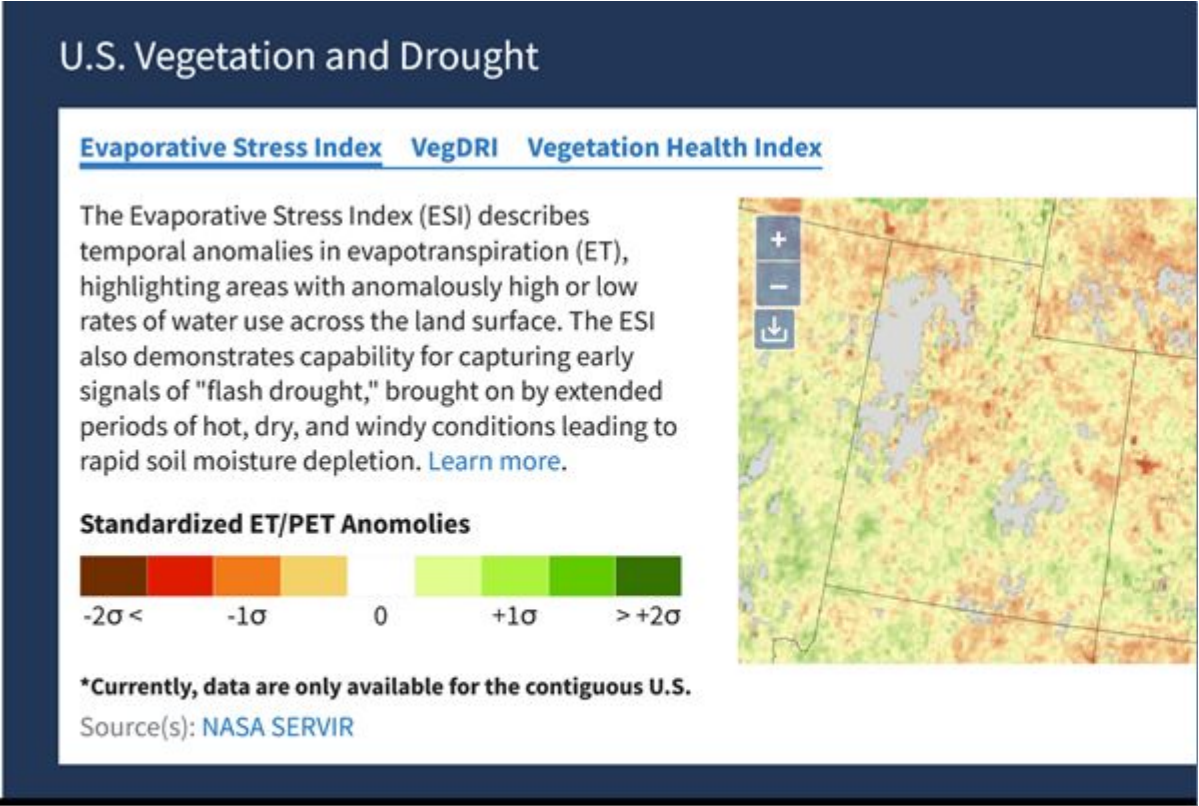
Agency - Utah Climate Center

Presenter - Jon Meyer

Summer Climate Summary (June-August)

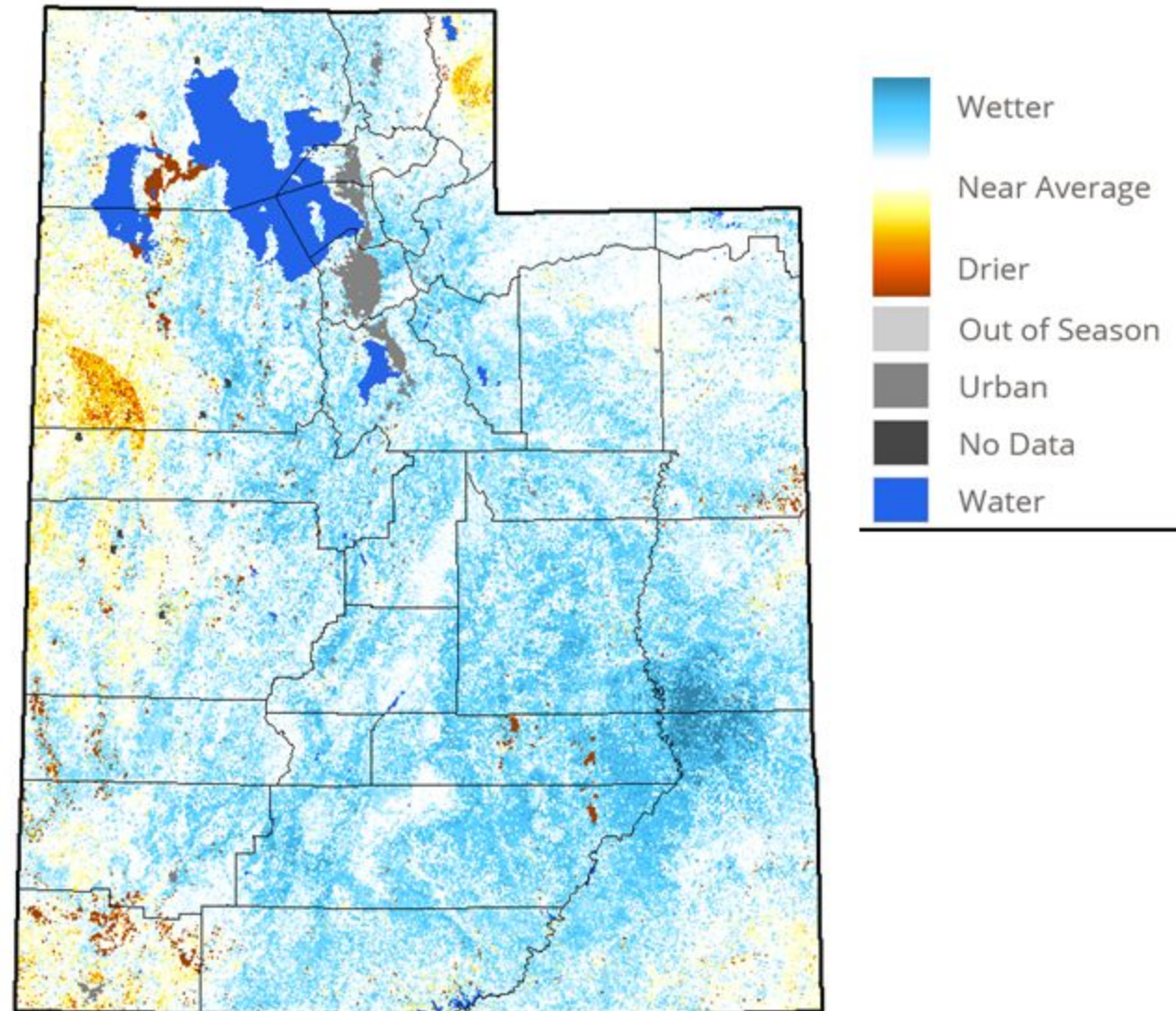


4-week Evaporative Demand Drought Index



Generated by NOAA/ESRL/Physical Sciences Laboratory

Quick Drought Response Index (QuickDRI)



Tabular weather station data

U.S. Vegetation and Drought

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

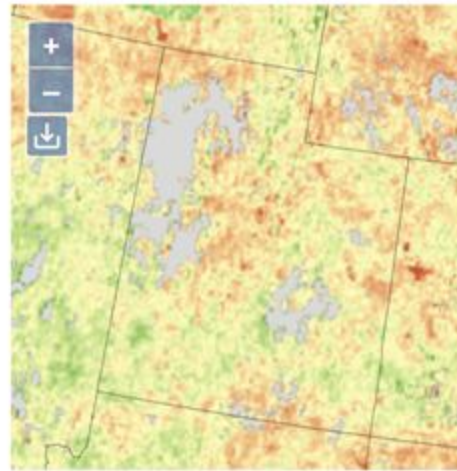
The Evaporative Stress Index (ESI) describes temporal anomalies in evapotranspiration (ET), highlighting areas with anomalously high or low rates of water use across the land surface. The ESI also demonstrates capability for capturing early signals of "flash drought," brought on by extended periods of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

Standardized ET/PET Anomalies



*Currently, data are only available for the contiguous U.S.

Source(s): [NASA SERVIR](#)

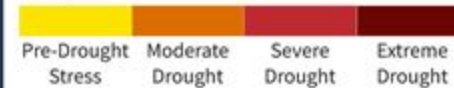


U.S. Vegetation and Drought

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

The Vegetation Drought Response Index (VegDRI) is a weekly depiction of drought's effects on vegetation stress across the contiguous United States, produced by the National Drought Mitigation Center, the U.S. Geological Survey's National Center for Earth Resources Observation and Science, and the High Plains Regional Climate Center. [Learn more.](#)

Drought Conditions



Moist Conditions

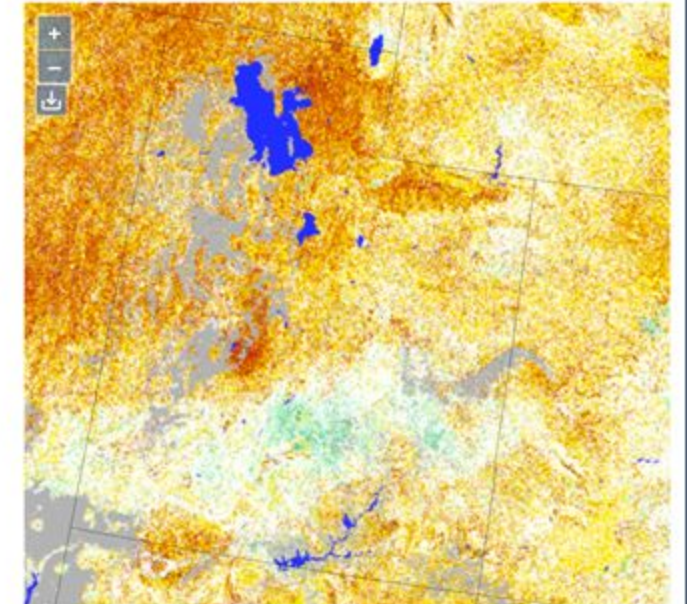


Other Conditions



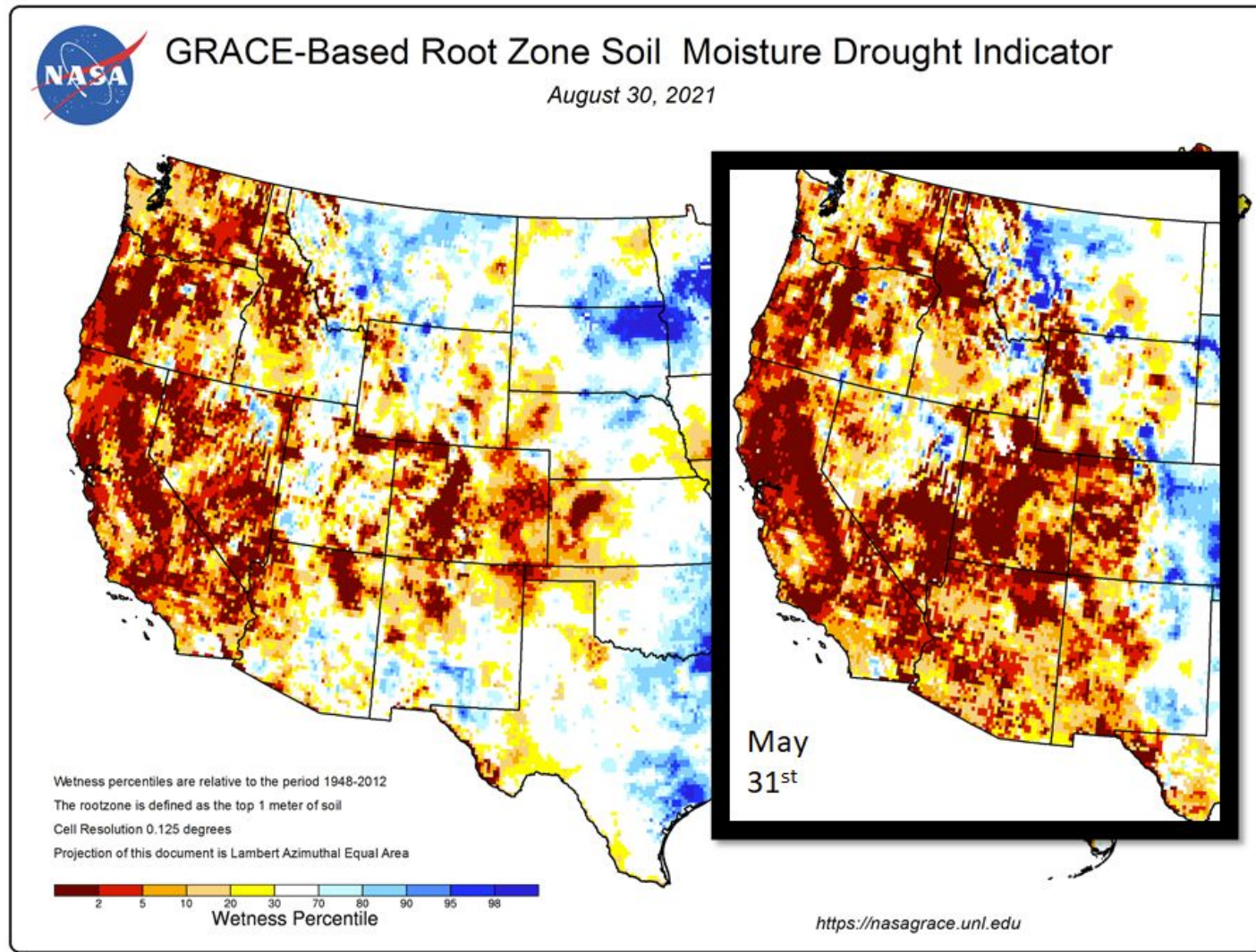
*Currently, data are only available for the contiguous U.S.

Source(s): [NDMC](#), [USGS](#), [HPRCC](#)



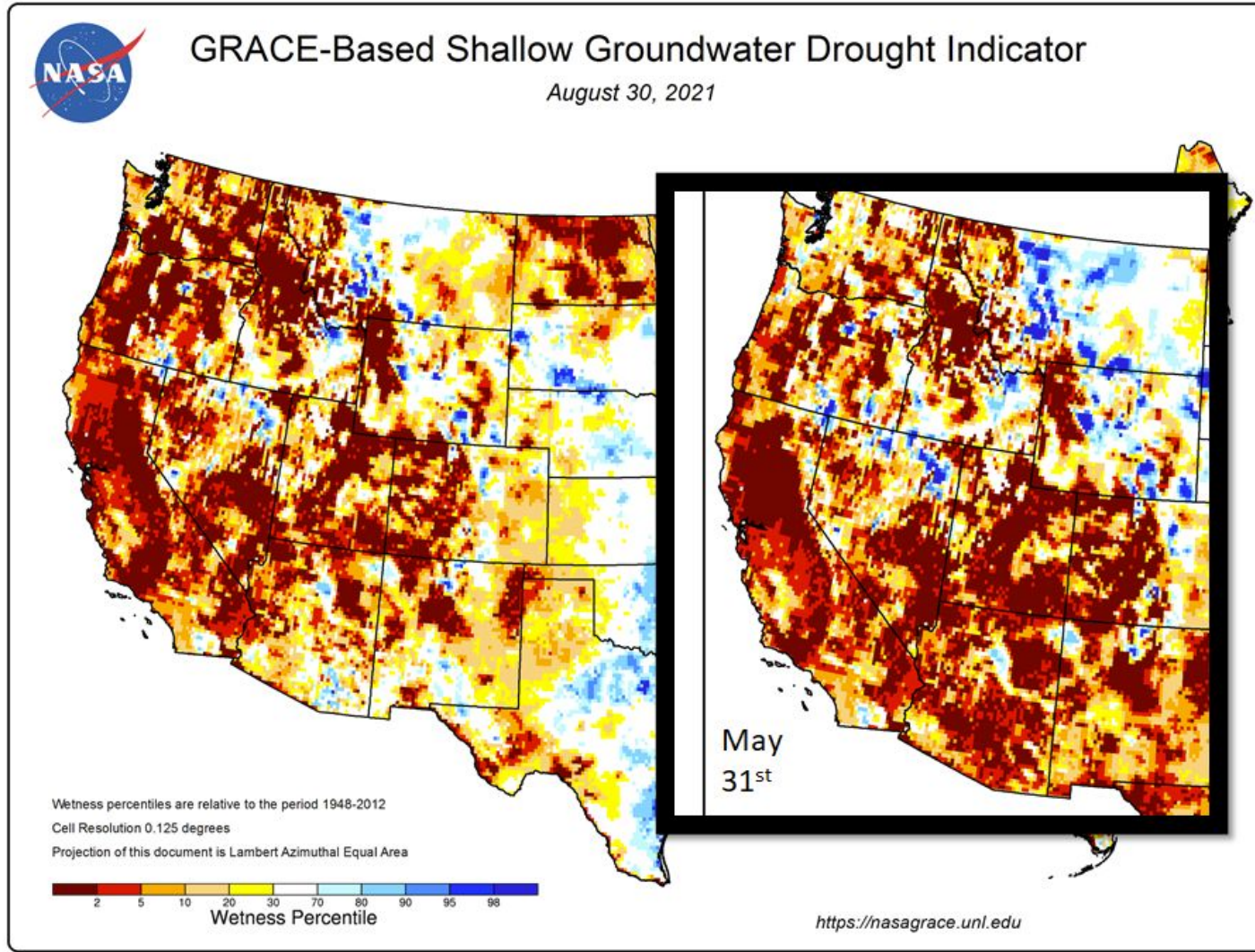
Updates Weekly - 09/07/21

GRACE Satellite Observations



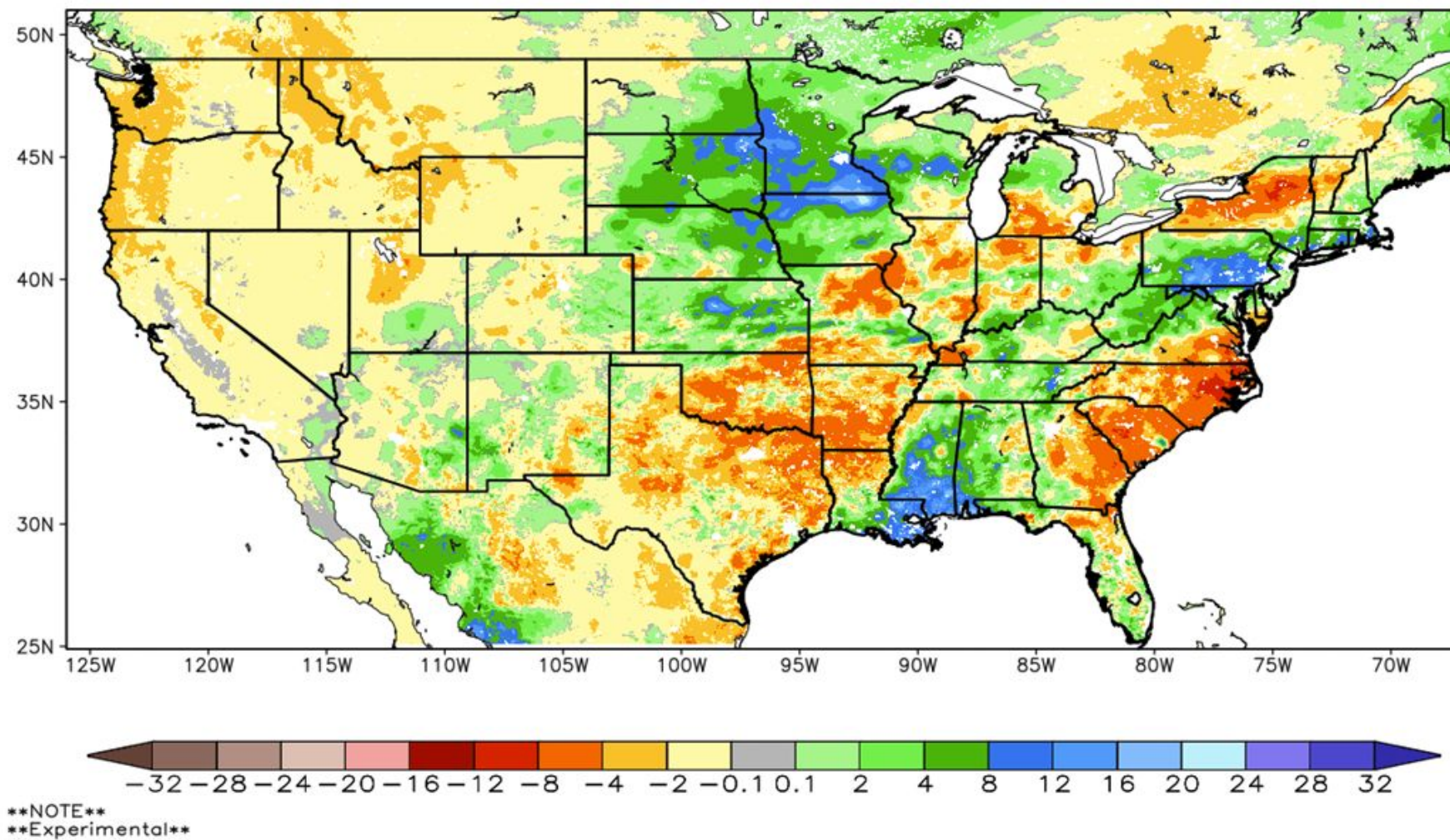
Summer Monsoon rains have greatly improved the root-zone soil moisture conditions!

GRACE Satellite Observations

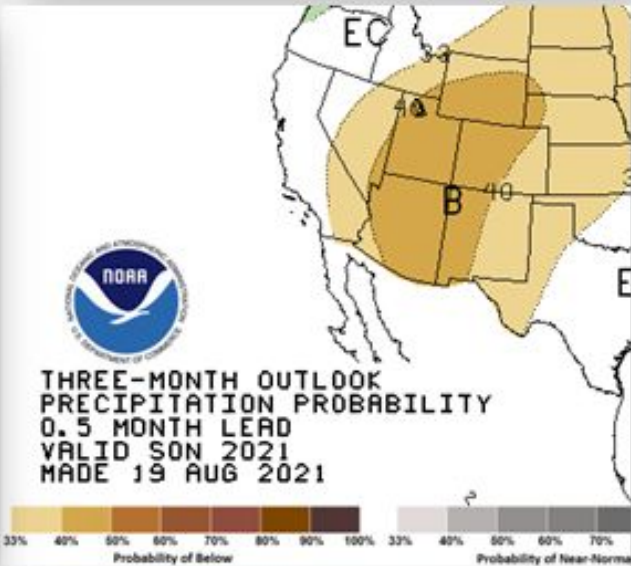
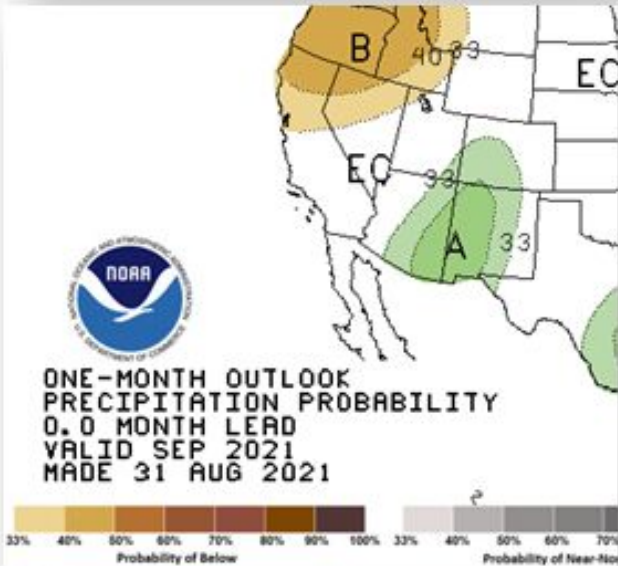
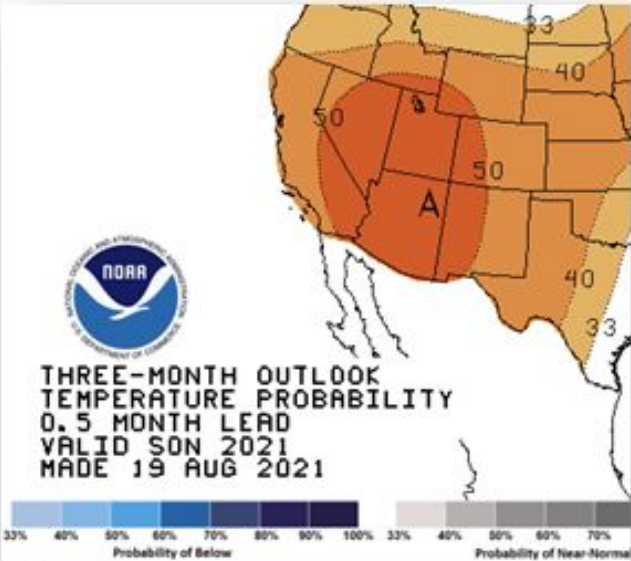


Despite an active monsoon, very little improvement to ground water conditions have been observed.

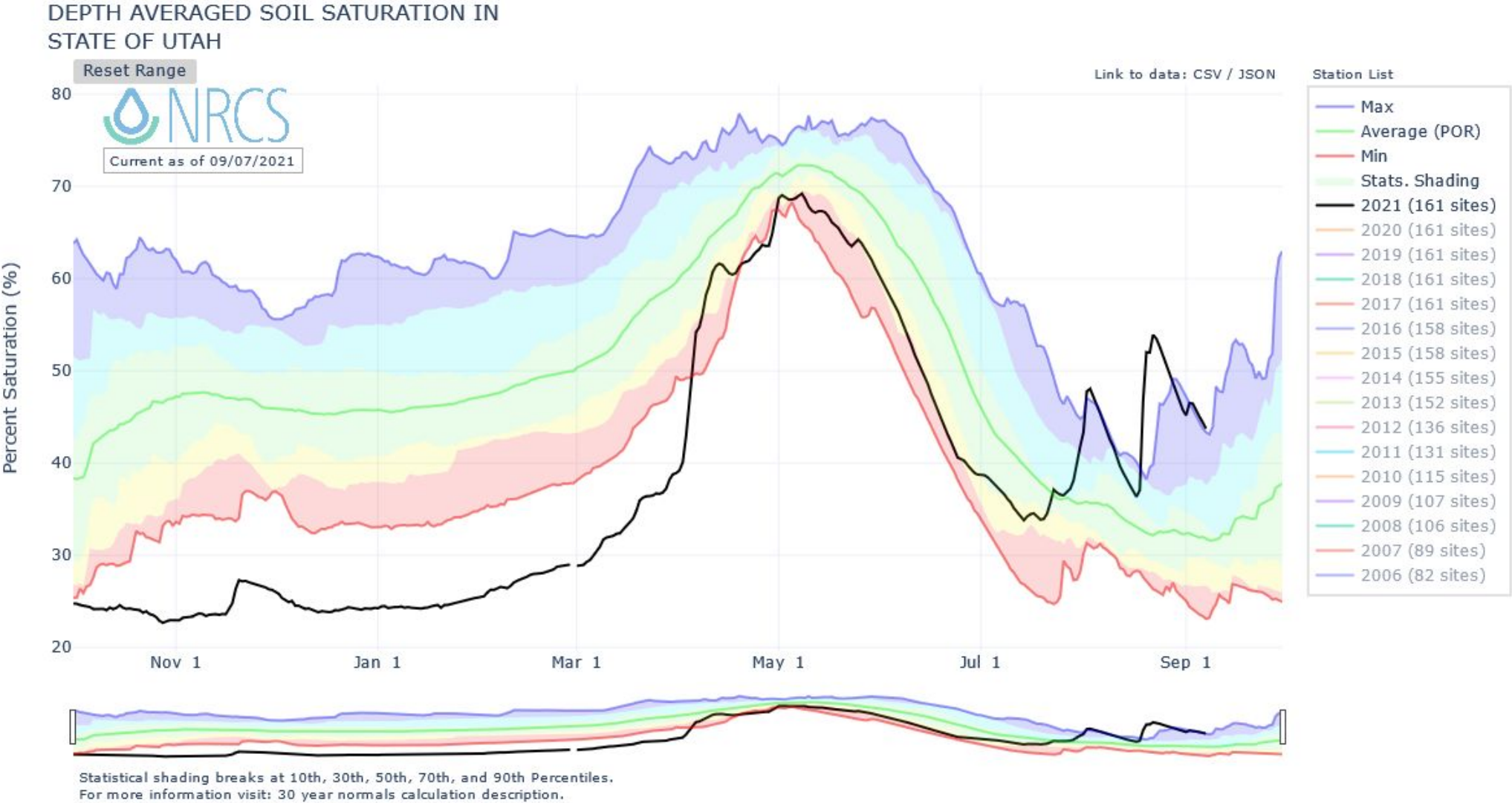
2-Week Difference in Column Relative Soil Moisture (%) valid 00z 07 Sep 2021



CPC 1-month (sept.) & 3-month (S-O-N) outlooks

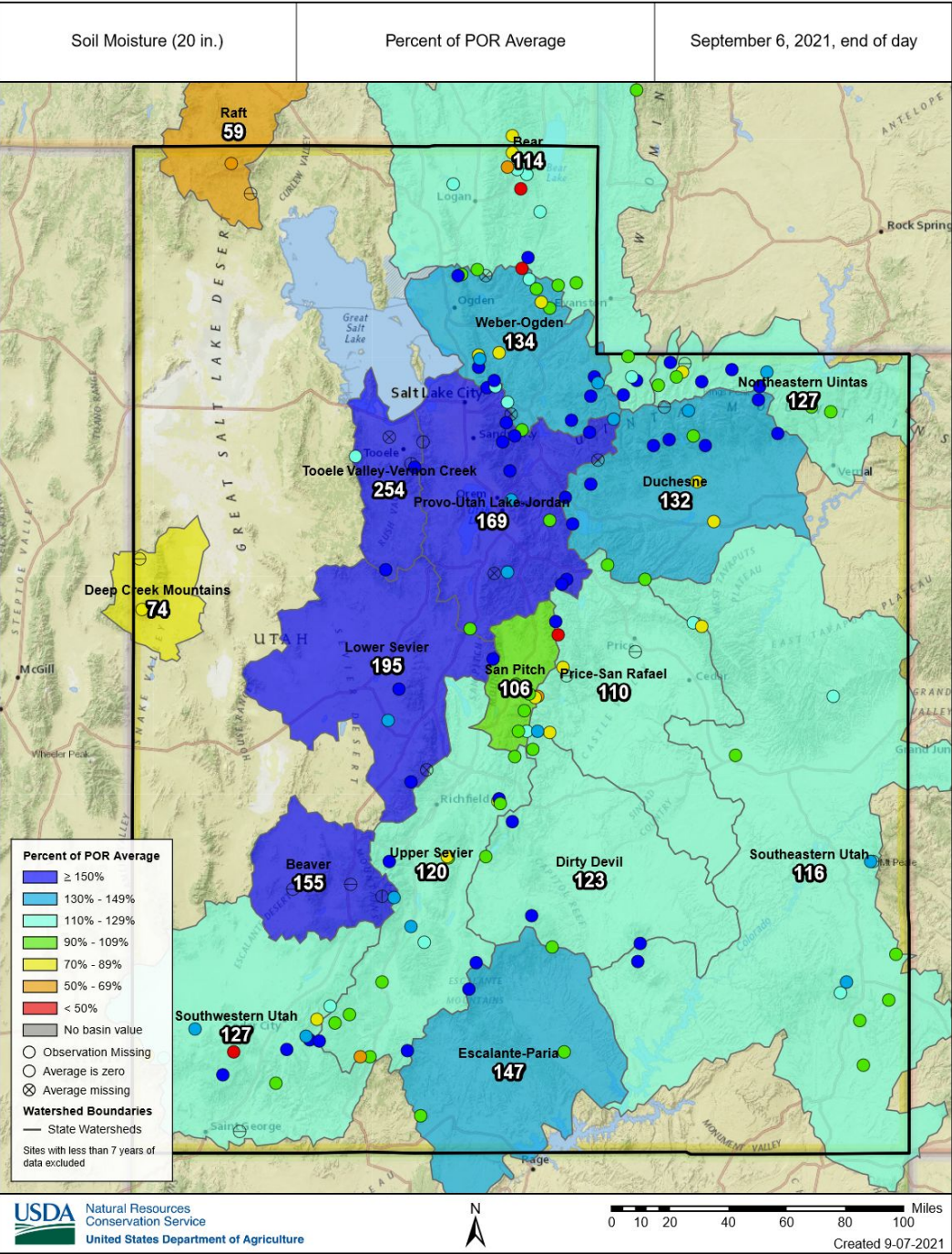


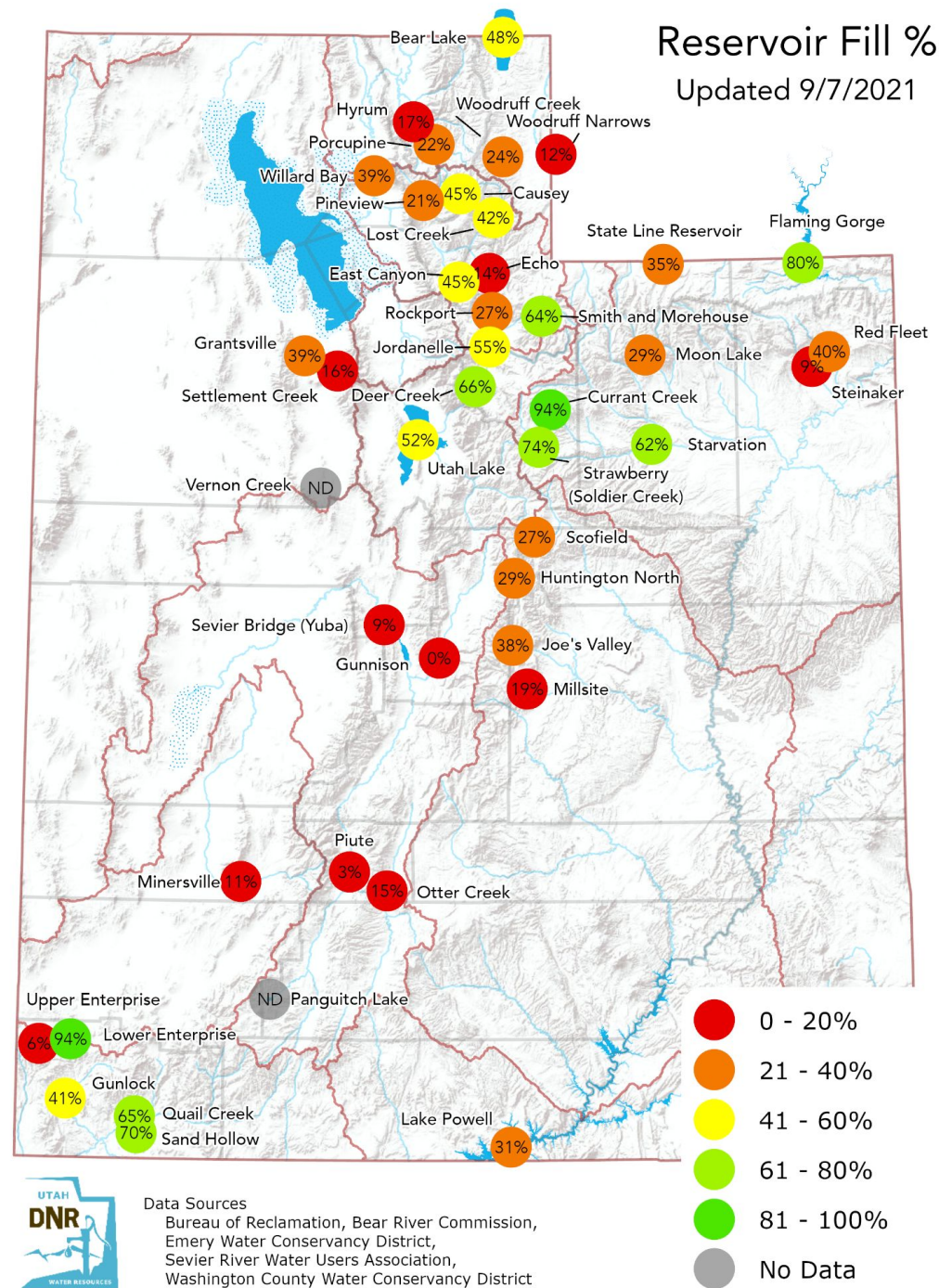
Soil Moisture



Soil Moisture

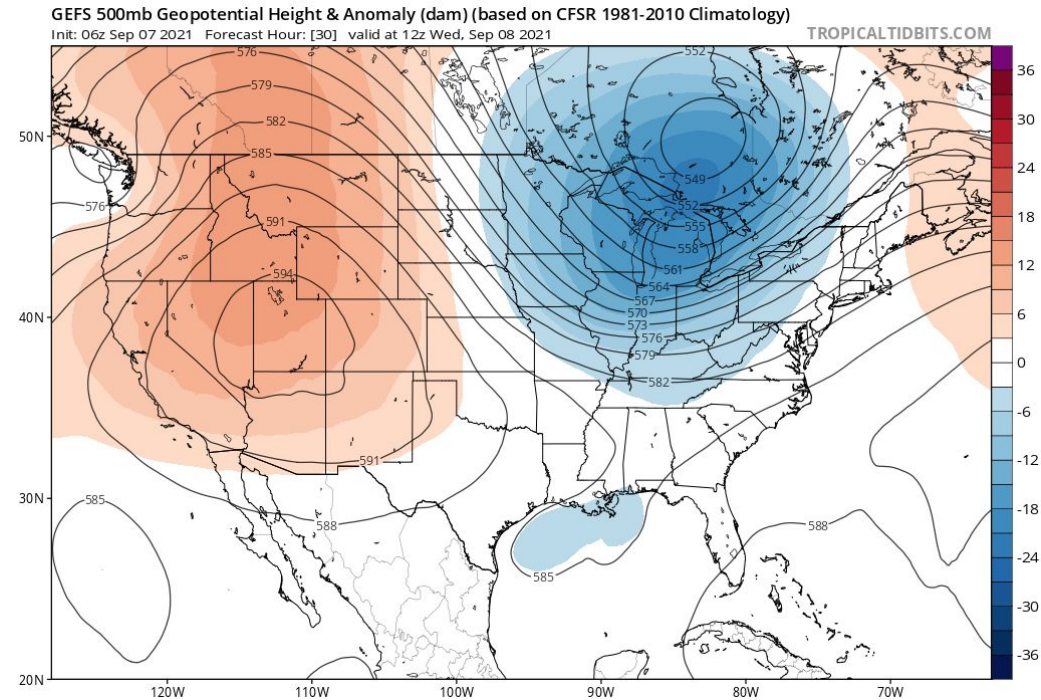
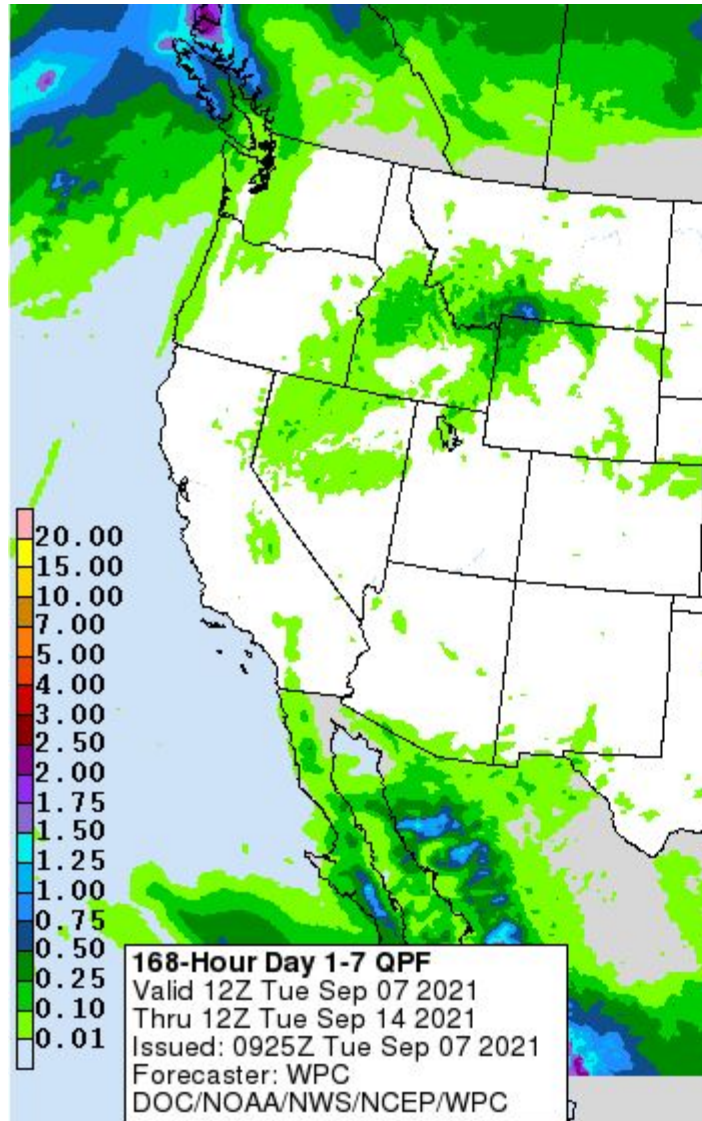
20" sensor depth
SNOTEL & SCAN sites





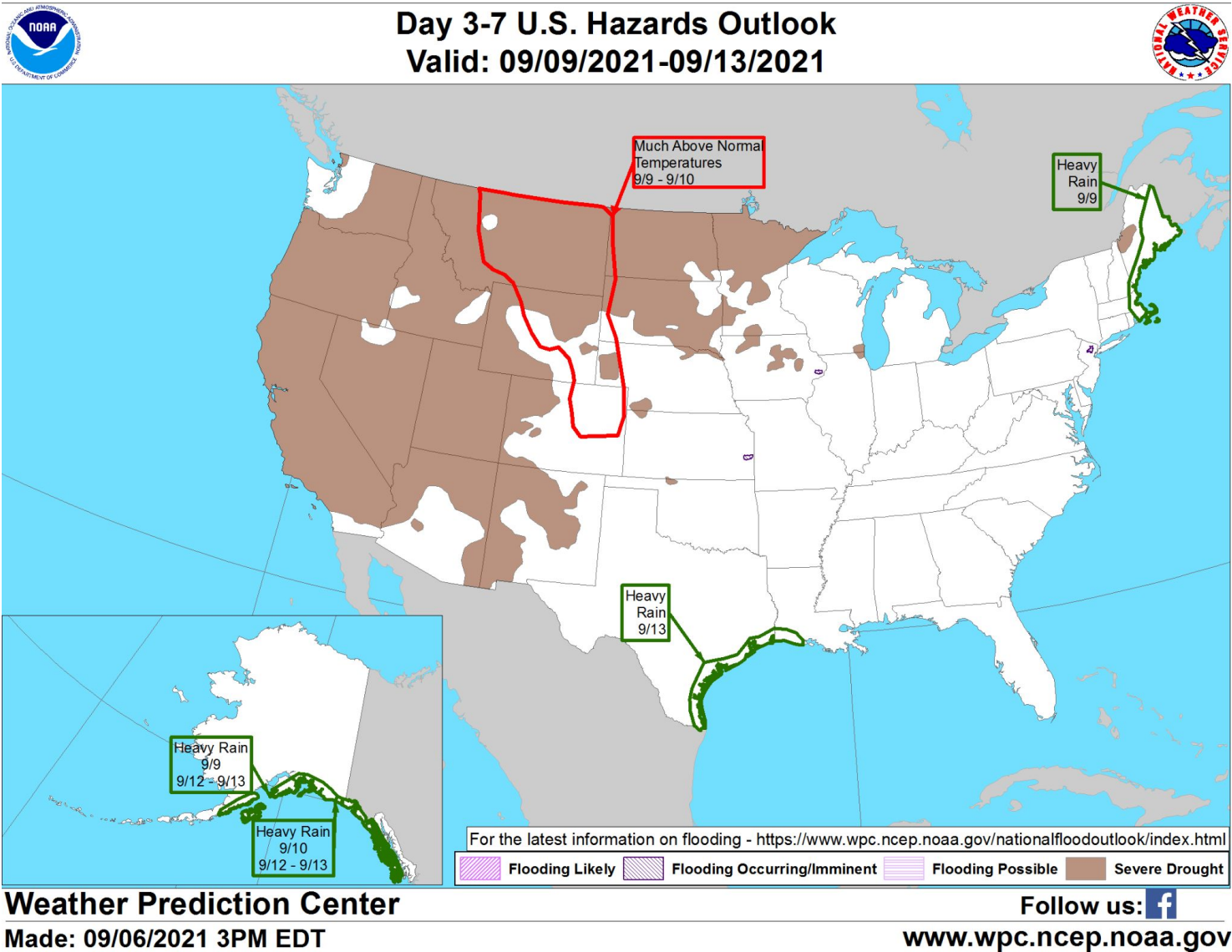
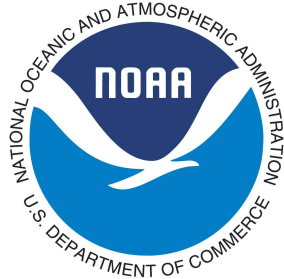
Agency - Division of Water Resources
 w/BOR & NRCS data
 Presenter - Laura Haskell

• Weather Forecast Office Utah Day 1-7 Outlook

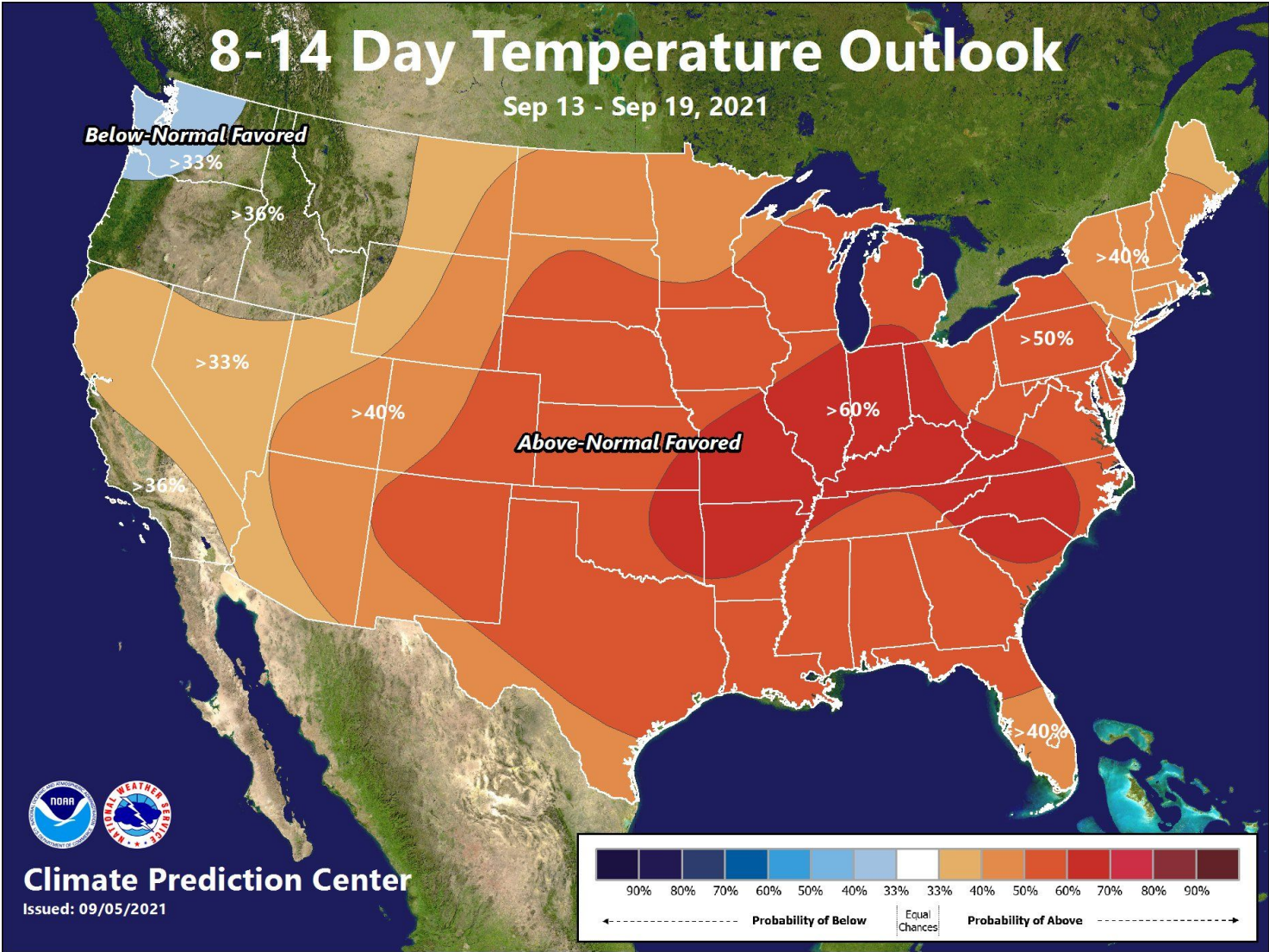
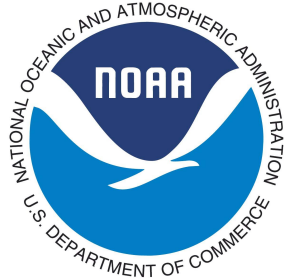


- Well above normal temperatures through Thursday (8-13F above climo).
- Temperatures cool to near seasonal values for the weekend (in the north).
- Scattered showers and storms across the north Friday-Saturday.
- Isolated showers and storms possible Sunday-Tuesday.

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

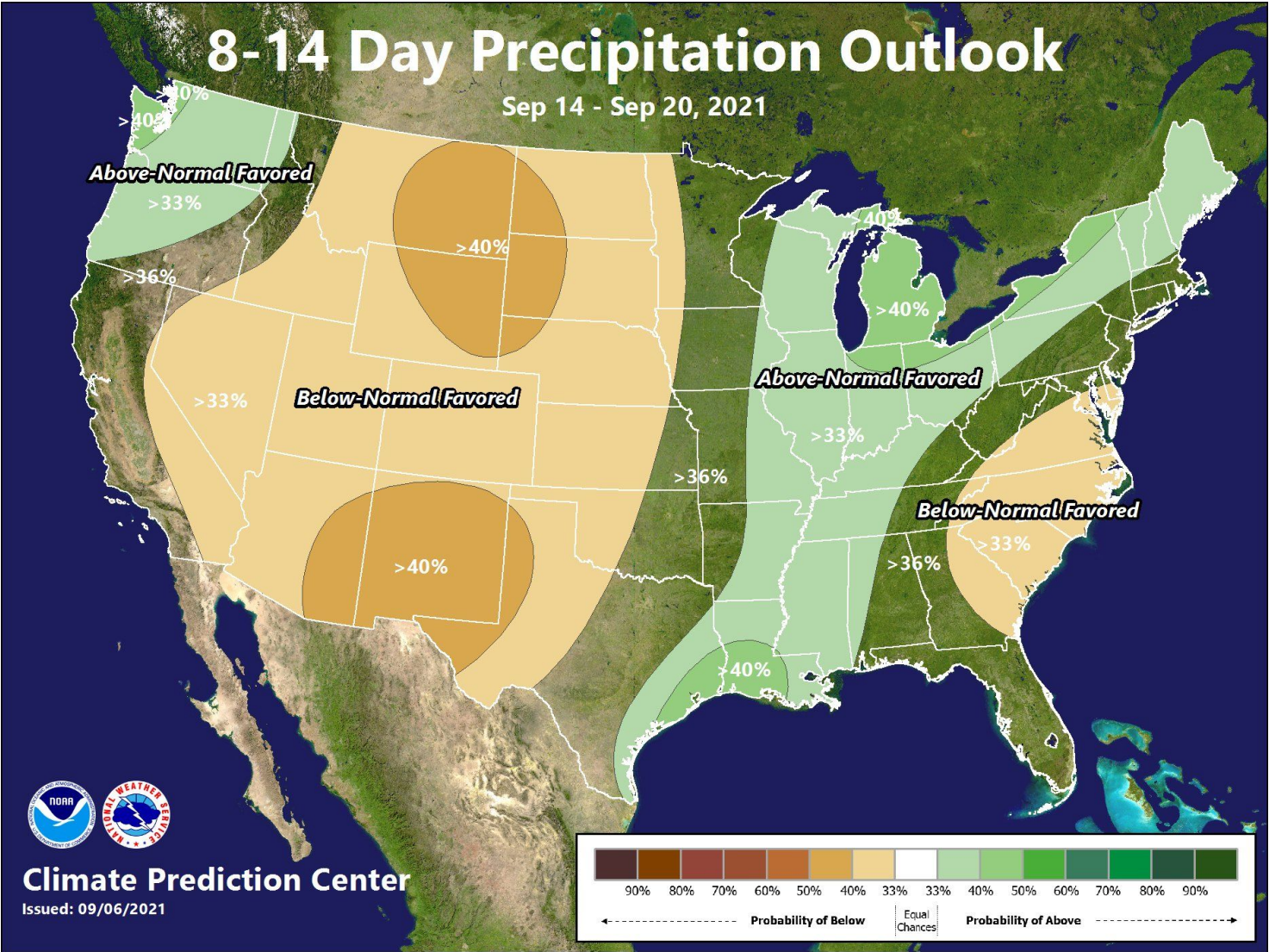
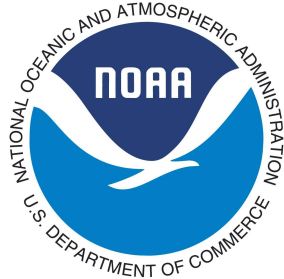


Climate Prediction Center 8 to 14 Day Outlooks - Temperature

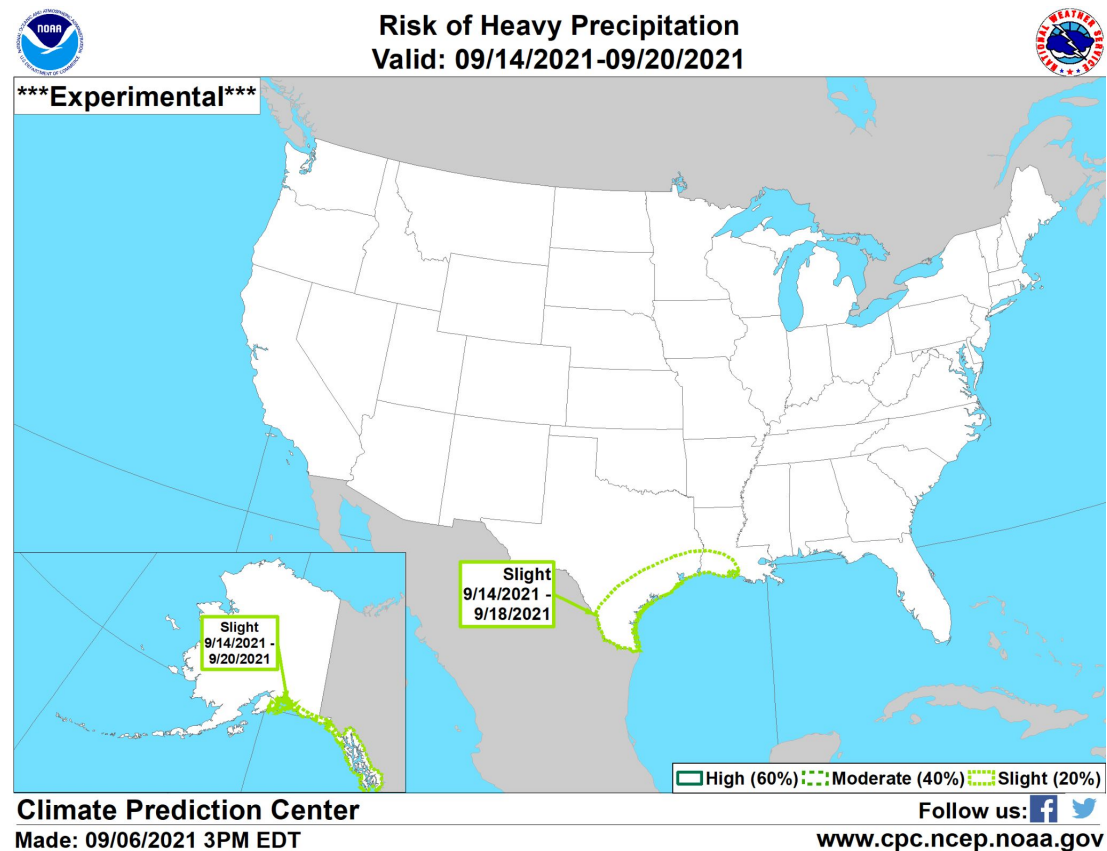
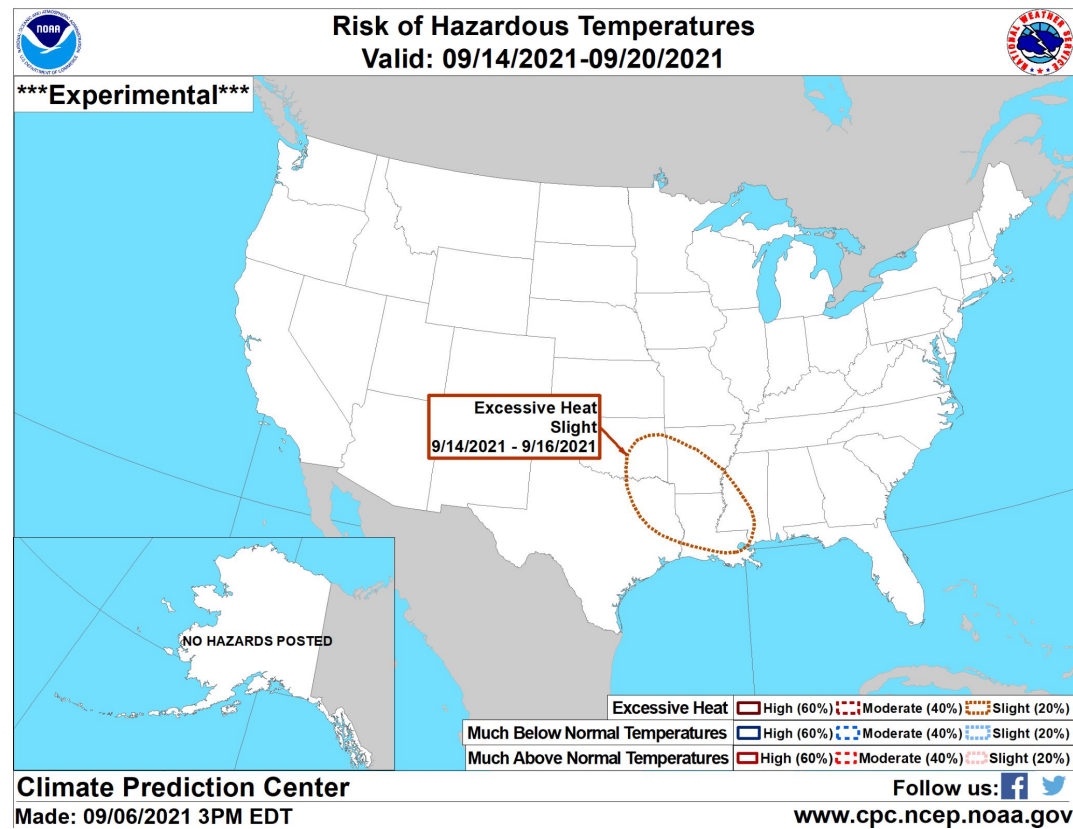
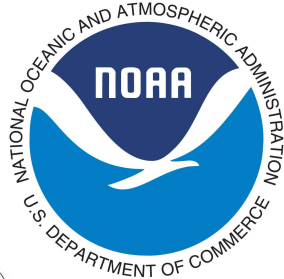


Agency - National Weather Service Weather Forecast Office
Presenter - Glen Merrill

Climate Prediction Center 8 to 14 Day Outlooks - Precipitation



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





Water Supply Forecasts - Reservoirs Inflows

Seasonal water supply forecasts have concluded for WY2021, however, adjusted flows and forecast for specific reservoirs illustrate the ongoing drought and low August flows with a couple of exceptions.

Lake Powell Unregulated Inflow 19% of Average

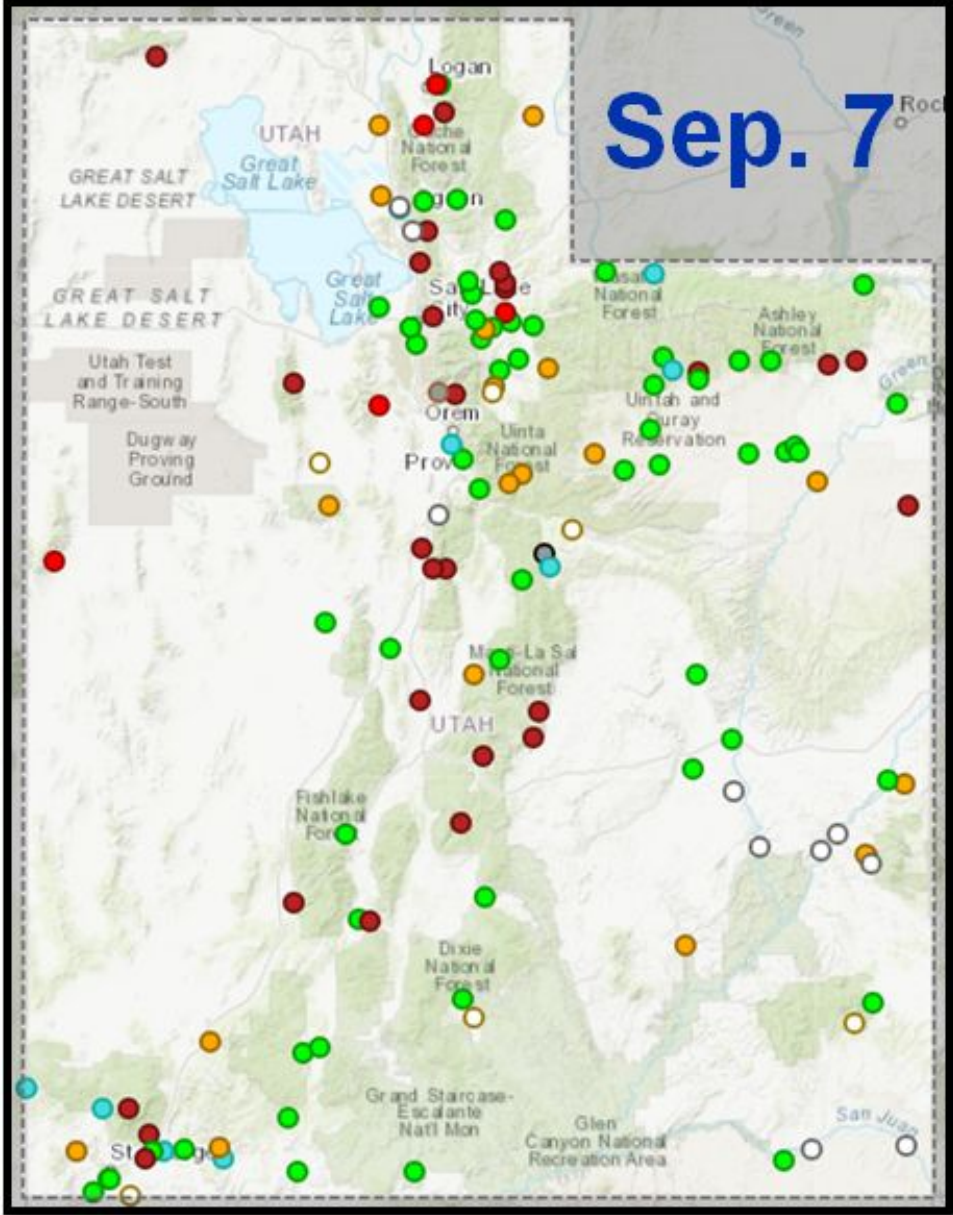
Fontenelle Unregulated Inflows 25% of Average

Flaming Gorge Unregulated Inflows 30% of Average









Deer Creek Reservoir Unregulated Inflows 55% of Average

Utah Lake Unregulated Inflows 113% of Average (Historic August Rains)

Current Streamflow Conditions



Agency - USGS Utah Water Science Center
Presenter - Ryan Rowland

Day-of-Year Status	# Gages	% Gages
All-time high for this day-of-year	0	0.0%
Much above normal for this day-of-year	0	0.0%
Above normal for this day-of-year	10	7.3% 
Normal for this day-of-year	58	42.3% 
Below normal for this day-of-year	19	13.9% 
Much below normal for this day-of-year	27	19.7% 
All-time low for this day-of-year	5	3.6% 
Not ranked - insufficient record	11	8.0% 
Not ranked - no recent measurement	1	0.7% 
Not ranked - stream not flowing	6	4.4% 

Streamflow: Status

Above flood stage

All-time high for this day

Much above normal

Above normal

Normal

Below normal

Much below normal

All-time low for this day

Not flowing

Not ranked

Measurement flag

Recent measurement unavailable

100th percentile (maximum)

>90th percentile

76th – 90th percentile

25th – 75th percentile

10th – 24th percentile

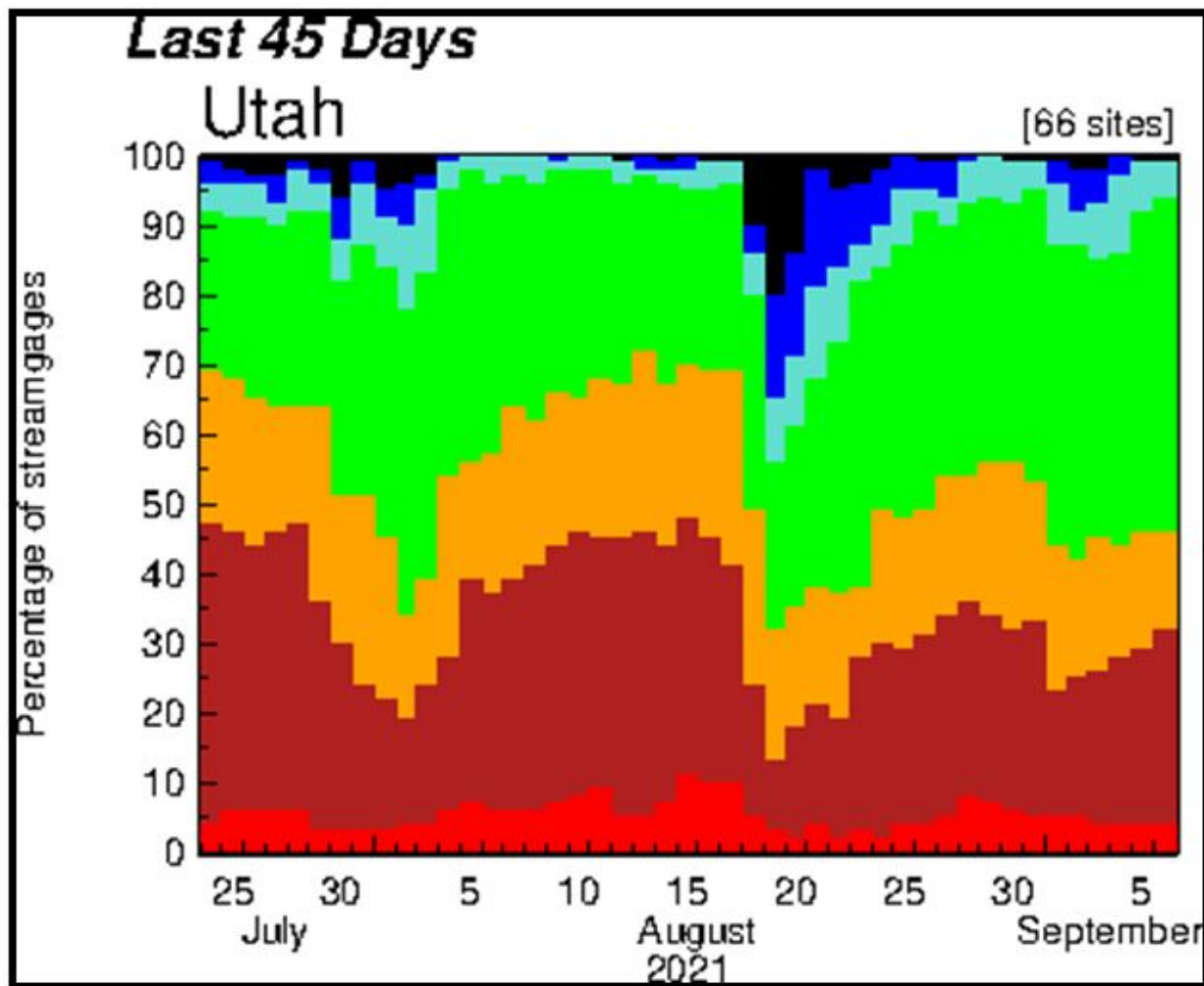
<10th percentile

0th percentile (minimum)

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



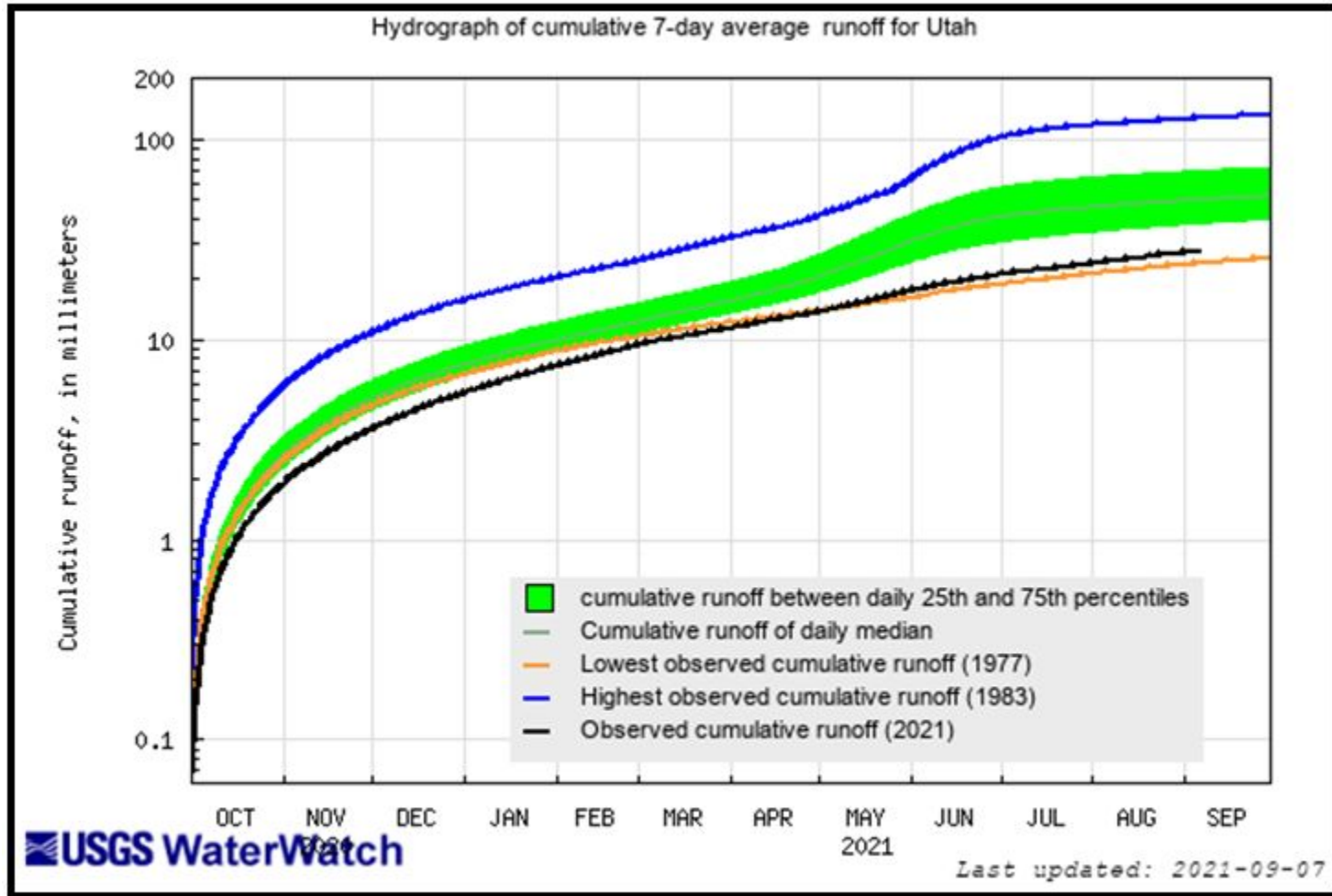
Current Streamflow Conditions



Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	No Data
	Much below normal	Below normal	Normal	Above normal	Much above normal		

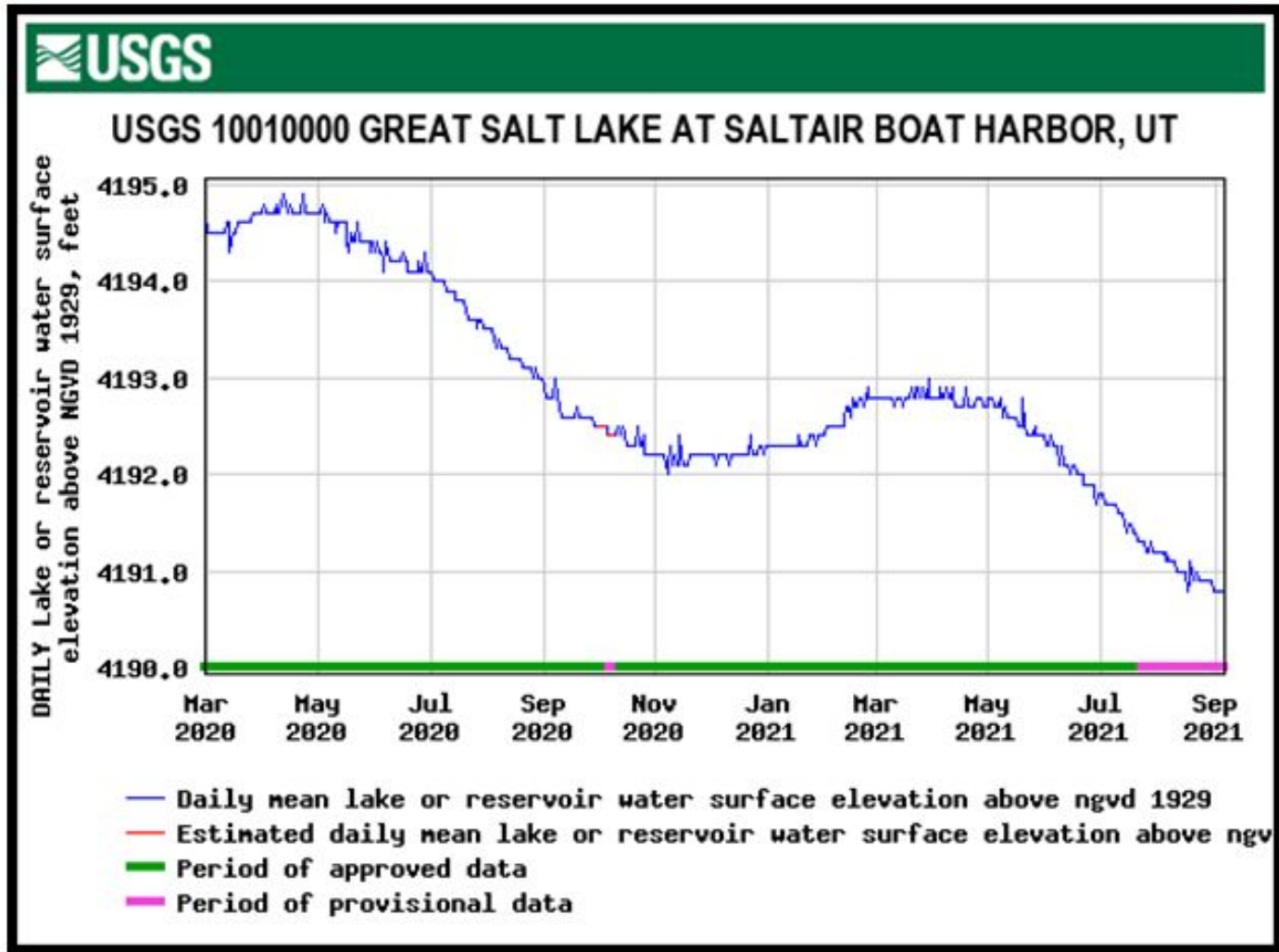
- ❑ Mean daily Streamflow compared to historical streamflow for the day of the year
- ❑ Sites must have at least 30 years of record to be included in this graphic

Cumulative Streamflow



❑ Cumulative 7-day average runoff for water year 2021 is near the lowest on record

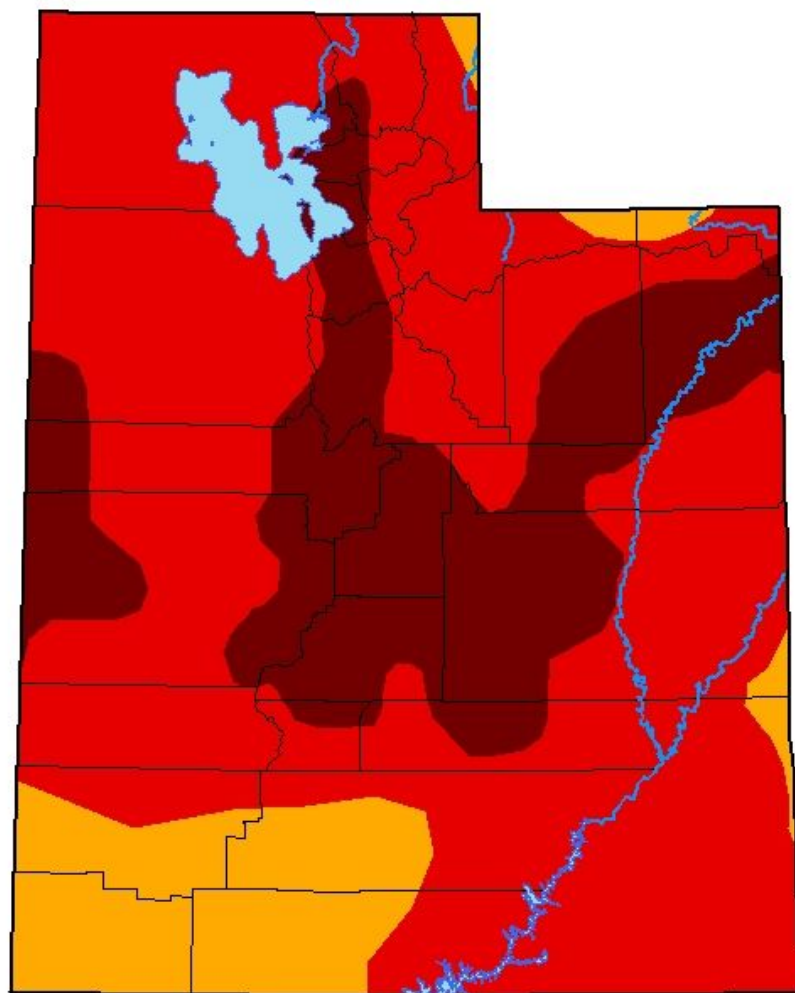
Great Salt Lake Water Surface Elevation



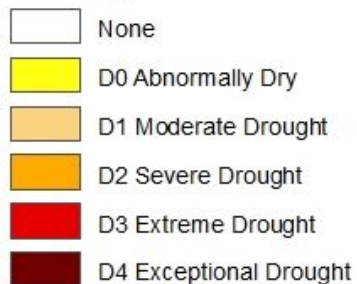
- ❑ Mean daily value yesterday
4,190.8'
- ❑ Broke historic low record on 7/21/2021 when daily mean value = 4,191.3'
- ❑ Site has data record dating back to 1847

U.S. Drought Monitor Utah

August 31, 2021
(Released Thursday, Sep. 2, 2021)
Valid 8 a.m. EDT



Intensity:



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:

David Simeral
Western Regional Climate Center



droughtmonitor.unl.edu

