



# Utah Water Conditions Update (drought webinar)

The meeting will begin shortly



Thank you to our contributors

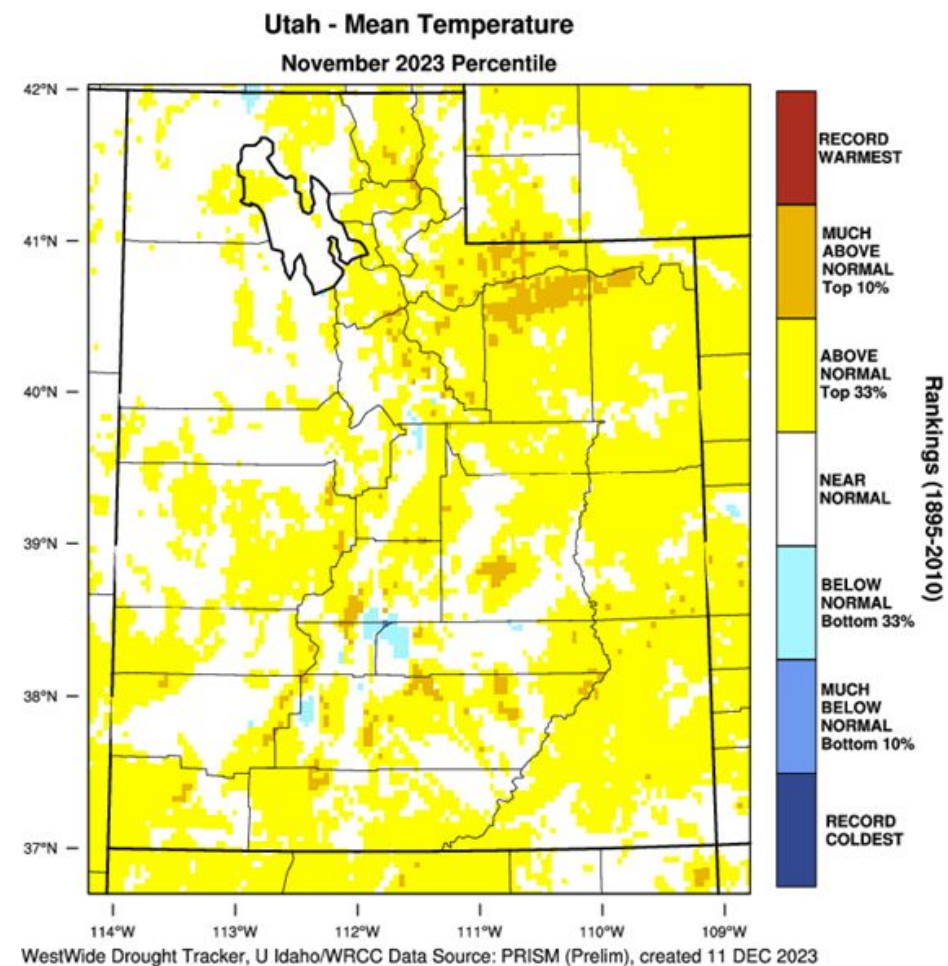




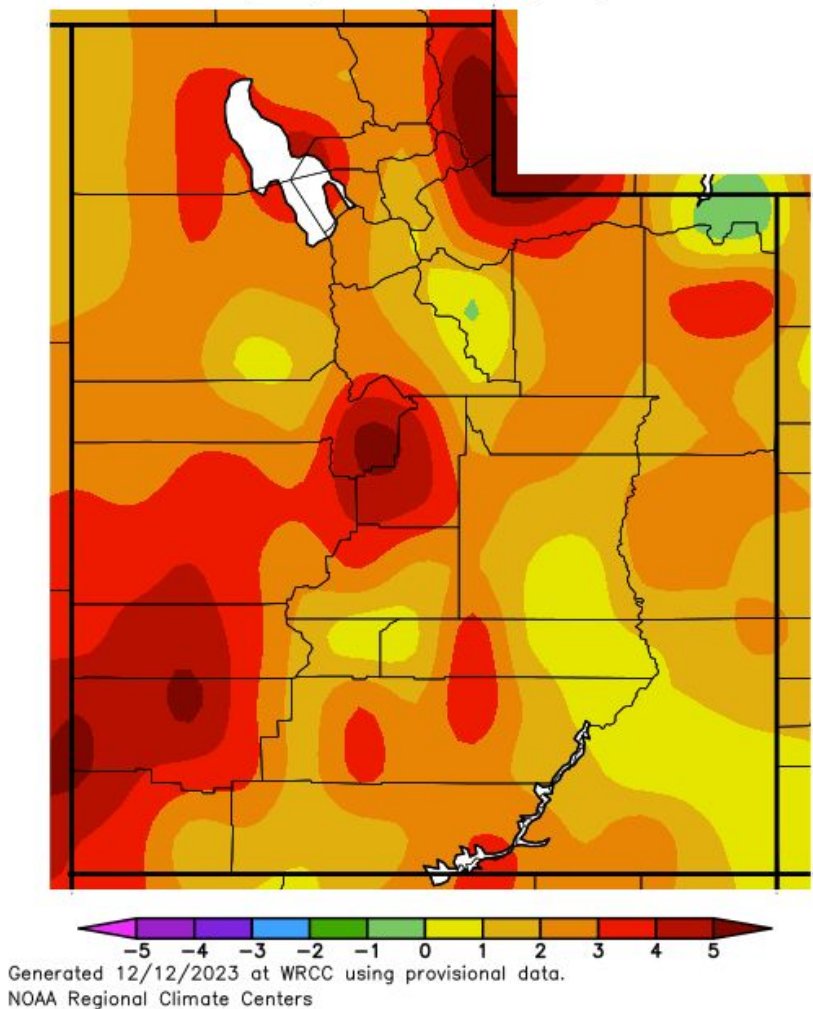
# **Utah Water Assessment & Conditions Monitoring Webinar**

**December 12, 2023**

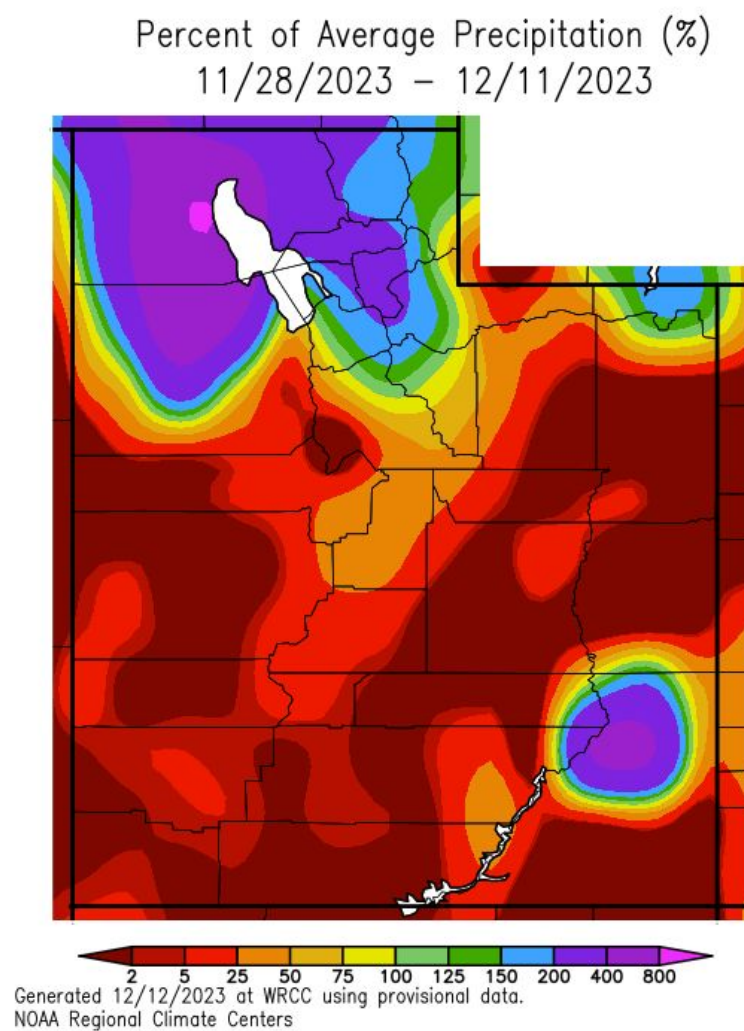
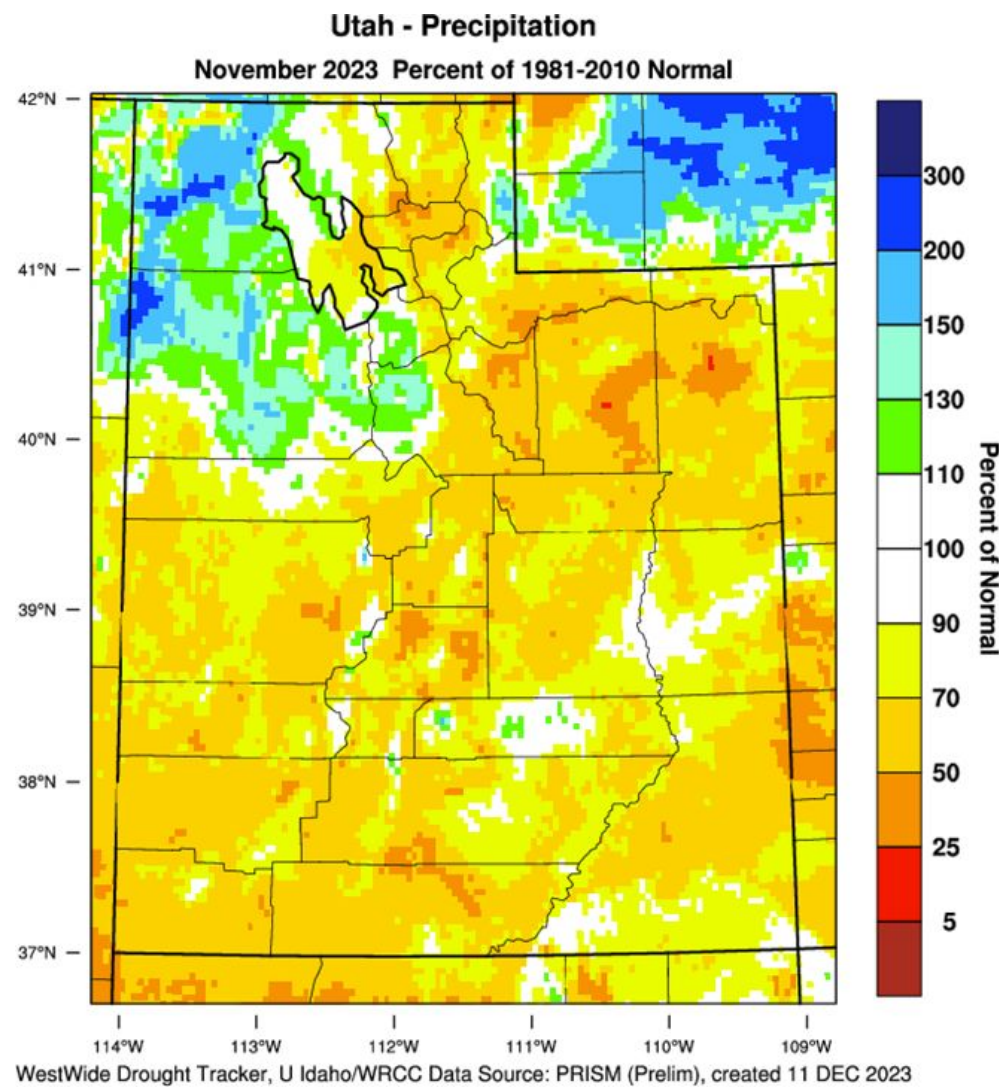
# Temperature History



Ave. Temperature dep from Ave (deg F)  
11/28/2023 – 12/11/2023

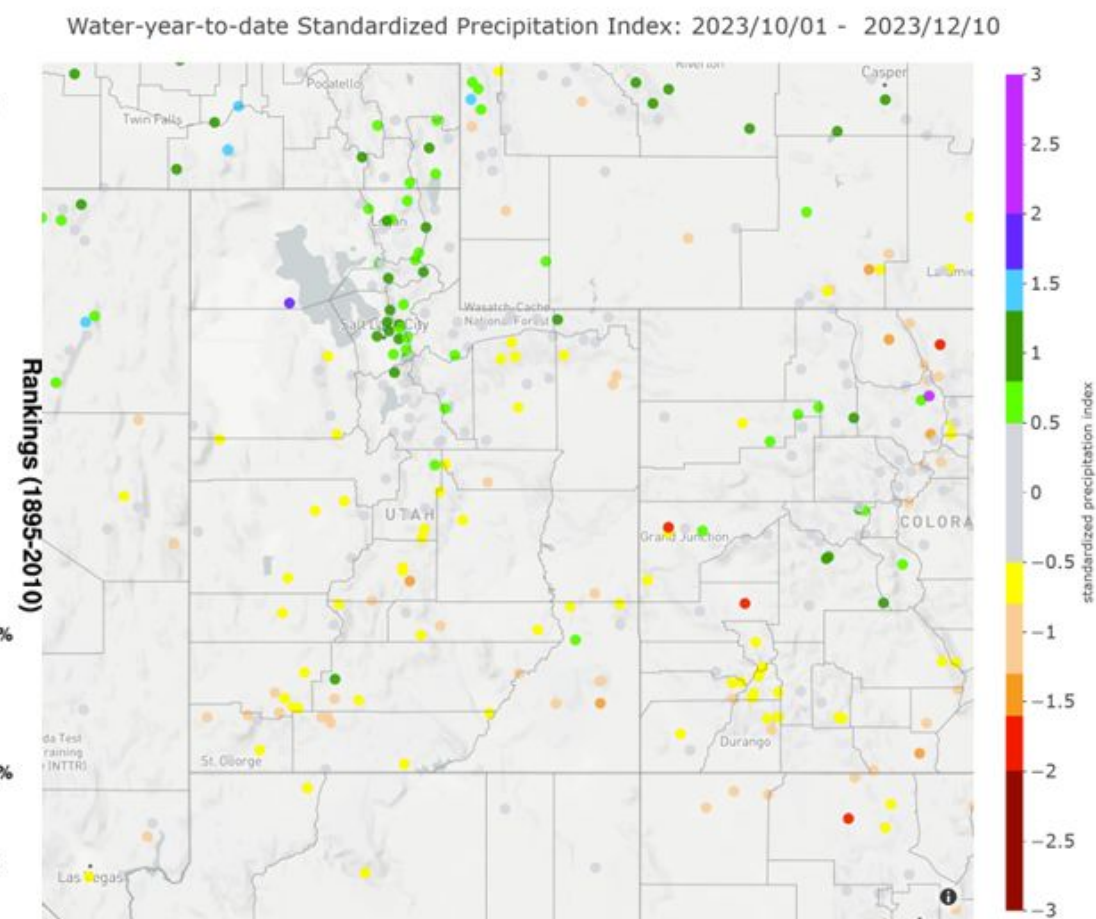
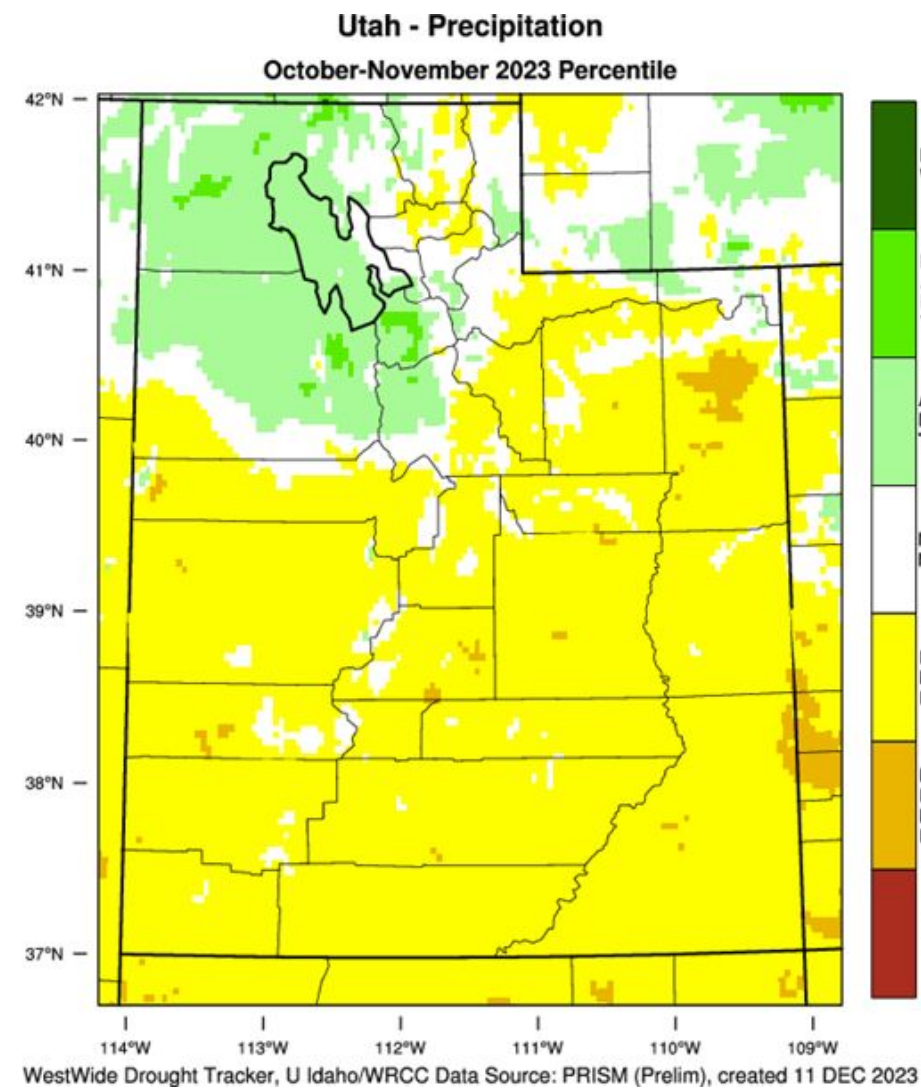


# Precipitation History

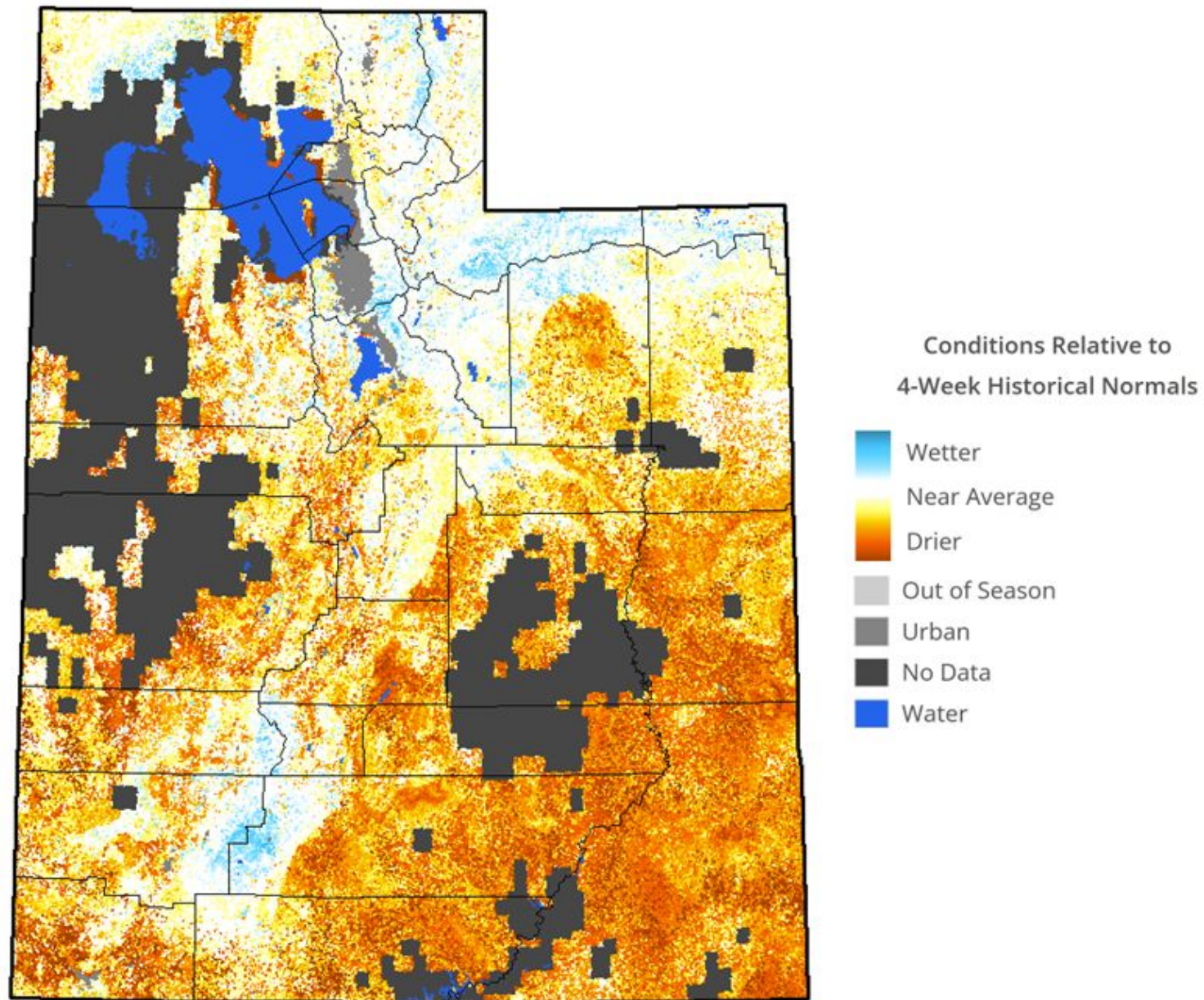




# Precipitation History

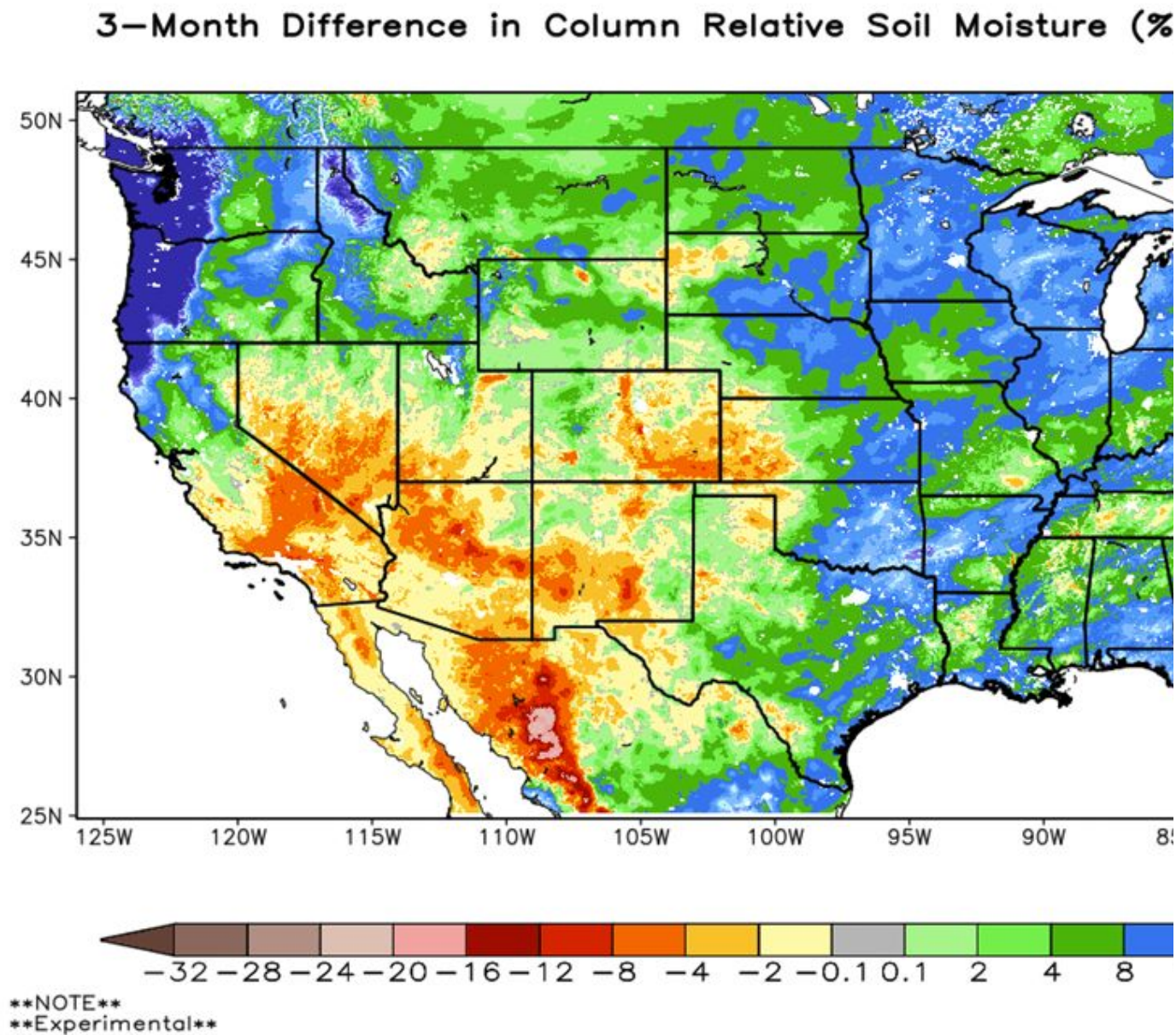


# Quick-DRI





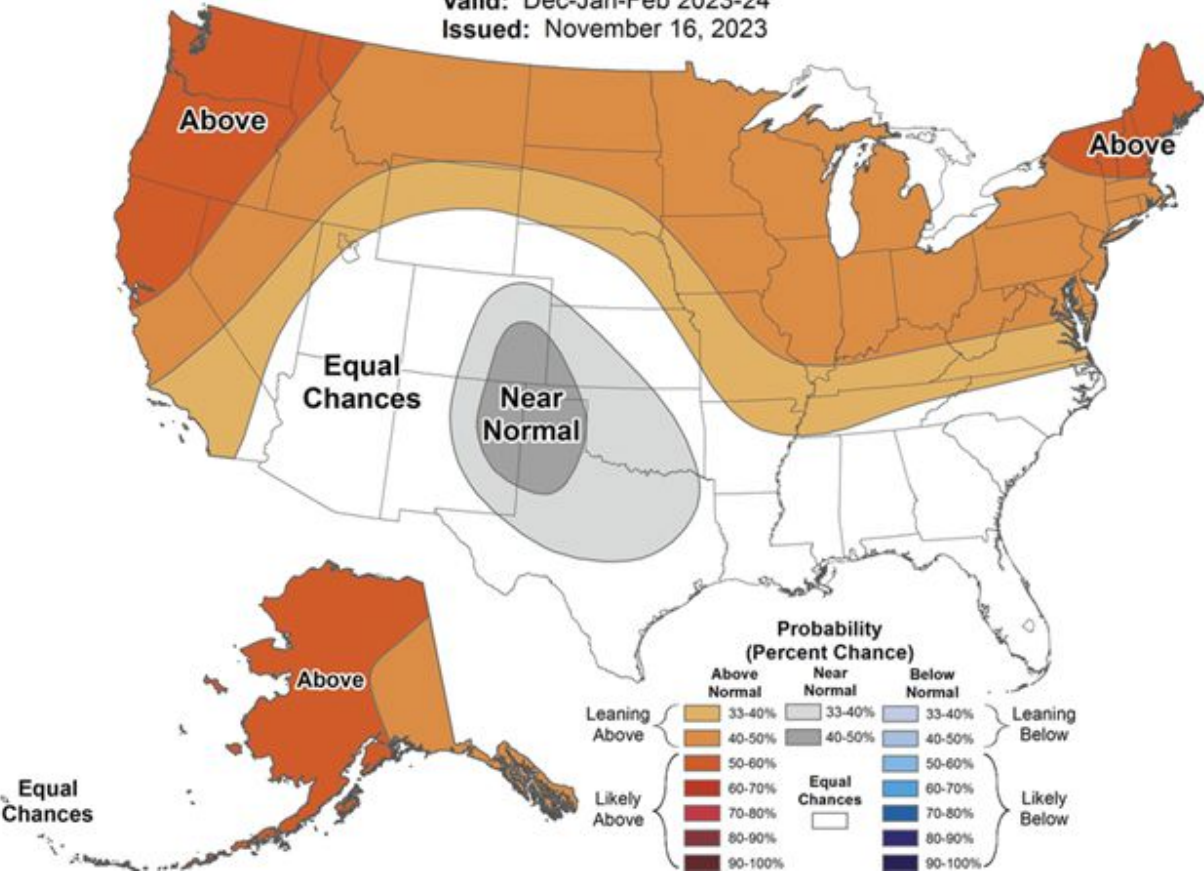
# Soil Moisture Trends (Column; 3-month)



# CPC 3-month (Dec-Feb) Outlook

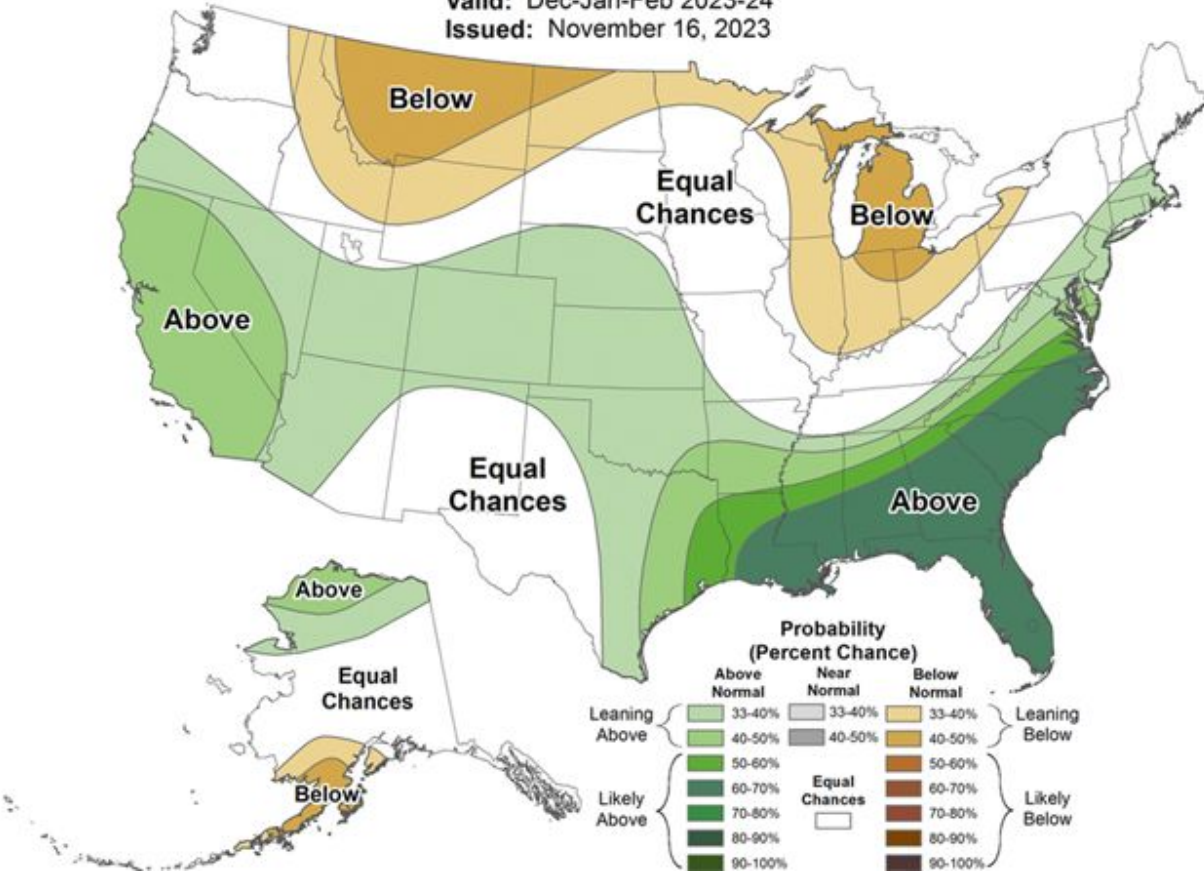
## Seasonal Temperature Outlook

Valid: Dec-Jan-Feb 2023-24  
Issued: November 16, 2023



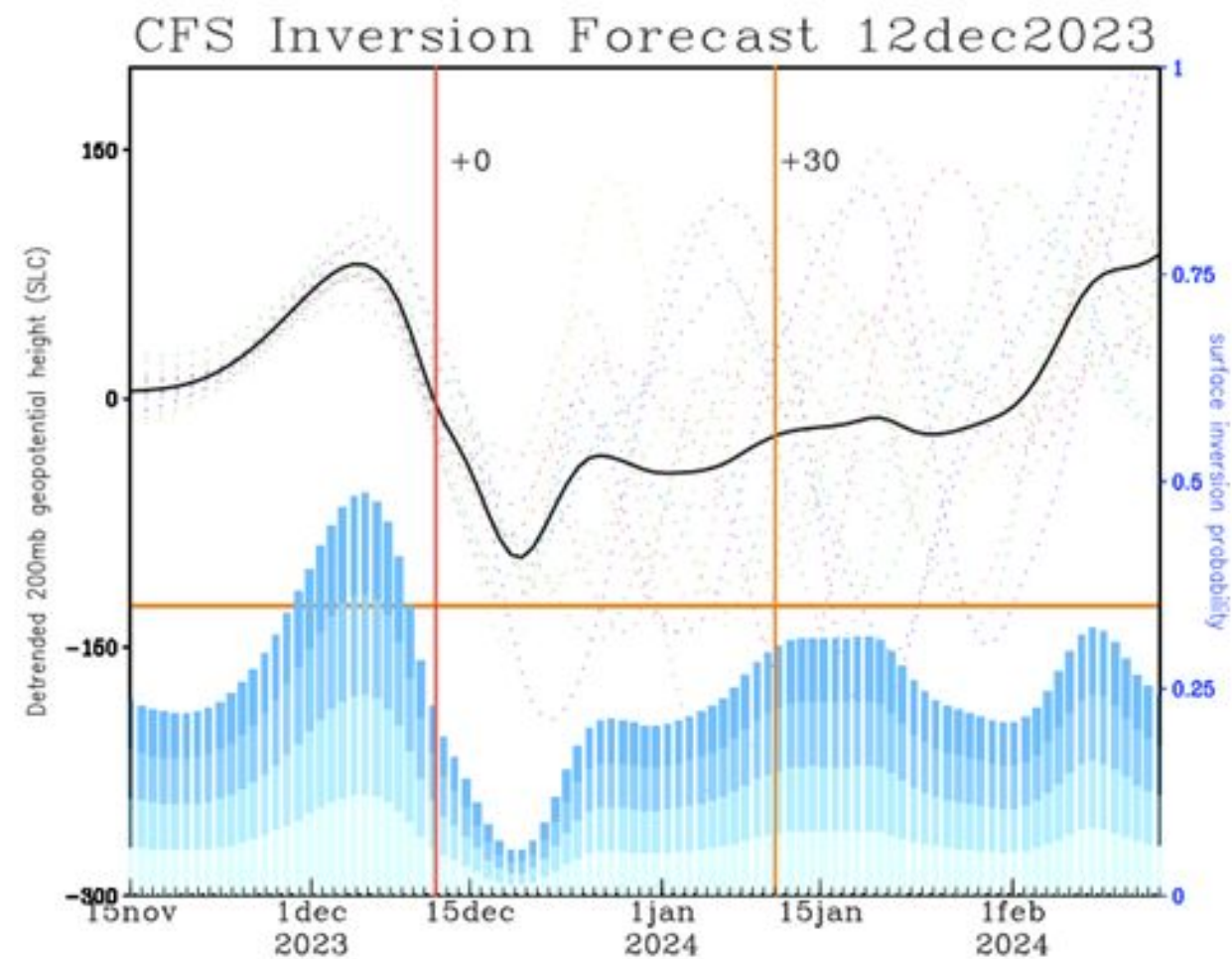
## Seasonal Precipitation Outlook

Valid: Dec-Jan-Feb 2023-24  
Issued: November 16, 2023





# Extended Range Weather Pattern Outlook

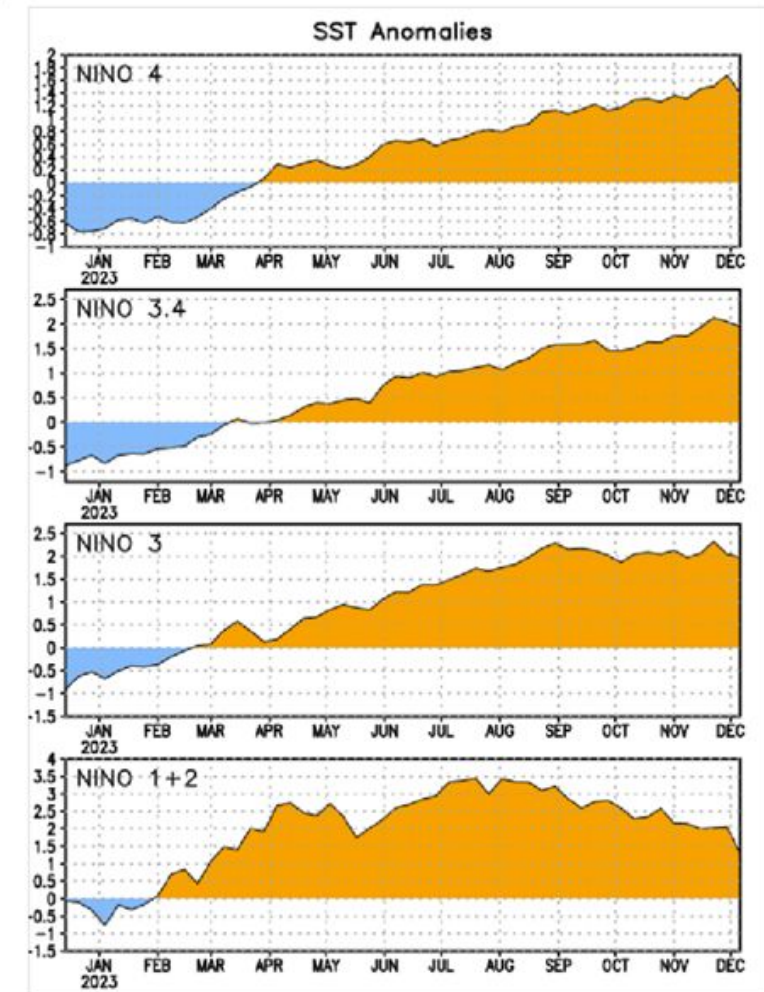
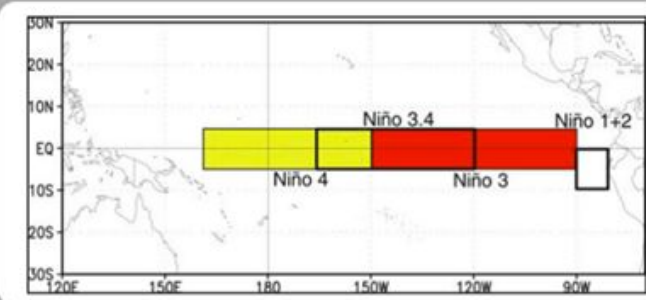


# El Nino Condition Monitoring

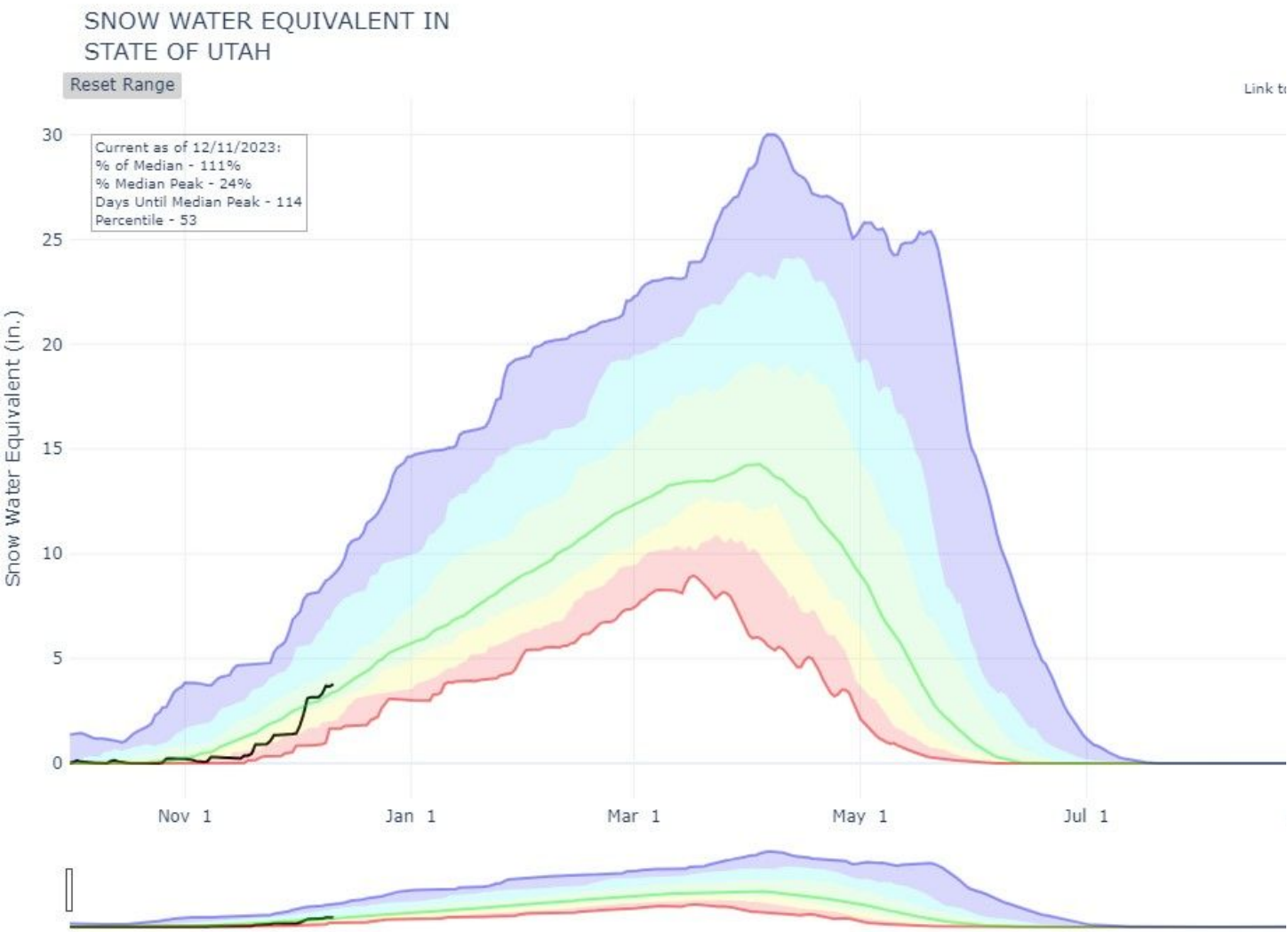
## Niño Region SST Departures (°C) Recent Evolution

The latest weekly SST departures are:

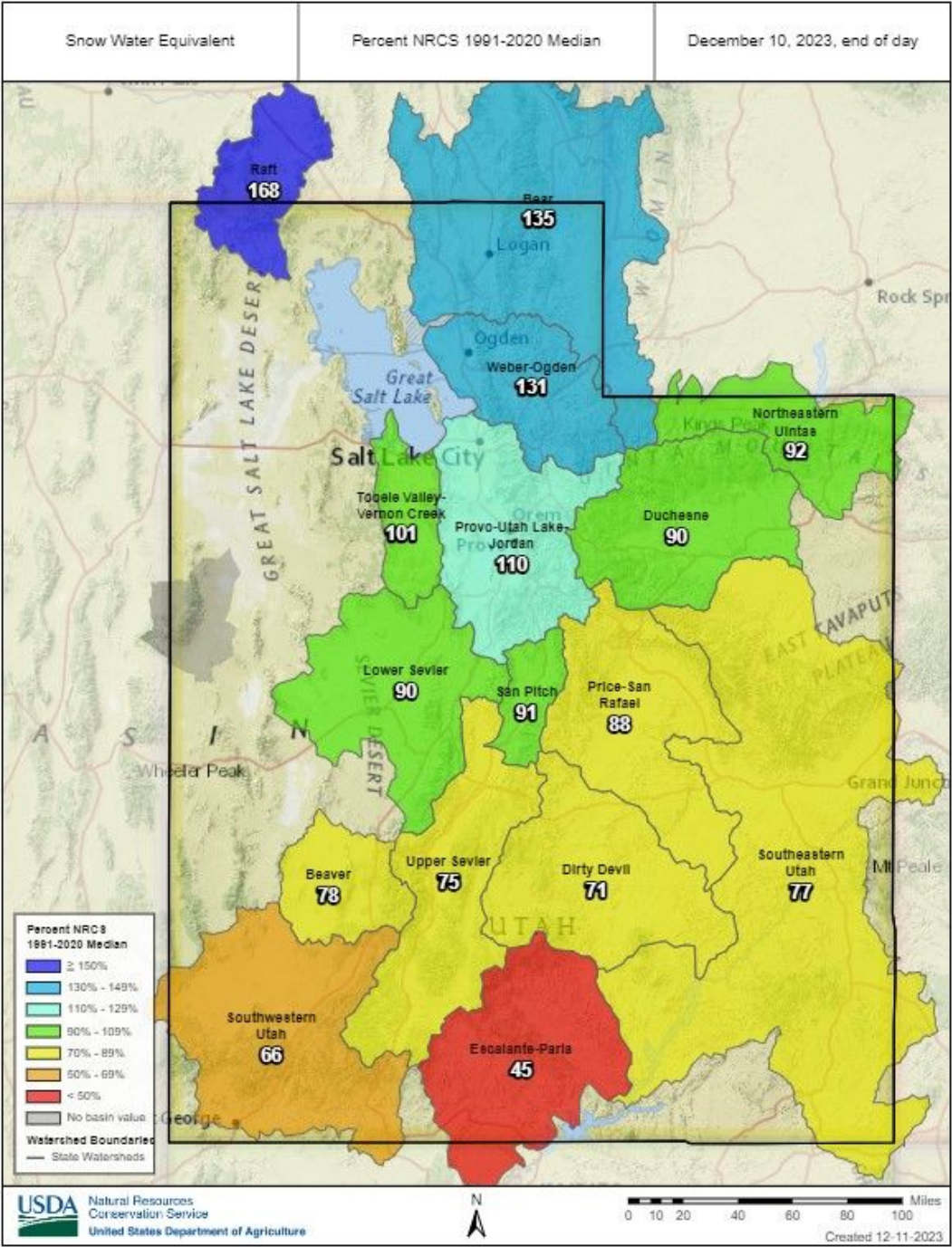
Niño 4	1.4°C
Niño 3.4	1.9°C
Niño 3	2.0°C
Niño 1+2	1.3°C



# Snowpack

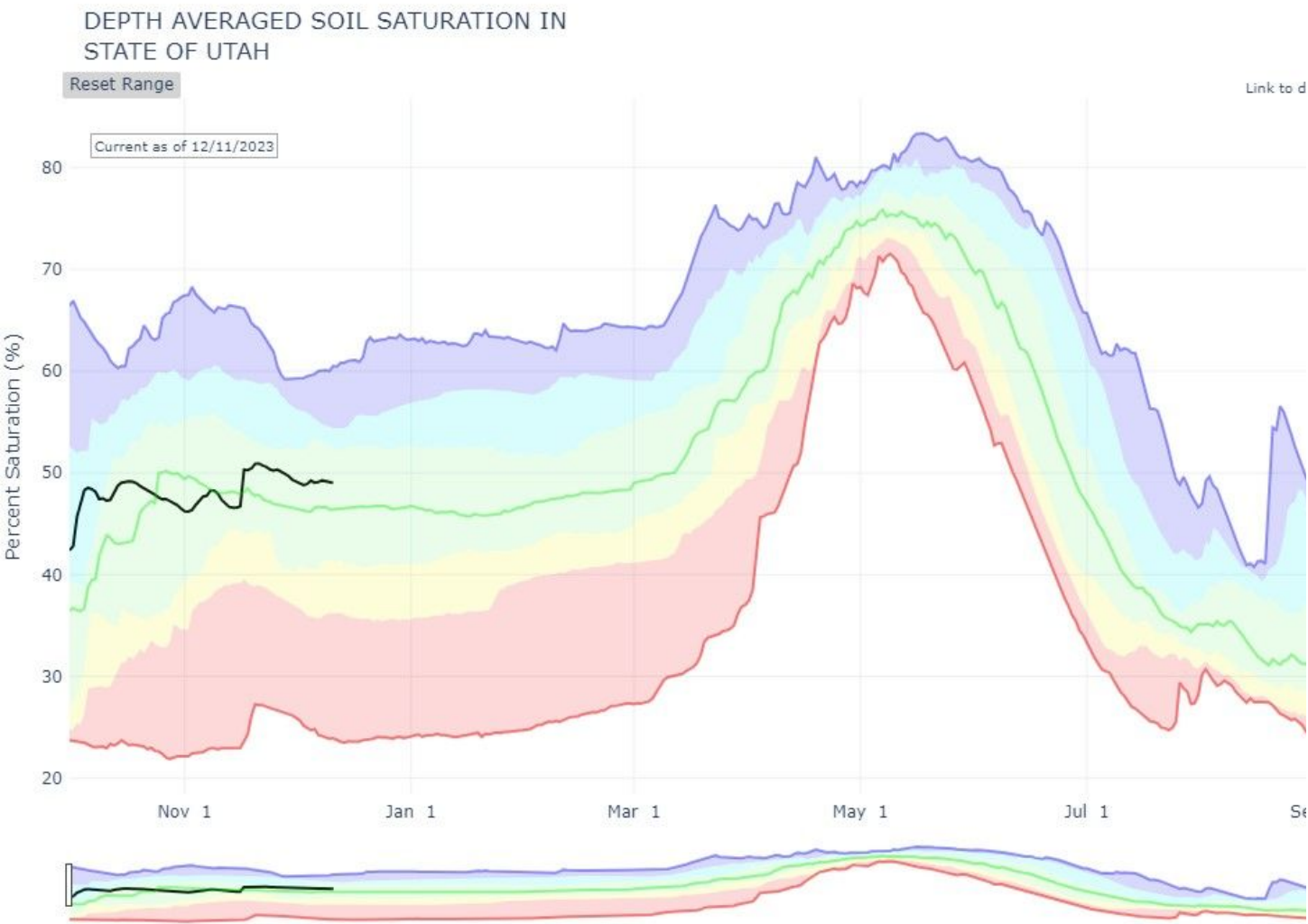


Agency - NRCS Snow Survey  
Presenter - Jordan Clayton

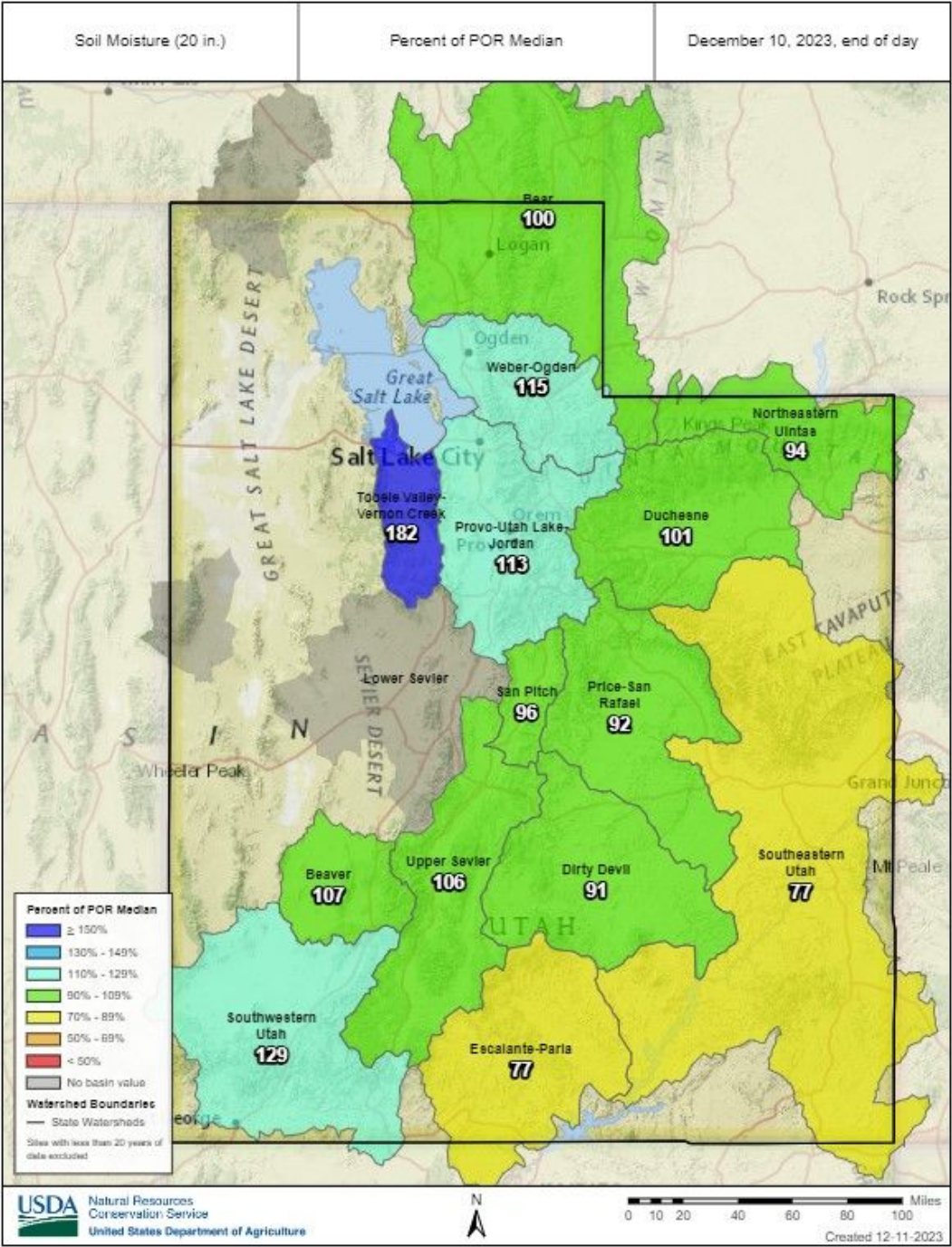




# Soil Moisture



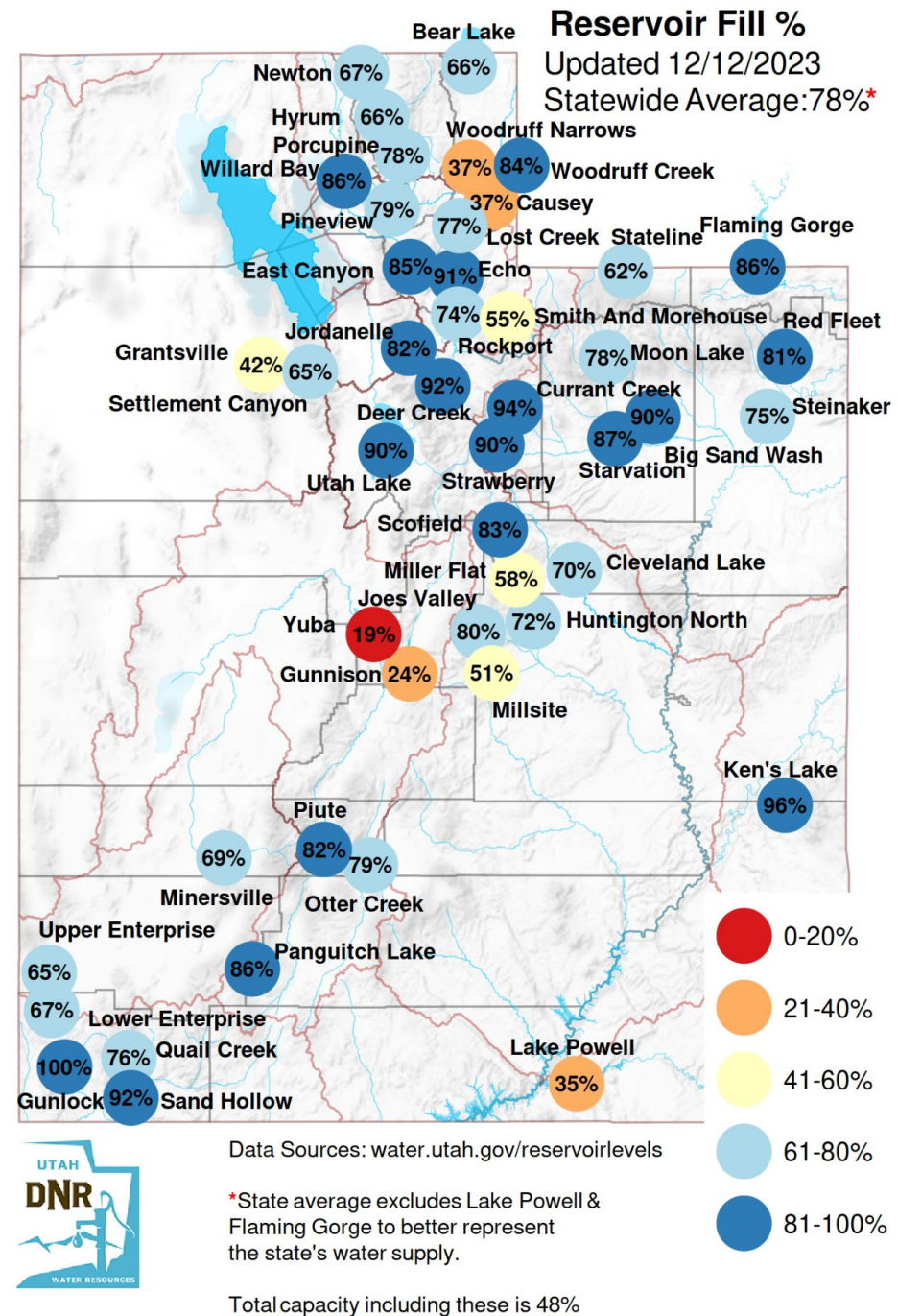
Agency - NRCS Snow Survey  
Presenter - Jordan Clayton



Current reservoir levels 78%

Median 55.4%

Last year 43%



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

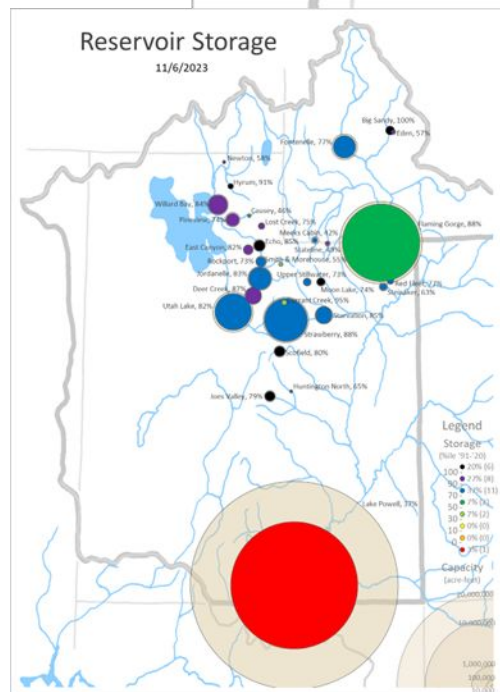


# Reservoir Storage

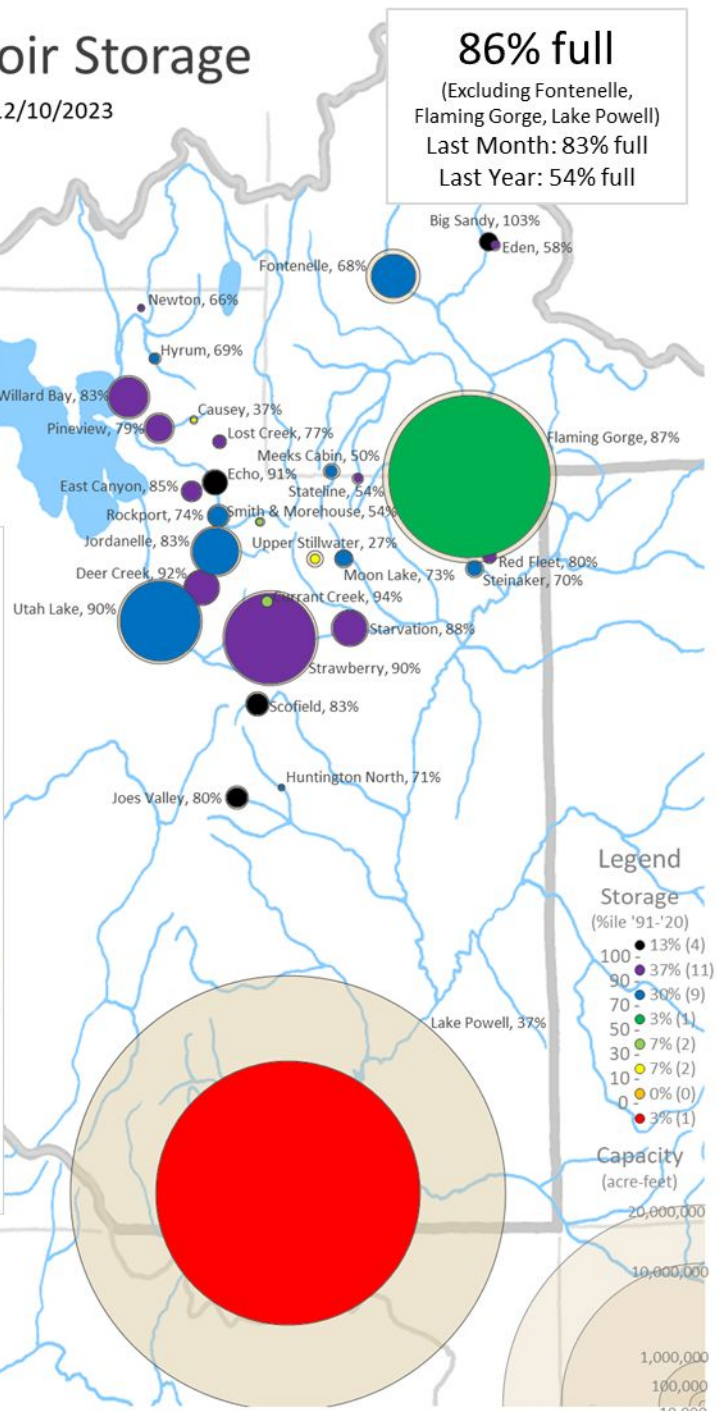
12/10/2023

86% full

(Excluding Fontenelle,  
Flaming Gorge, Lake Powell)  
Last Month: 83% full  
Last Year: 54% full



Agency - BOR  
Presenter - Gary Henrie



## Current Storage

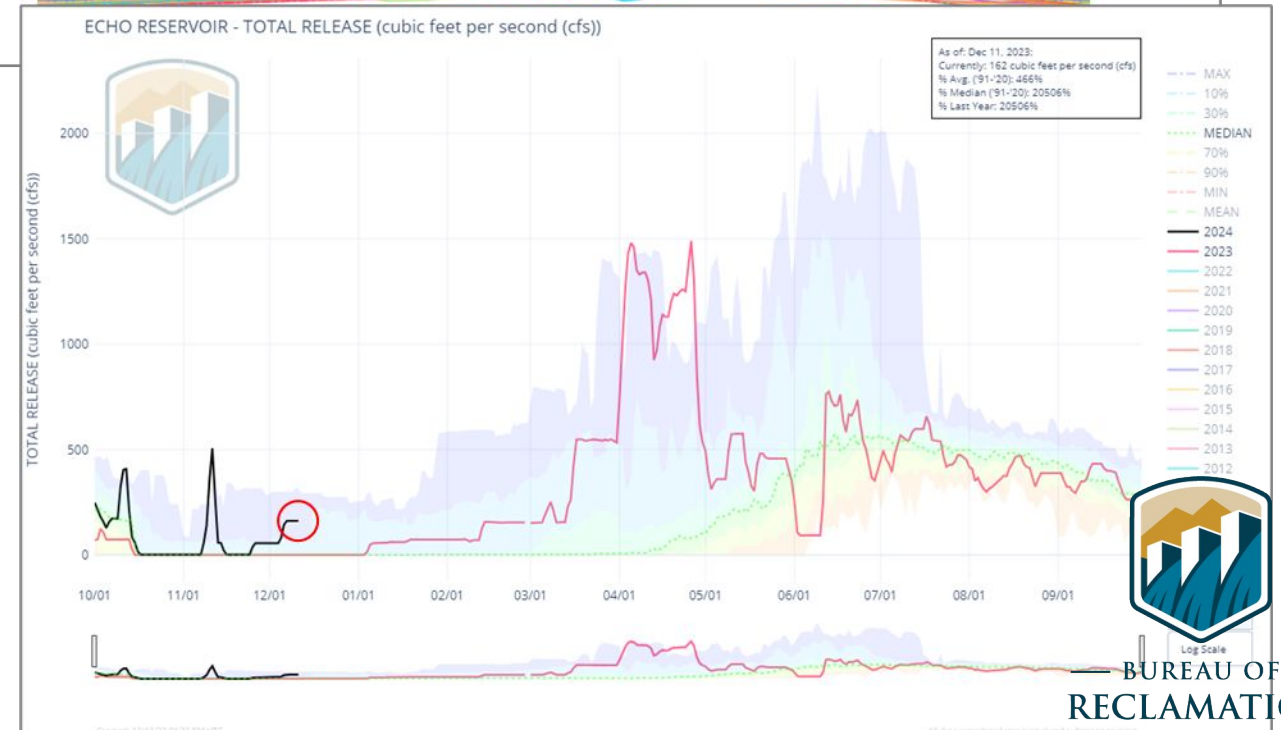
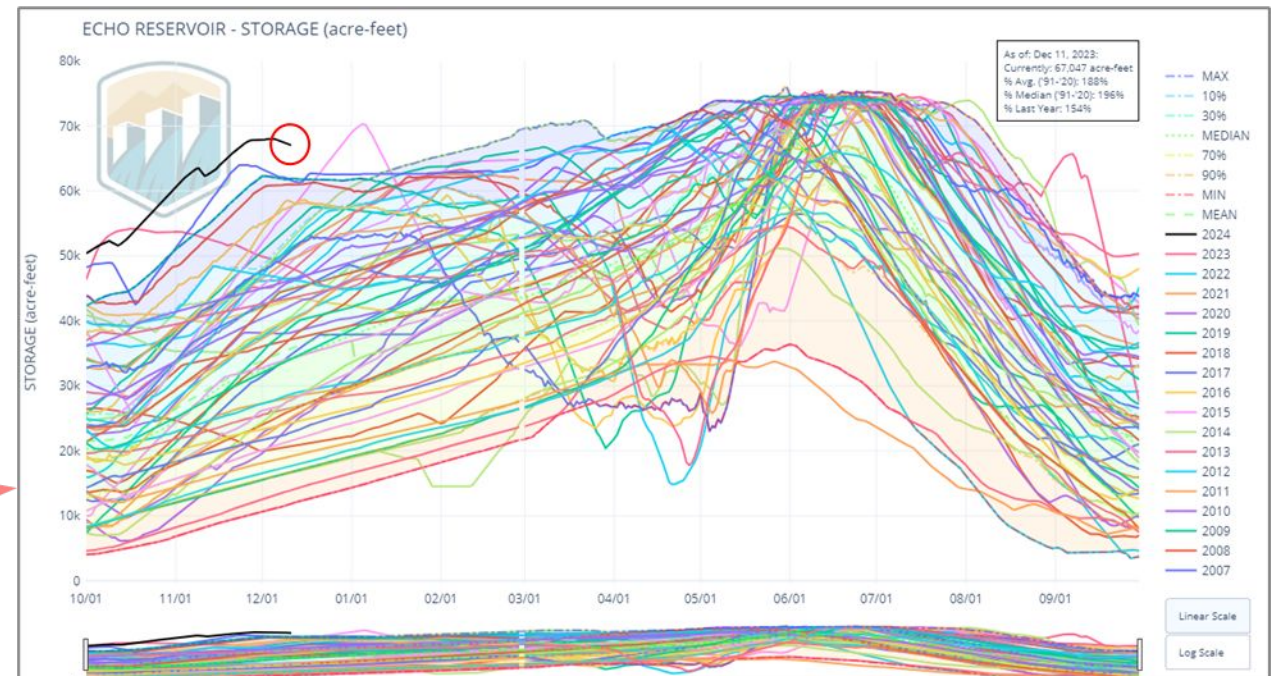
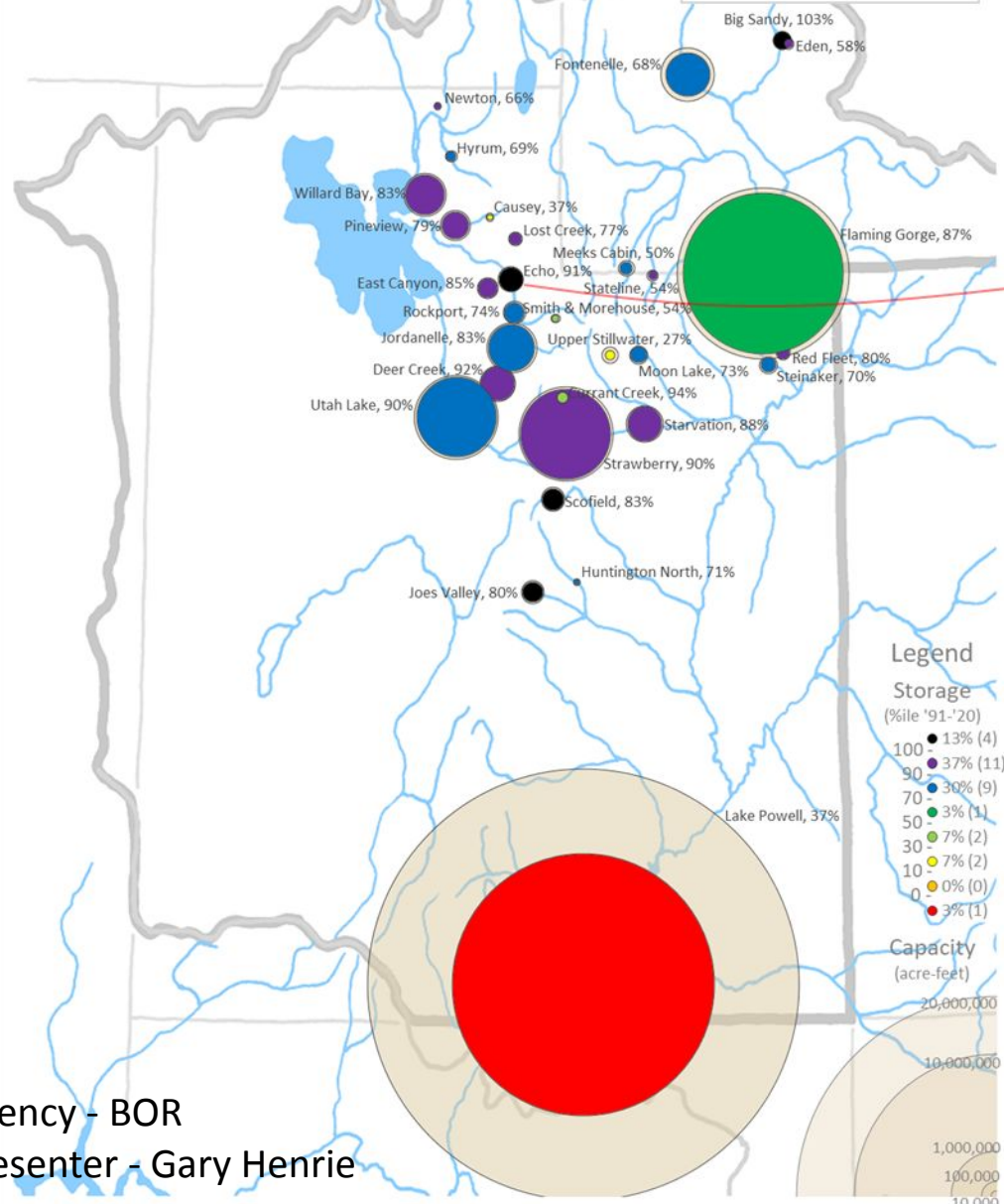
- 86% full (excl. Font, FG, LP)
    - last month: 83% full
    - last year: 54% full
  - Very high for this time of year
  - ~All reservoirs >70<sup>th</sup> percentile
- ## 2024 Storage Outlook
- Good chance of filling all reservoirs
  - Some releases being made



# Reservoir Storage

12/10/2023

**86% full**  
(Excluding Fontenelle,  
Flaming Gorge, Lake Powell)  
Last Month: 83% full  
Last Year: 54% full



Agency - BOR  
Presenter - Gary Henrie

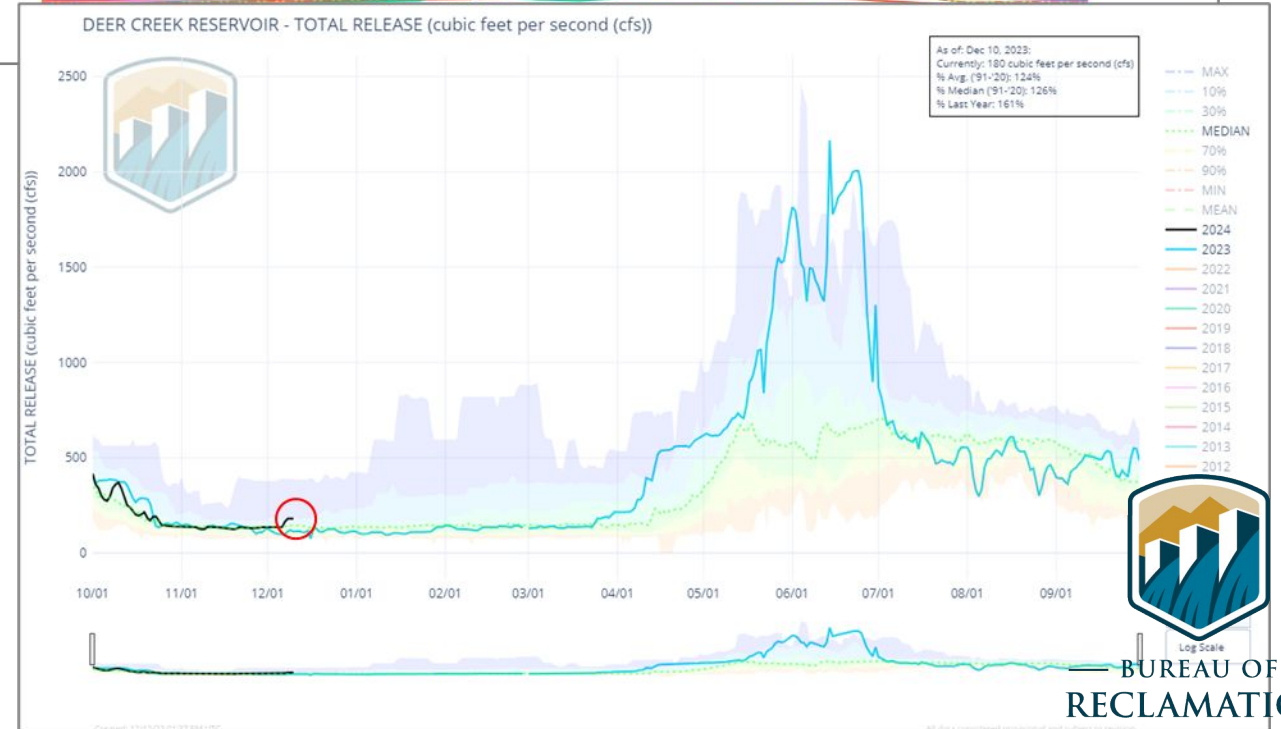
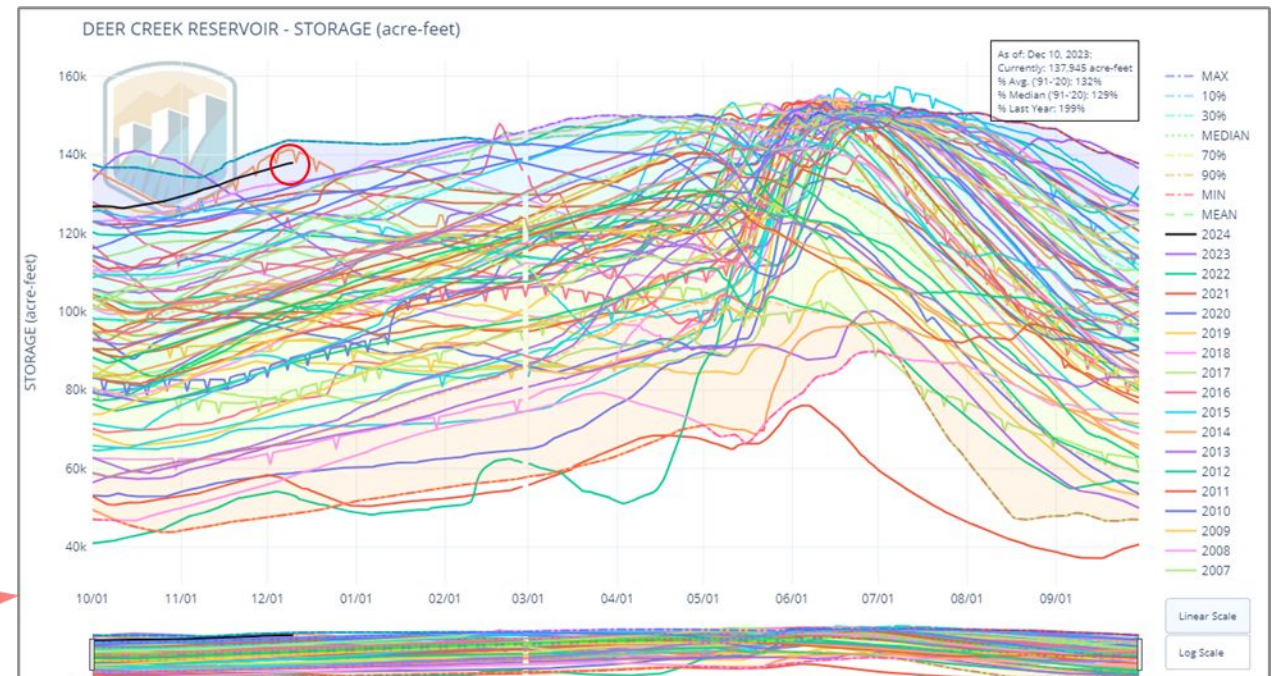
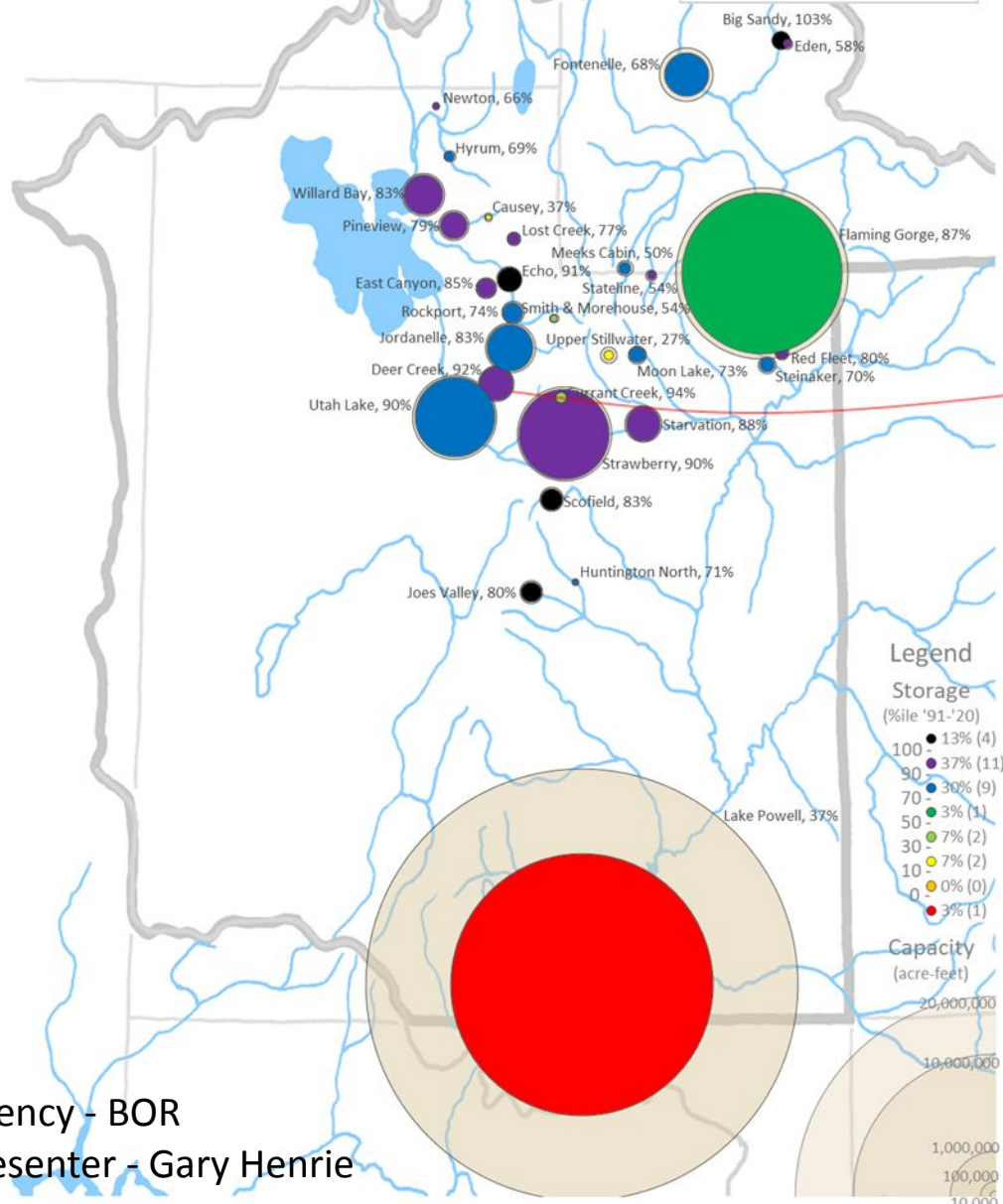


# Reservoir Storage

12/10/2023

86% full

(Excluding Fontenelle,  
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Last Month: 83% full  
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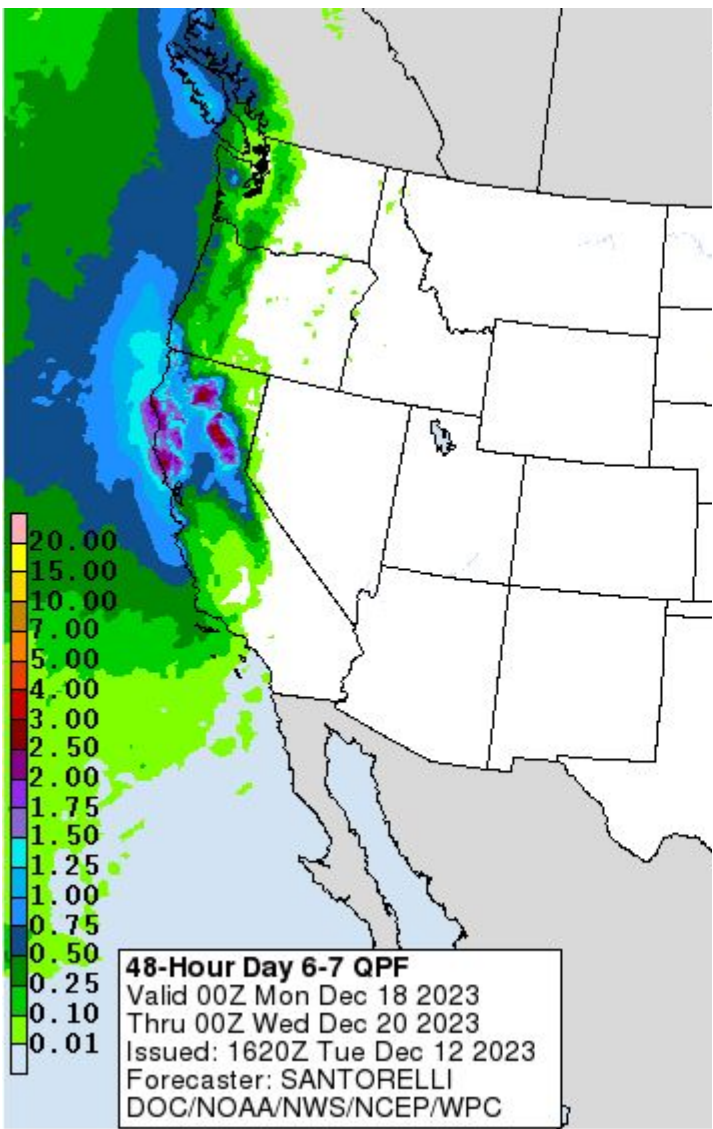
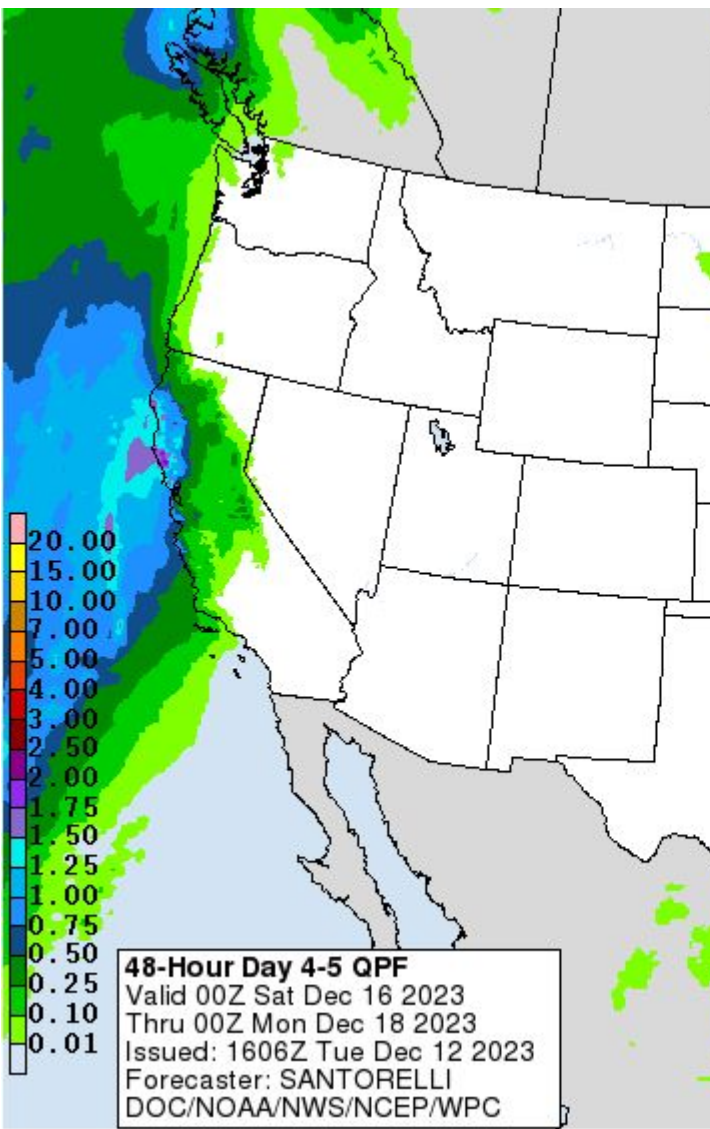
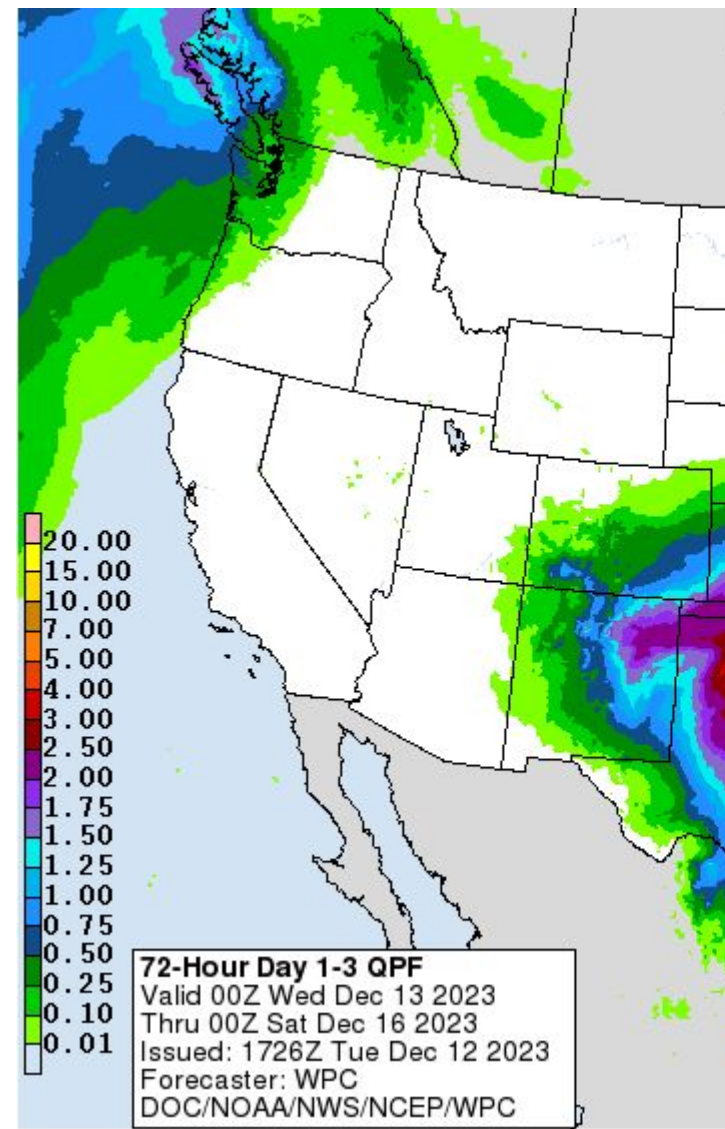
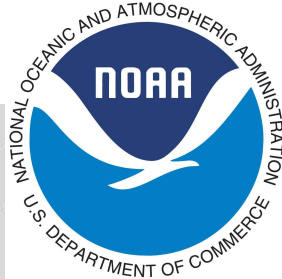
Agency - BOR  
Presenter - Gary Henrie



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RECLAMATION

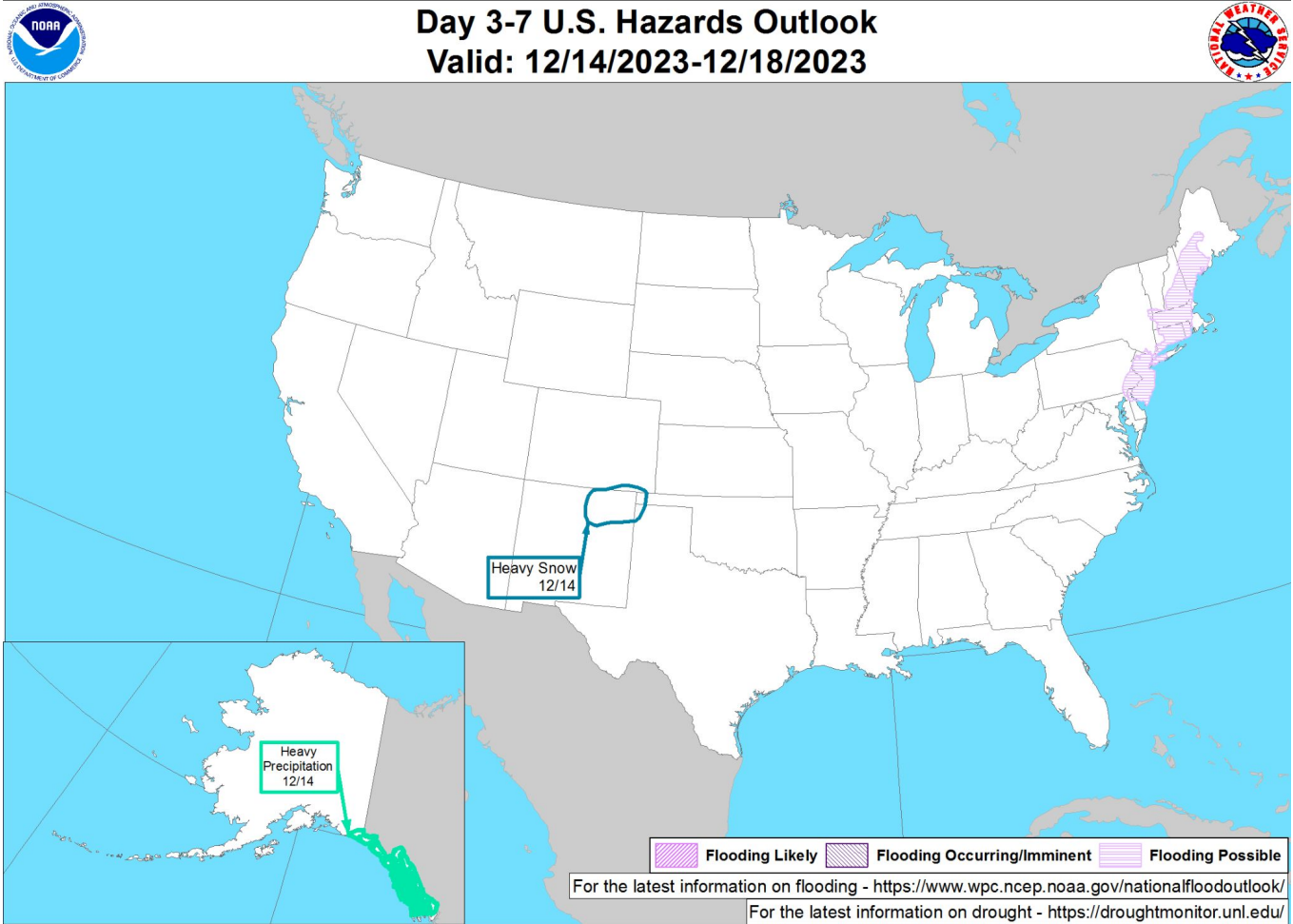


# Weather Forecast Office Utah Day 1-7 Outlook





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



**Weather Prediction Center**  
Made: 12/11/2023 02:29 PM EST

Follow us:   
[www.wpc.ncep.noaa.gov](https://www.wpc.ncep.noaa.gov)

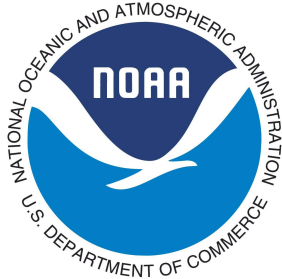
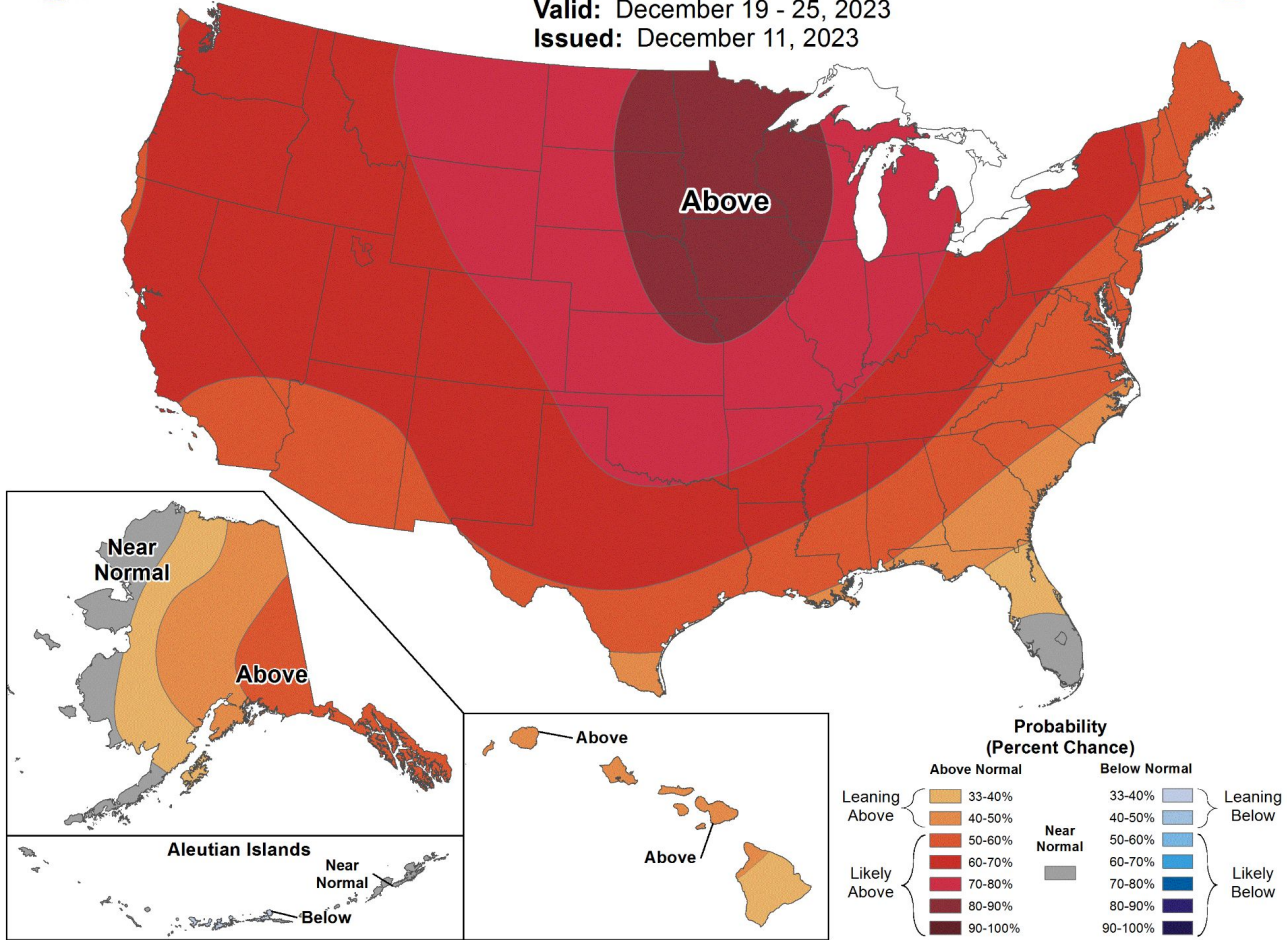
# Climate Prediction Center 8 to 14 Day Outlooks - Temperature



## 8-14 Day Temperature Outlook



Valid: December 19 - 25, 2023  
Issued: December 11, 2023



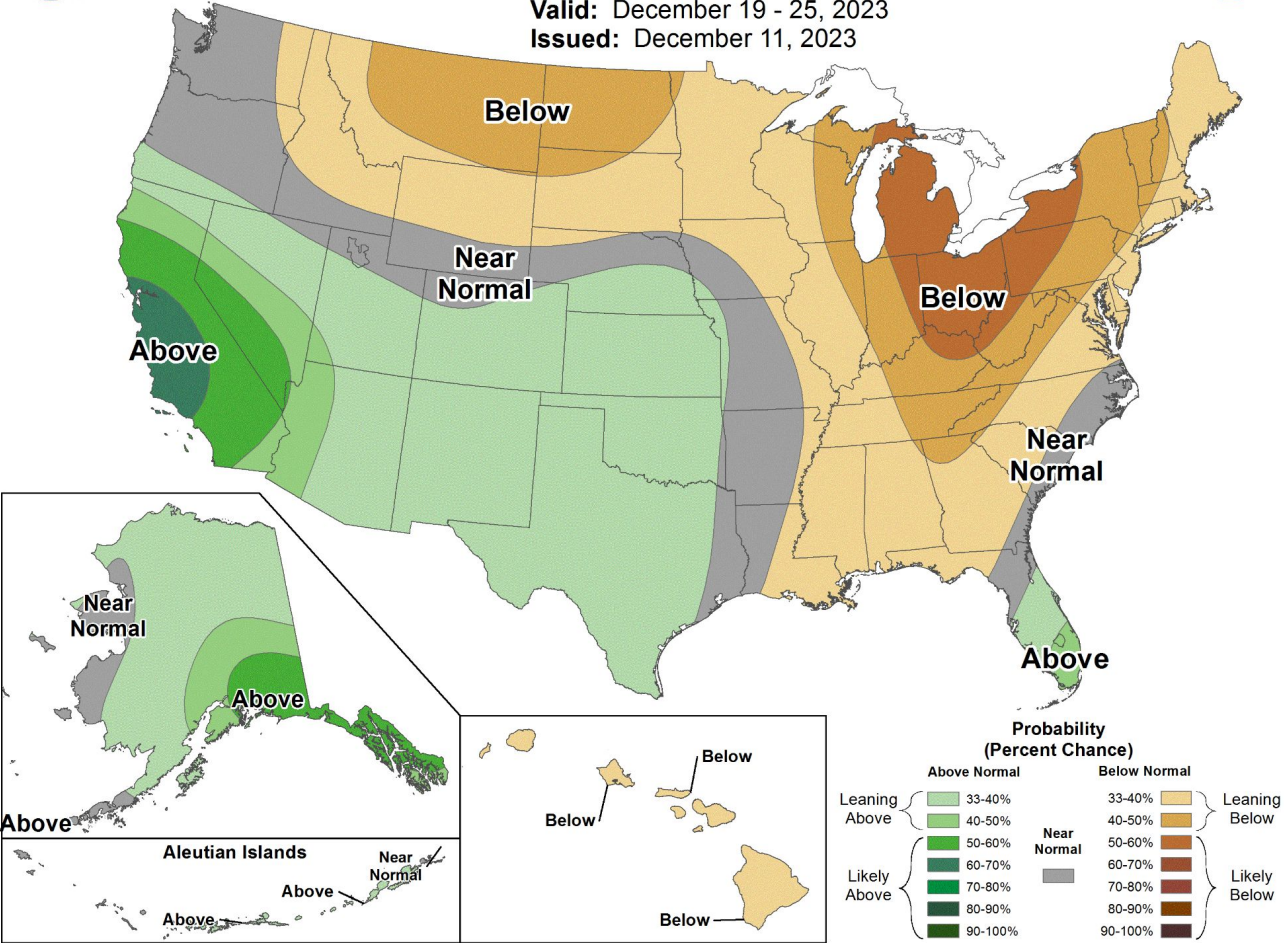
# Climate Prediction Center 8 to 14 Day Outlooks - Precipitation



## 8-14 Day Precipitation Outlook

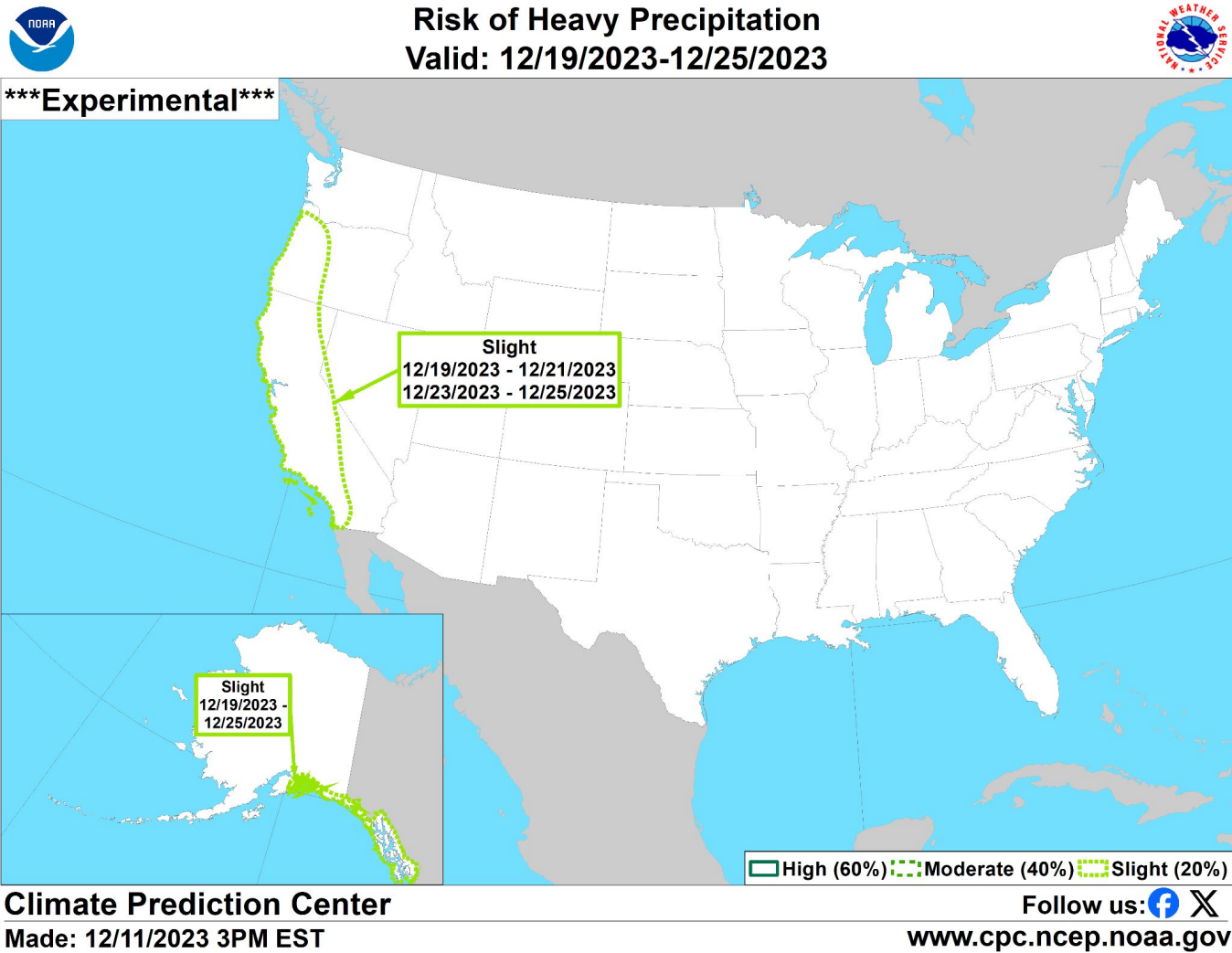


Valid: December 19 - 25, 2023  
Issued: December 11, 2023

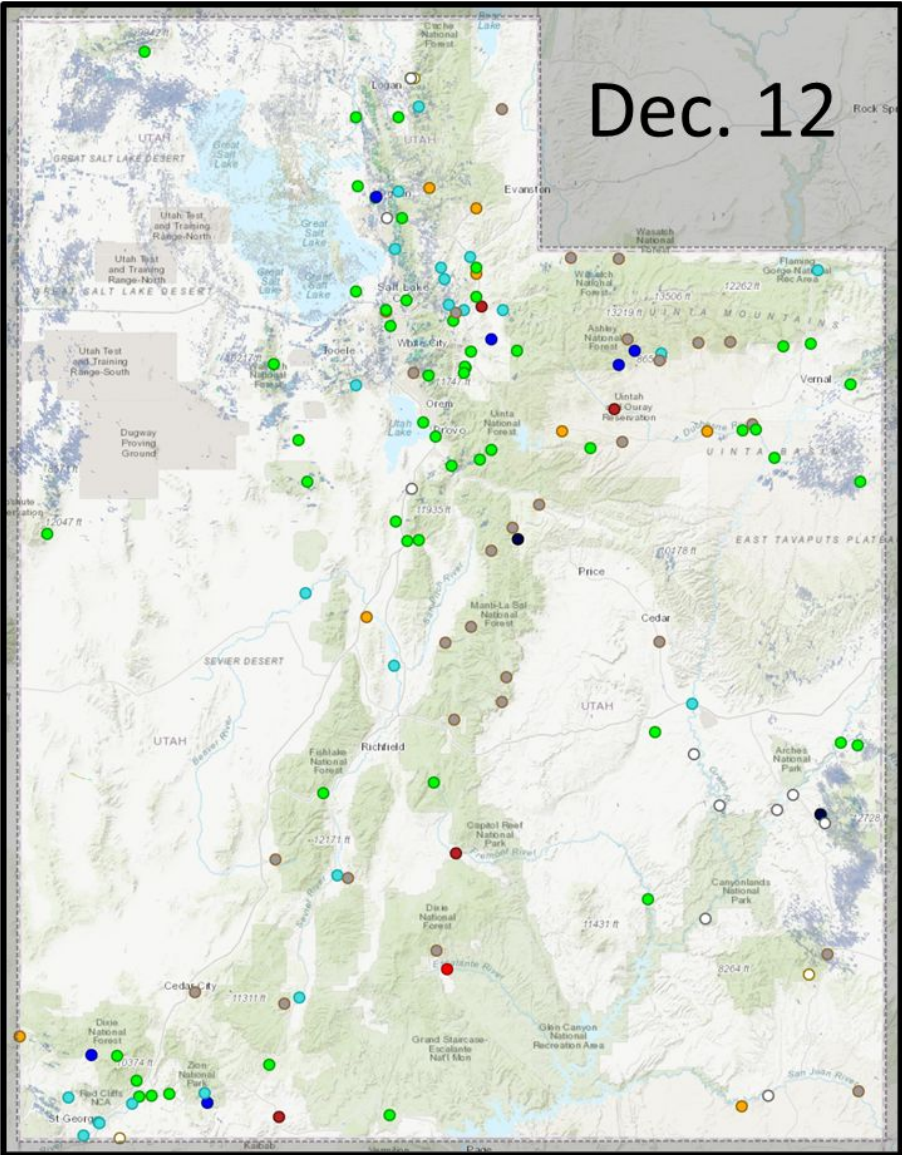




# Climate Prediction Center U.S. Week-2 Hazards Outlook



# Current Streamflow Conditions



Dec. 12

Provisional data,  
subject to revision

## National Water Dashboard

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

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

100<sup>th</sup> percentile (maximum)

>90<sup>th</sup> percentile

76<sup>th</sup> – 90<sup>th</sup> percentile

25<sup>th</sup> – 75<sup>th</sup> percentile

10<sup>th</sup> – 24<sup>th</sup> percentile

<10<sup>th</sup> percentile

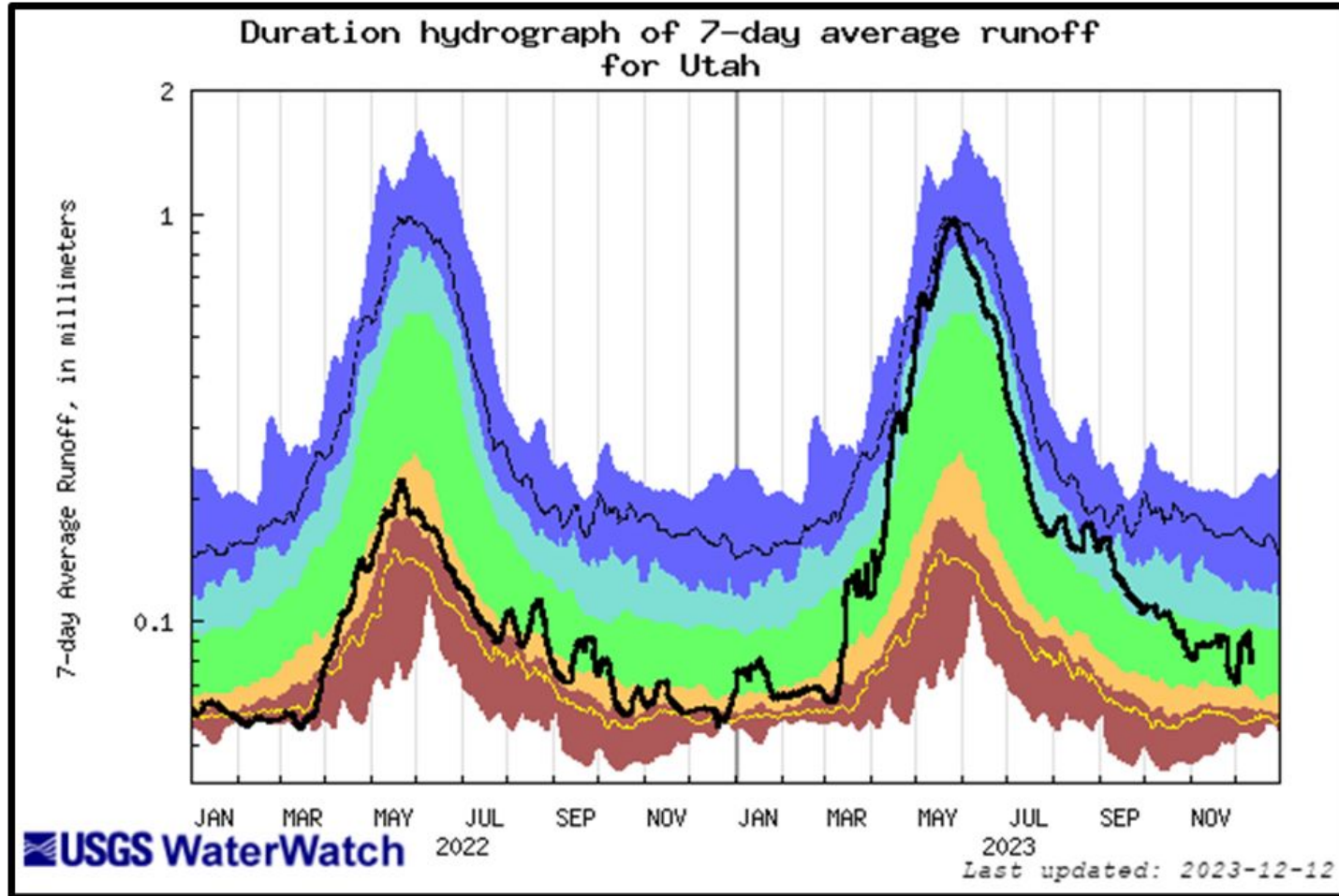
0<sup>th</sup> percentile (minimum)

### Day-of-Year Status

All-time high for this day-of-year	2	1.4%	
Much above normal for this day-of-year	6	4.3%	
Above normal for this day-of-year	24	17.3%	
Normal for this day-of-year	53	38.1%	
Below normal for this day-of-year	9	6.5%	
Much below normal for this day-of-year	4	2.9%	
All-time low for this day-of-year	1	0.7%	
Not ranked - insufficient record	13	9.4%	
Not ranked - no measurement	24	17.3%	
Not ranked - stream not flowing	3	2.2%	



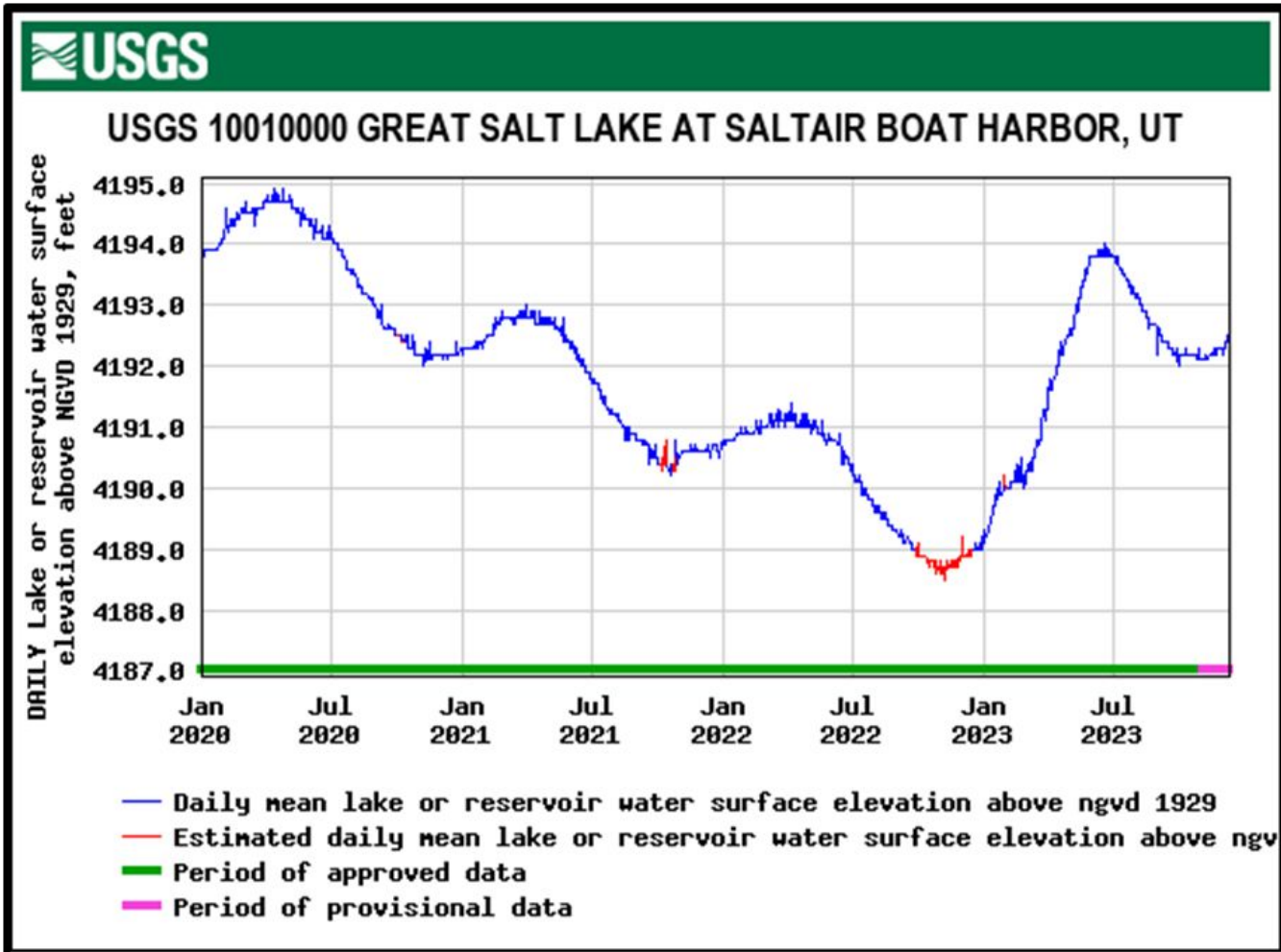
# Utah Area-Based Runoff Duration Hydrograph



- ❑ 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.

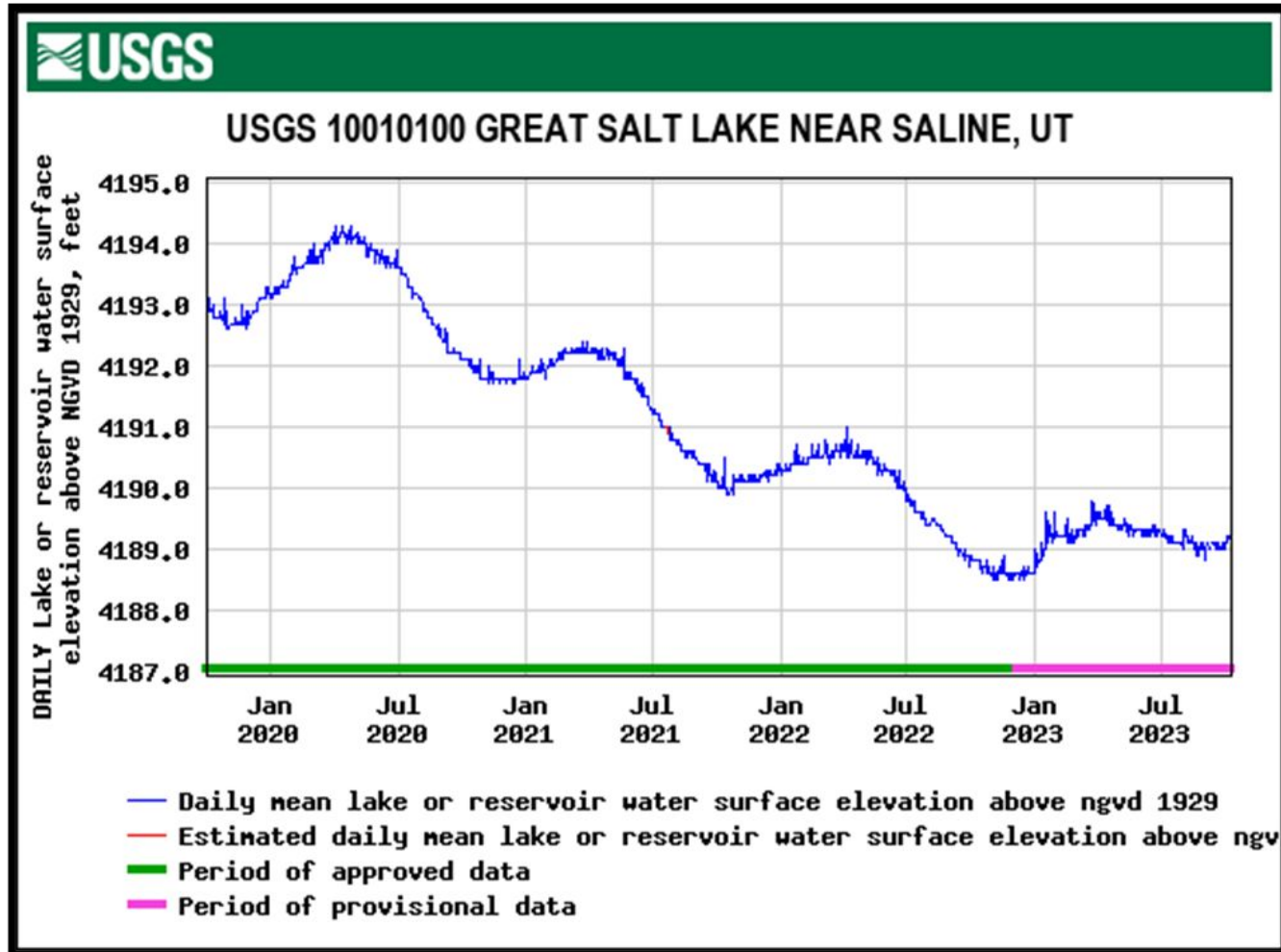


# Great Salt Lake Water Surface Elevation – South Arm



- ❑ Daily value  
12/11/2023 =  
4,192.4'
- ❑ 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  
12/11/2023 =  
4,189.4'
- ❑ Peaked at  
4,189.8' on  
3/24/2023



# Contact Information

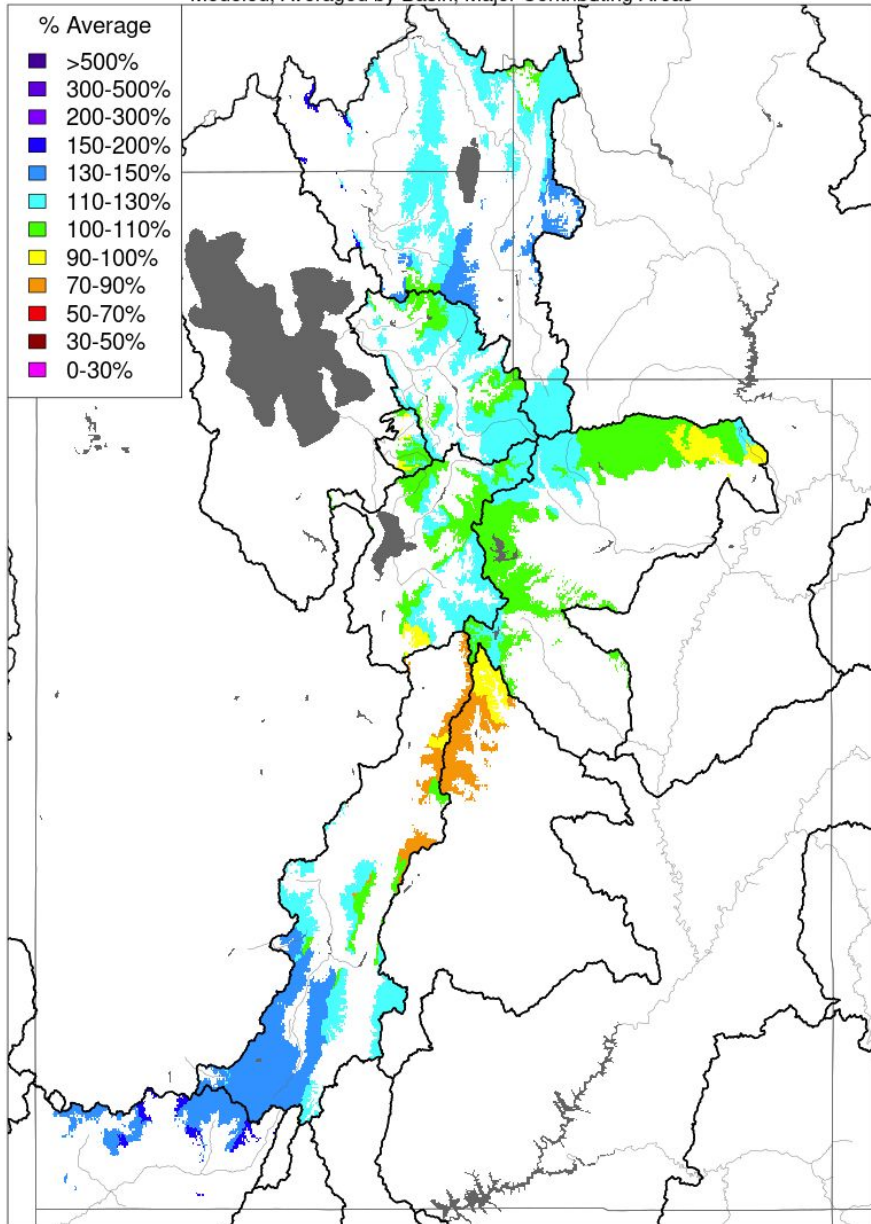


*View from Gilbert Bay, Great Salt Lake, October 2018*

**Ryan Rowland**  
**Data Chief**  
**USGS Utah Water**  
**Science Center**  
**[rrowland@usgs.gov](mailto:rrowland@usgs.gov)**  
**Office: 801-908-5036**  
**Cell: 801-573-8716**

### Soil Moisture - Fall - 2023 (November 15)

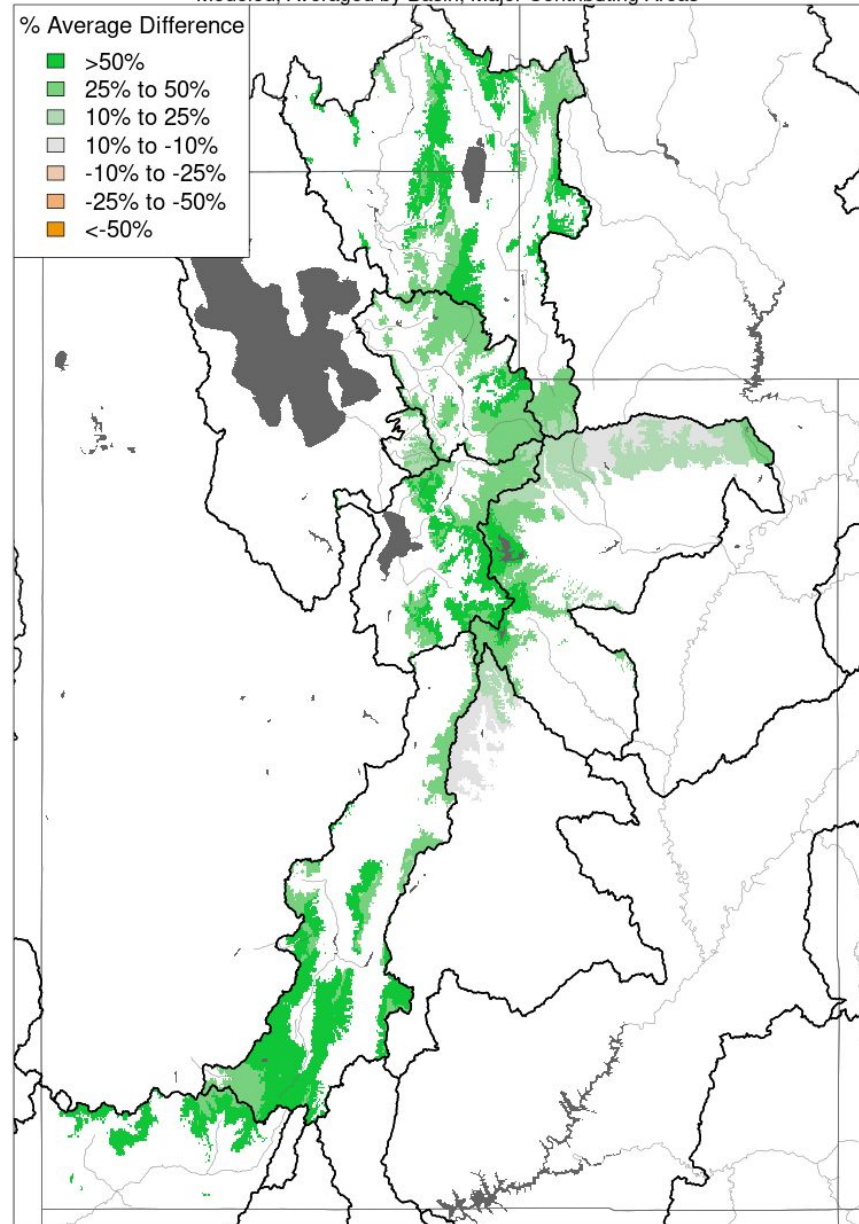
Modeled, Averaged by Basin, Major Contributing Areas



Prepared by NOAA, Colorado Basin River Forecast Center  
Salt Lake City, Utah, [www.cbrfc.noaa.gov](http://www.cbrfc.noaa.gov)

### Soil Moisture - Fall - 2023 vs 2022

Modeled, Averaged by Basin, Major Contributing Areas



Prepared by NOAA, Colorado Basin River Forecast Center  
Salt Lake City, Utah, [www.cbrfc.noaa.gov](http://www.cbrfc.noaa.gov)

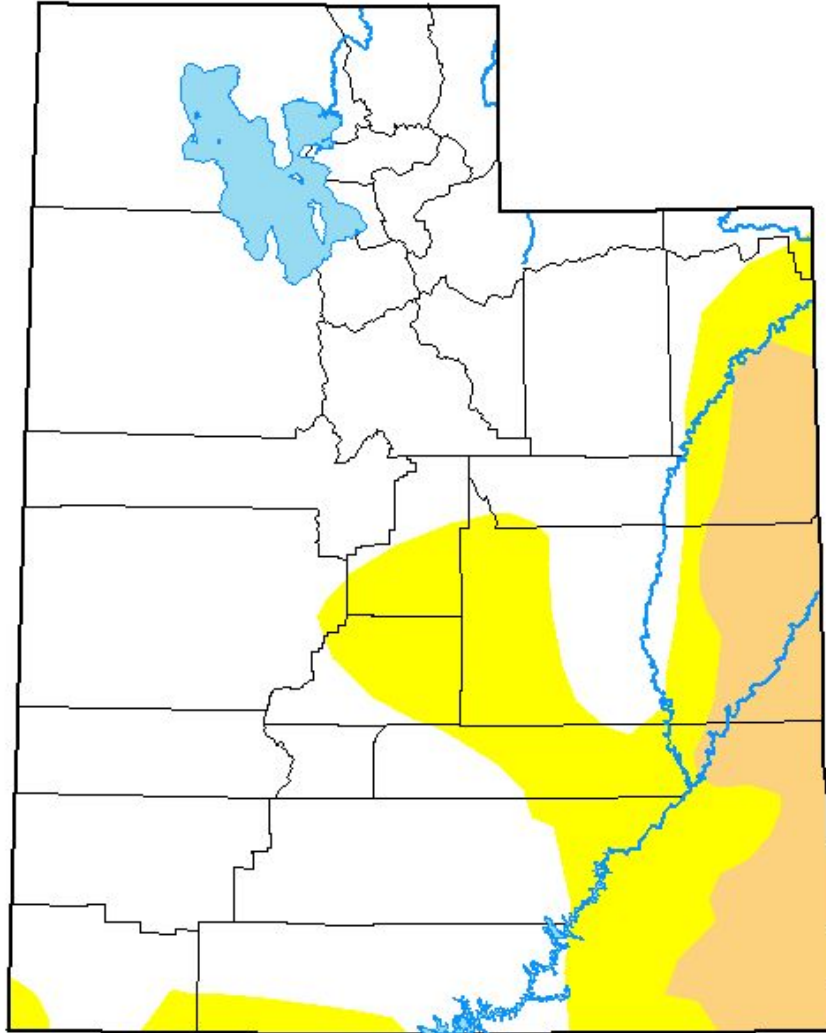


Fall soil moisture conditions throughout Utah improved significantly over last year, which is beneficial towards a more efficient runoff.

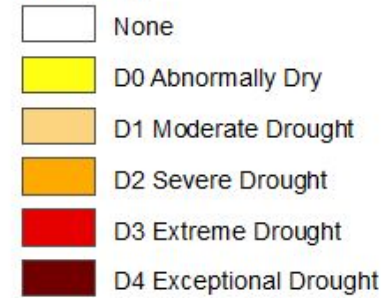
We have an Early Season Outlook webinar tomorrow. You can register here:  
<https://register.gotowebinar.com/register/7157235092367415381>



# Current Drought Map



## 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](https://droughtmonitor.unl.edu)**

To report on conditions between meetings:

Submit a report on CMOR drought website

Email [Lhaskell@utah.gov](mailto:Lhaskell@utah.gov)

email [drought@utah.gov](mailto:drought@utah.gov)