

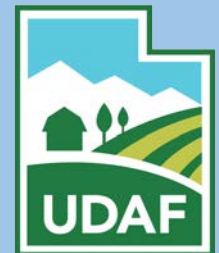


# Utah Water Conditions Update (drought webinar)

The meeting will begin shortly



Thank you to our contributors

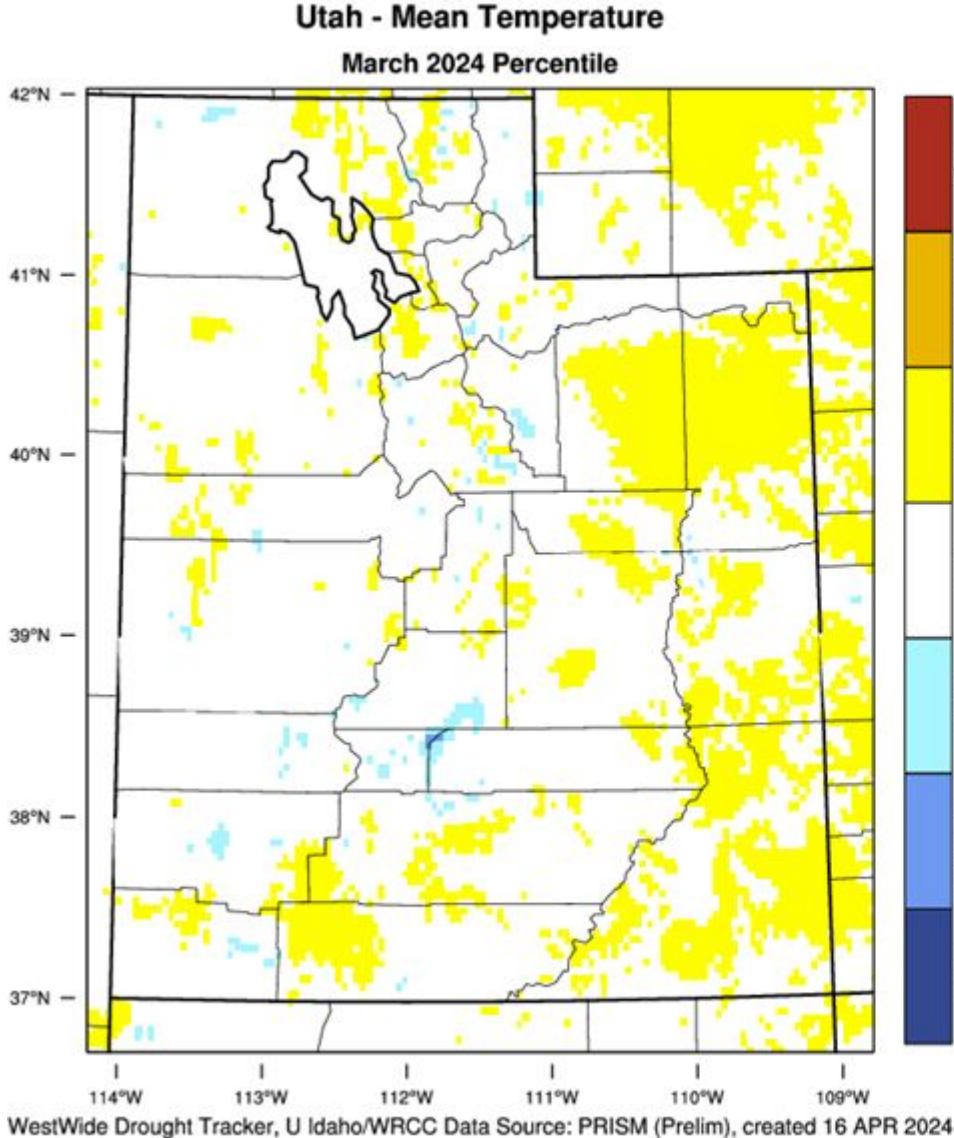




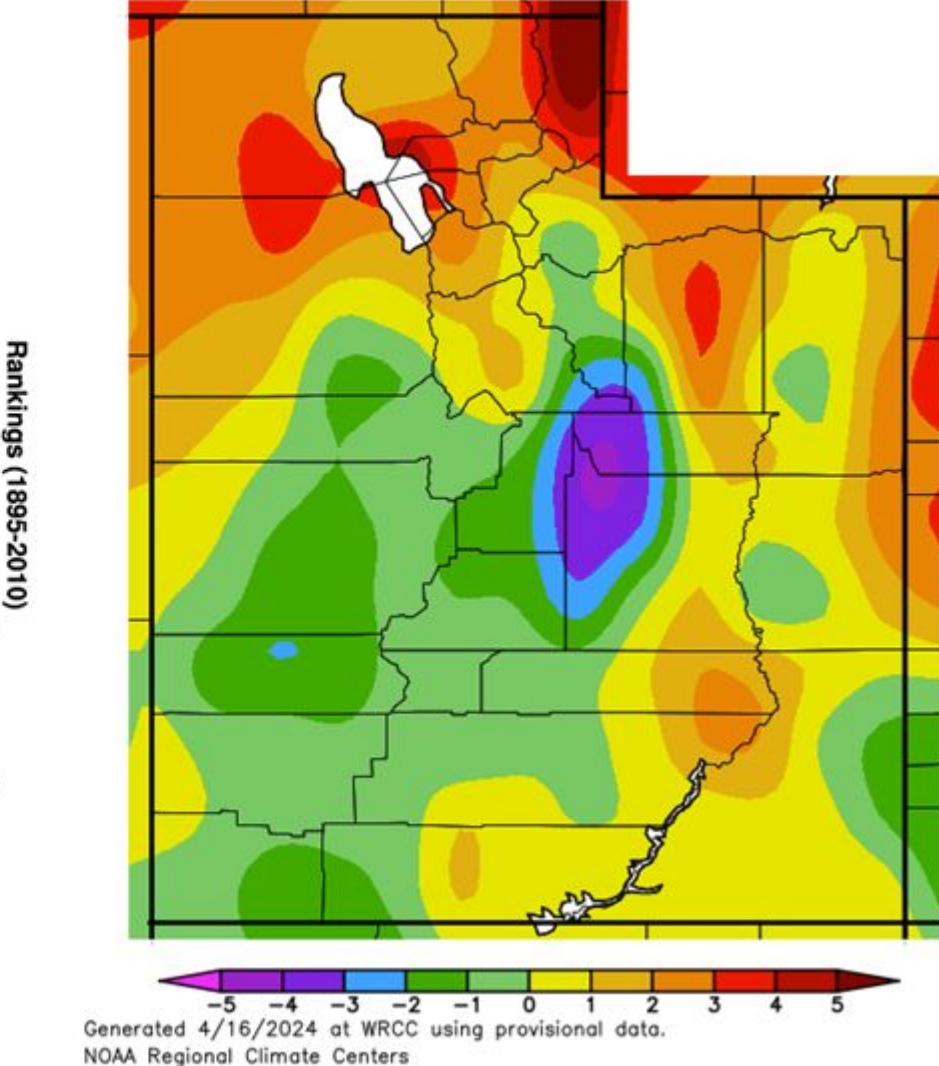
# **Utah Water Assessment & Conditions Monitoring Webinar**

**April 16, 2024**

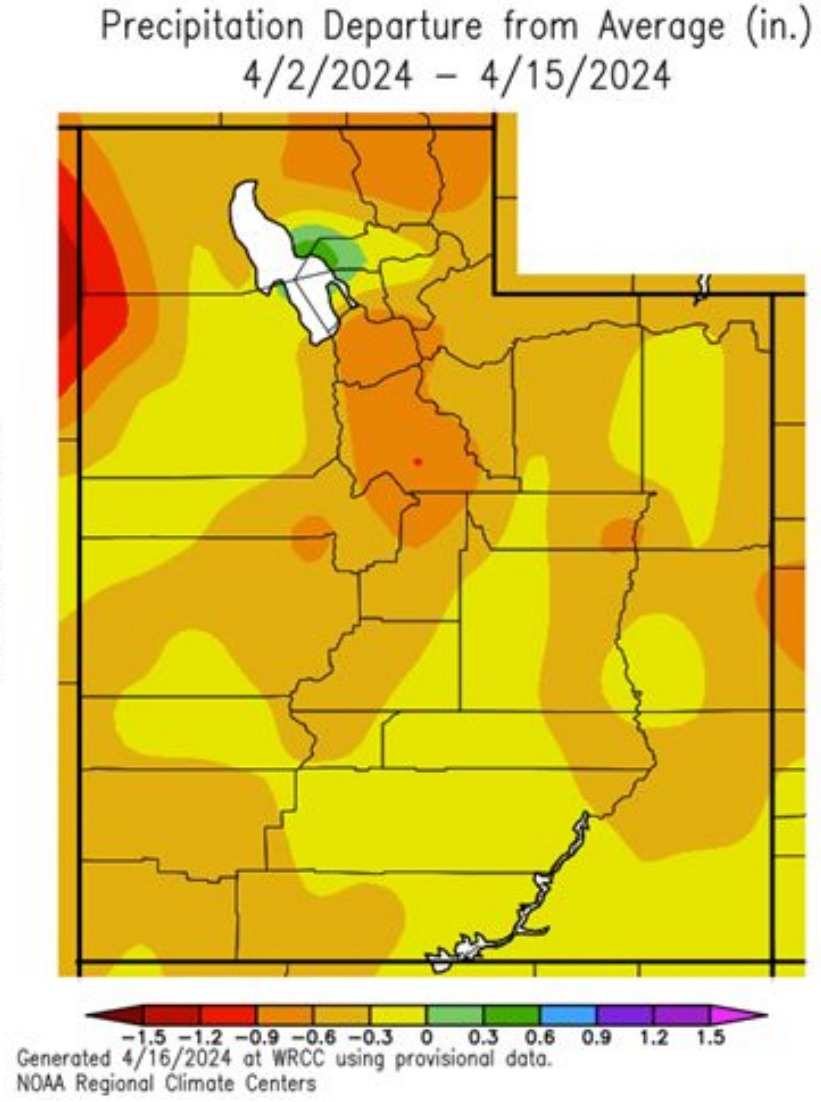
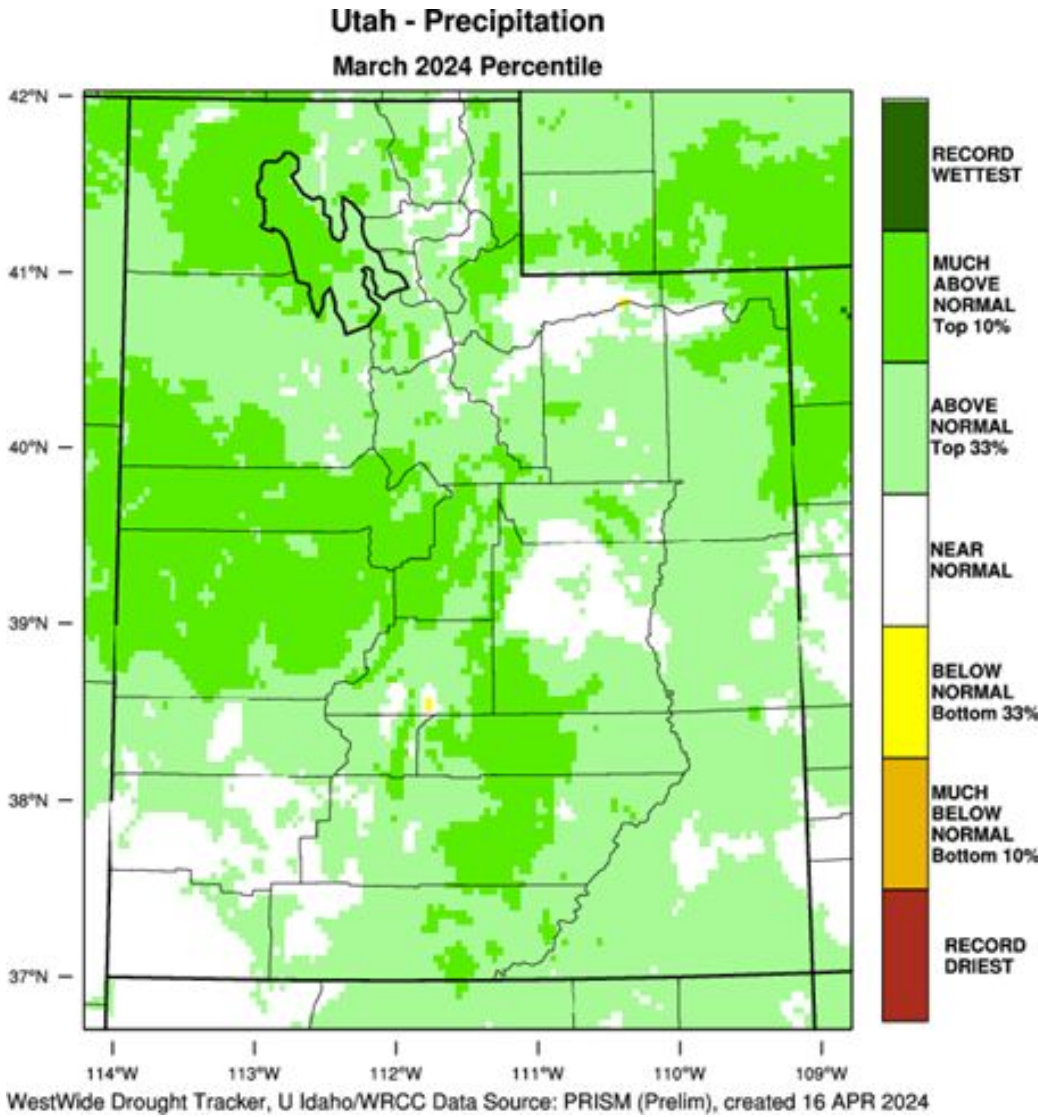
# Temperatures



Ave. Temperature dep from Ave (deg F)  
4/2/2024 – 4/15/2024

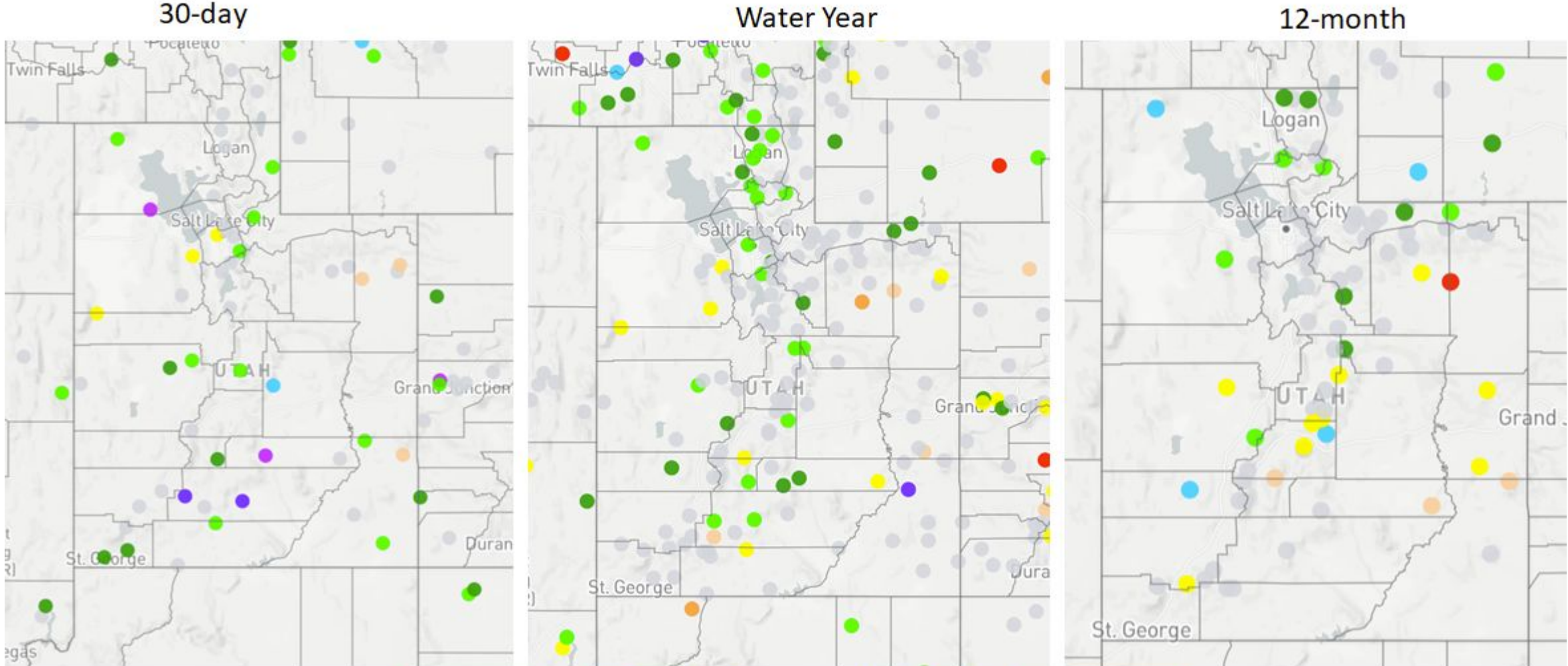


# Precipitation



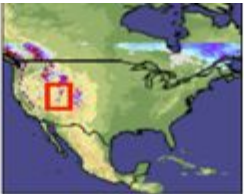
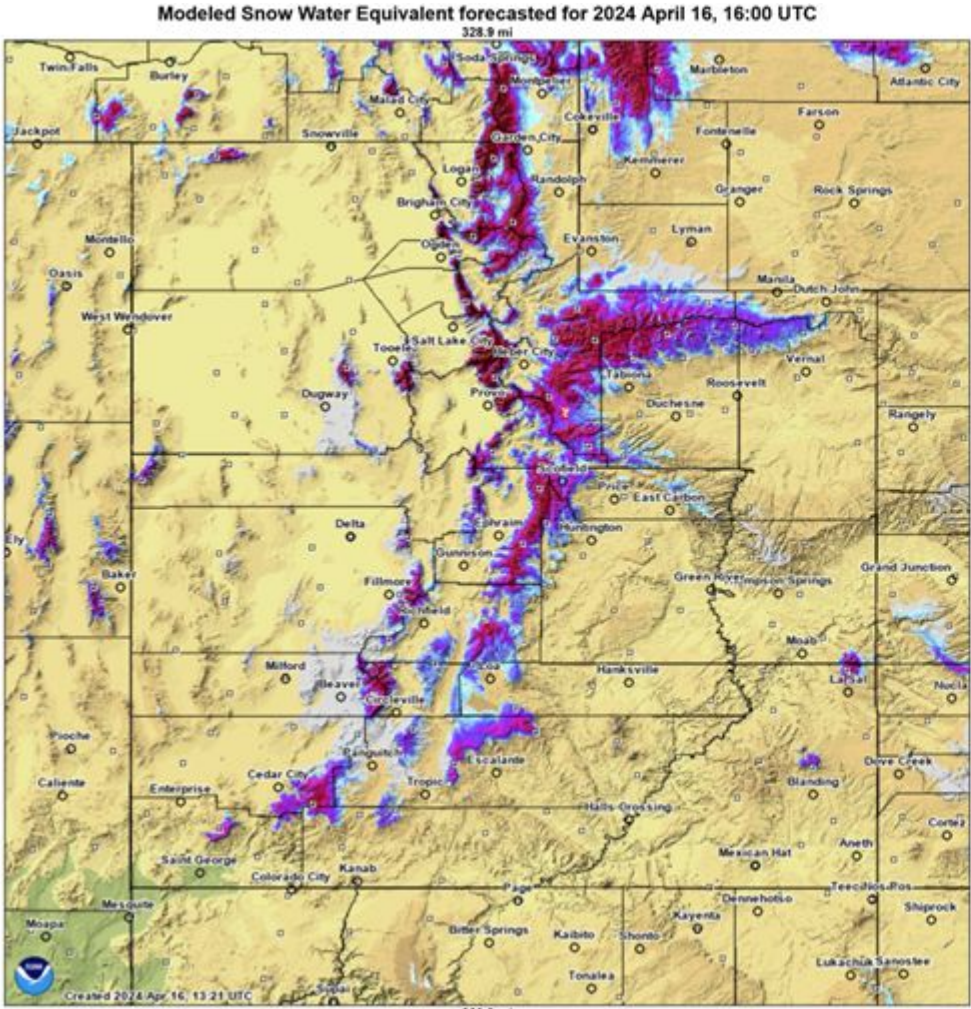
Agency - Utah Climate Center  
Presenter - Jon Meyer

# Standardized Precipitation Index (SPI)

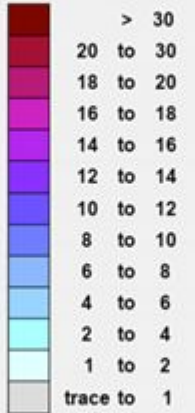


Agency - Utah Climate Center  
Presenter - Jon Meyer

# Year-over-year Snowpack

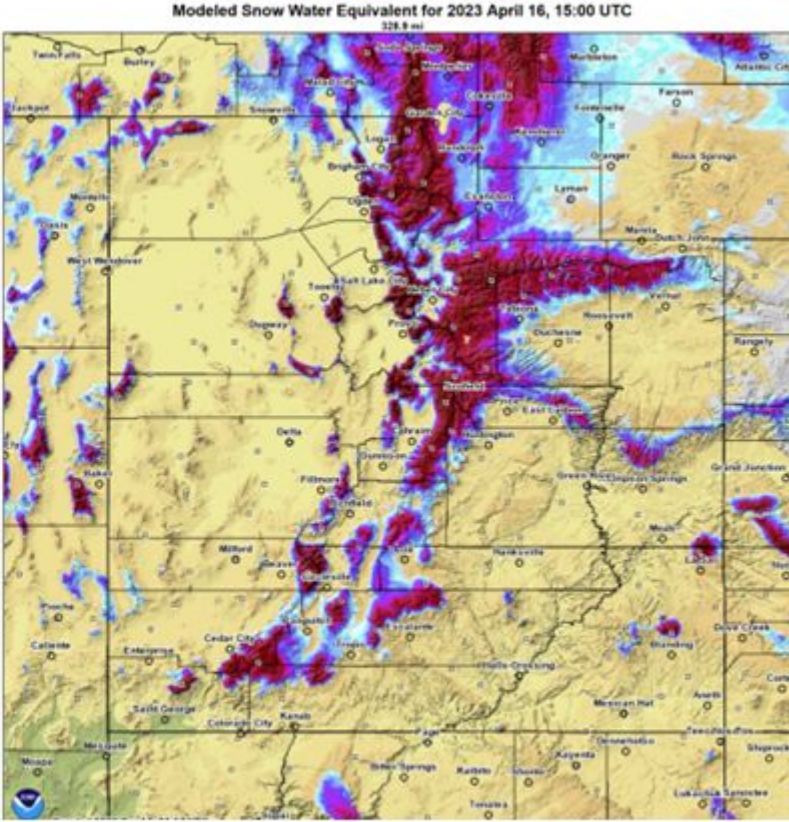


Inches of water equivalent



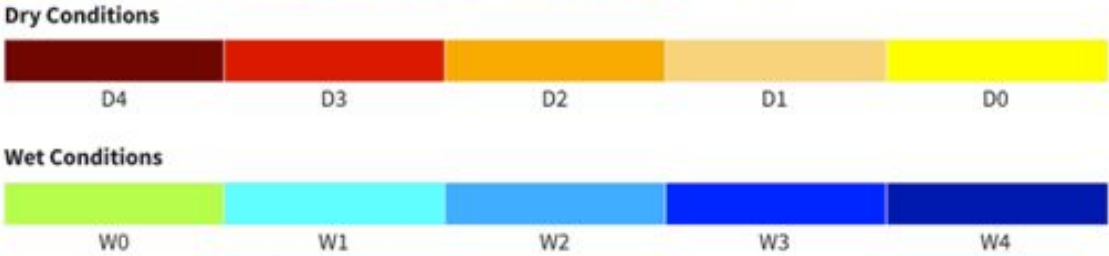
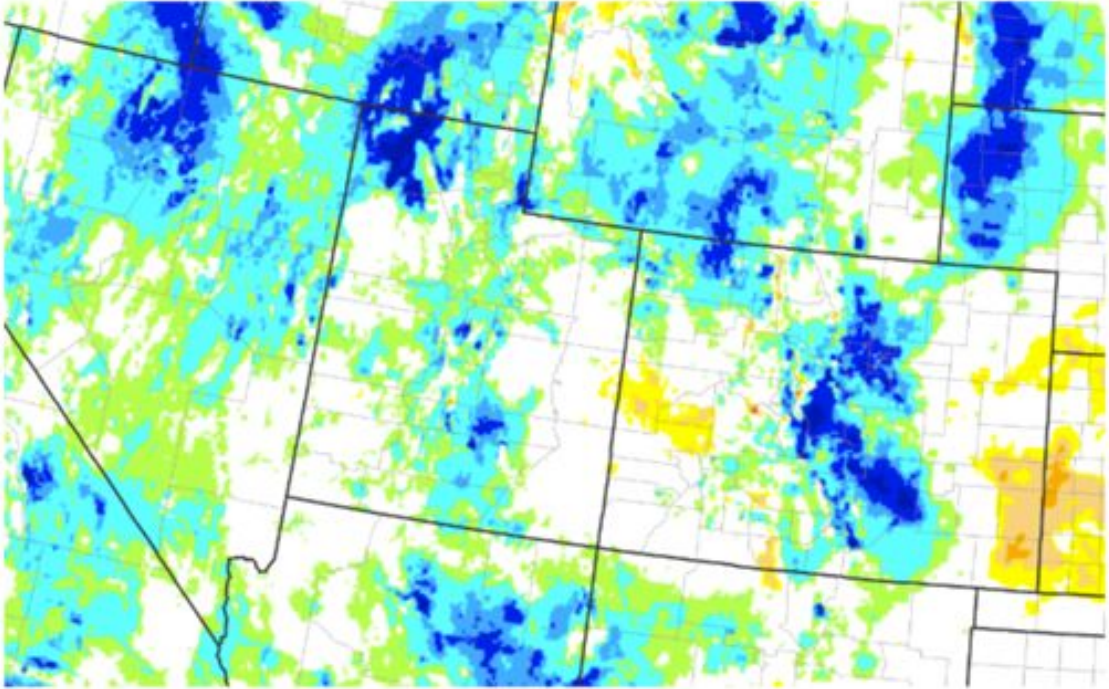
Not Estimated

Elevation in feet



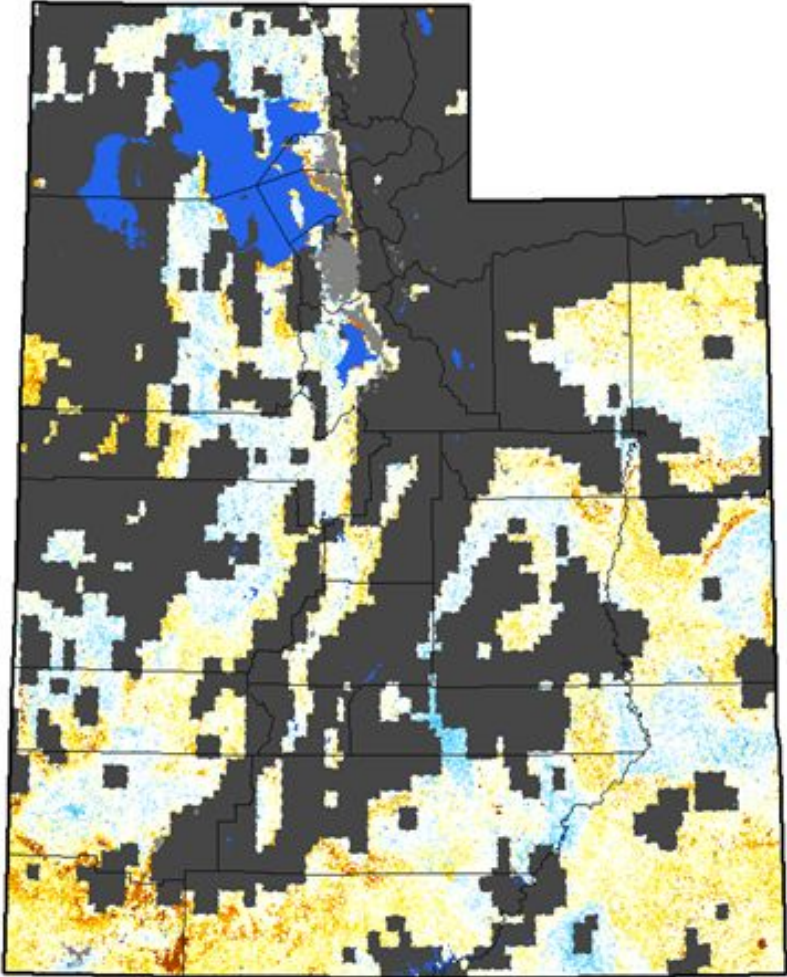
# Short-term drought trends

Short-Term Multi-Indicator Drought Index (MIDI)



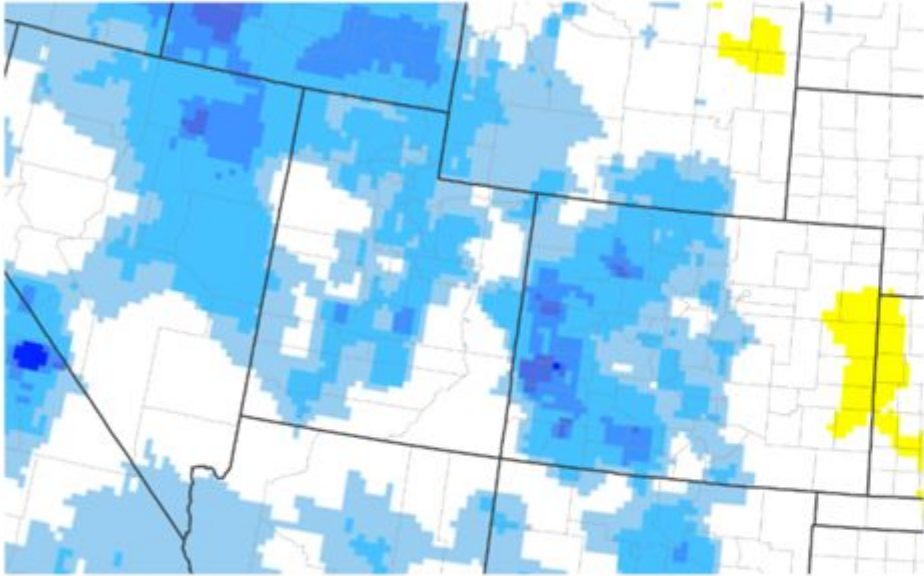
Source(s): UC Merced, via Climate Engine  
Data Valid: 04/09/24

Drought.gov



# Evaporative Demand Drought Index (EDDI)

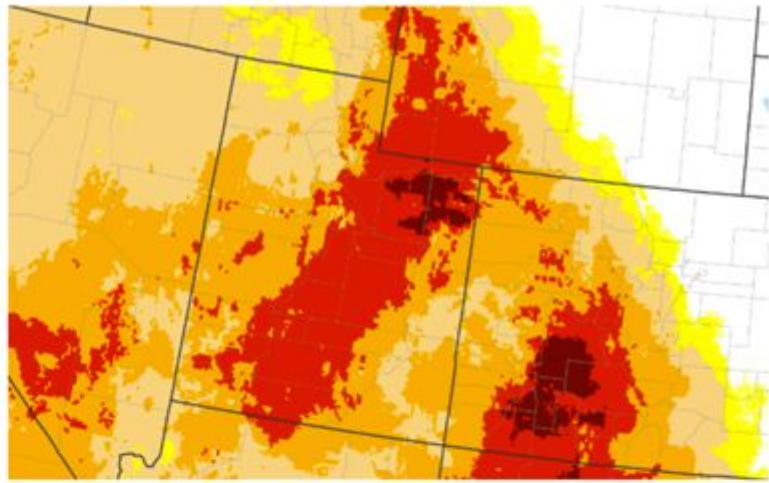
Evaporative Demand Drought Index (EDDI): 4 Week



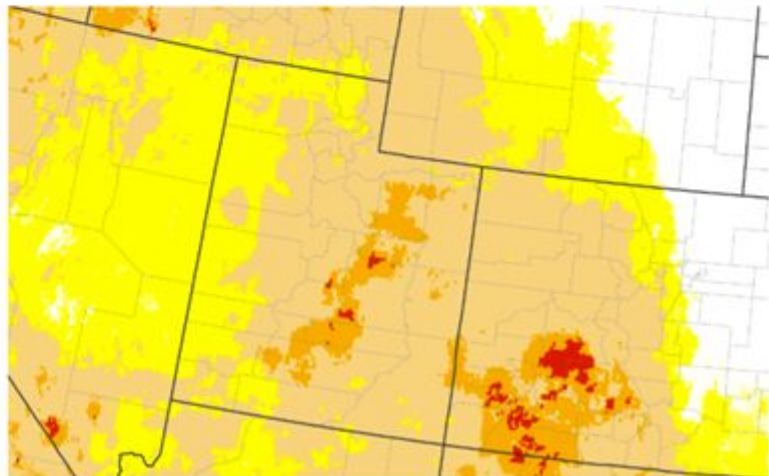
Source(s): NOAA Physical Sciences Laboratory  
Data Valid: 04/09/24

Drought.gov

Evaporative Demand Drought Index (EDDI) Forecast: 2 Weeks

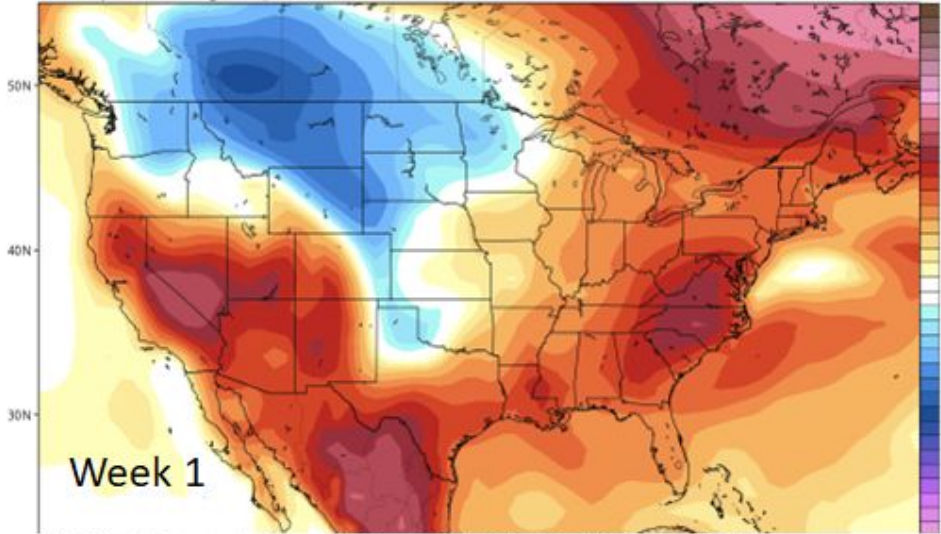


Evaporative Demand Drought Index (EDDI) Forecast: 4 Weeks

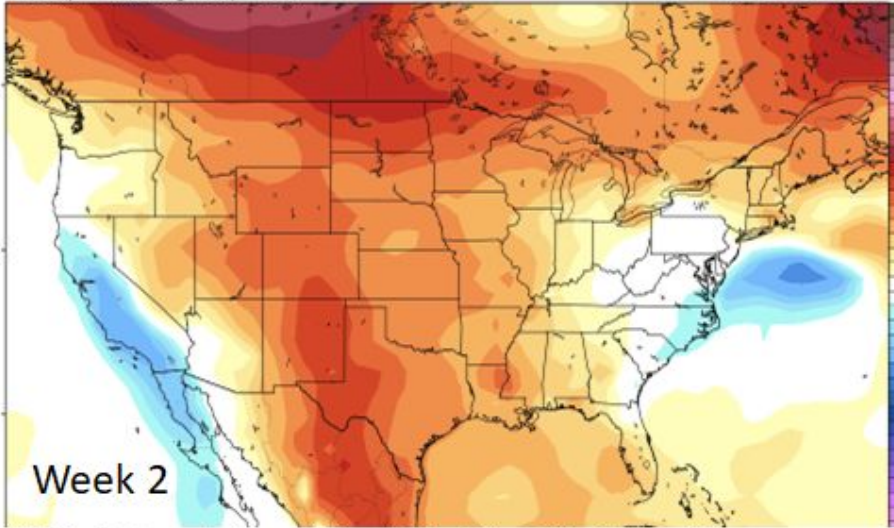


# One Month Outlook

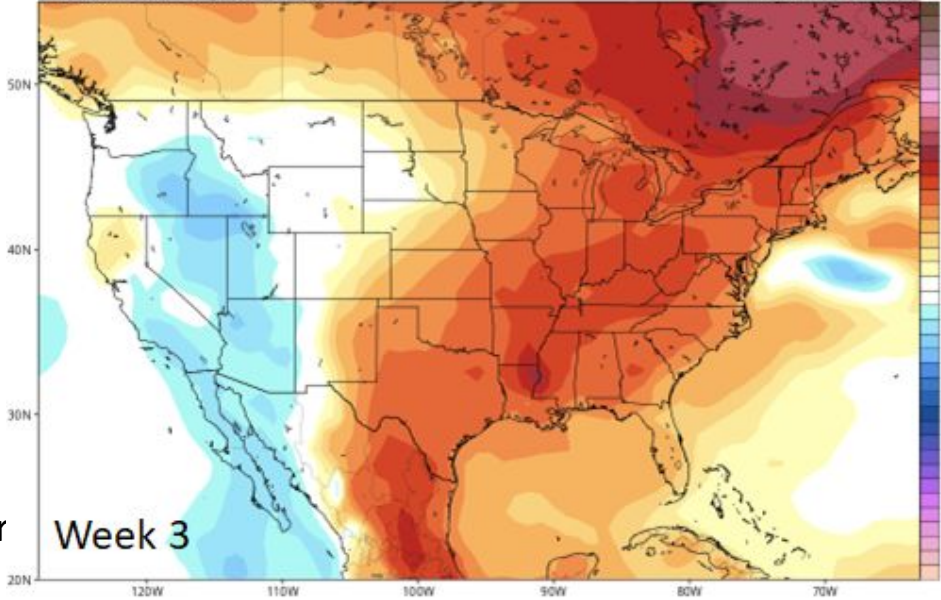
CFSv2 Mean 2m Temperature Anomaly (°C) from 00z16Apr2024 to 00z23Apr2024 (Days 1-7)  
Average of last 48 forecasts (12 runs x 4 members)  
Init: 06z Apr 13 2024 through 00z Apr 16 2024



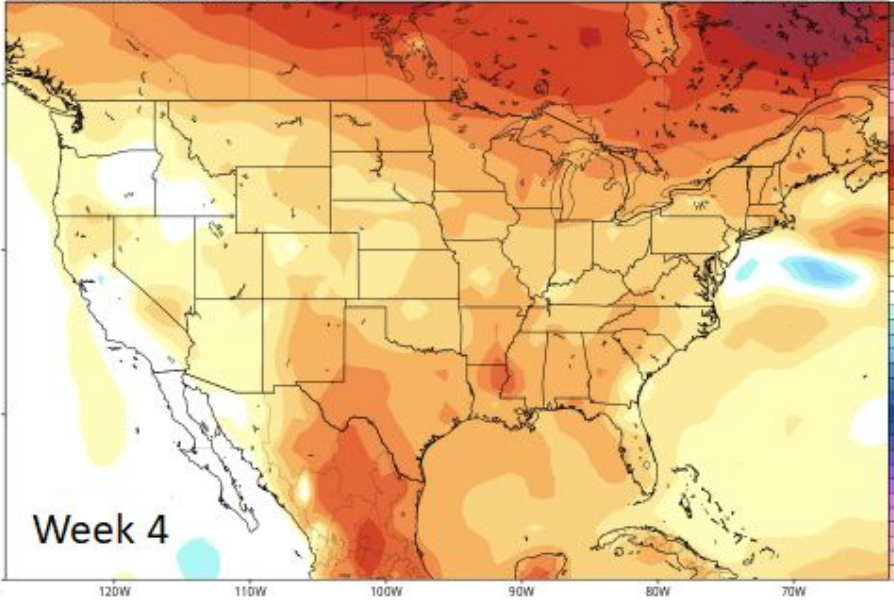
CFSv2 Mean 2m Temperature Anomaly (°C) from 00z23Apr2024 to 00z30Apr2024 (Days 8-14)  
Average of last 48 forecasts (12 runs x 4 members)  
Init: 06z Apr 13 2024 through 00z Apr 16 2024



CFSv2 Mean 2m Temperature Anomaly (°C) from 00z30Apr2024 to 00z07May2024 (Days 15-21)  
Average of last 48 forecasts (12 runs x 4 members)  
Init: 06z Apr 13 2024 through 00z Apr 16 2024

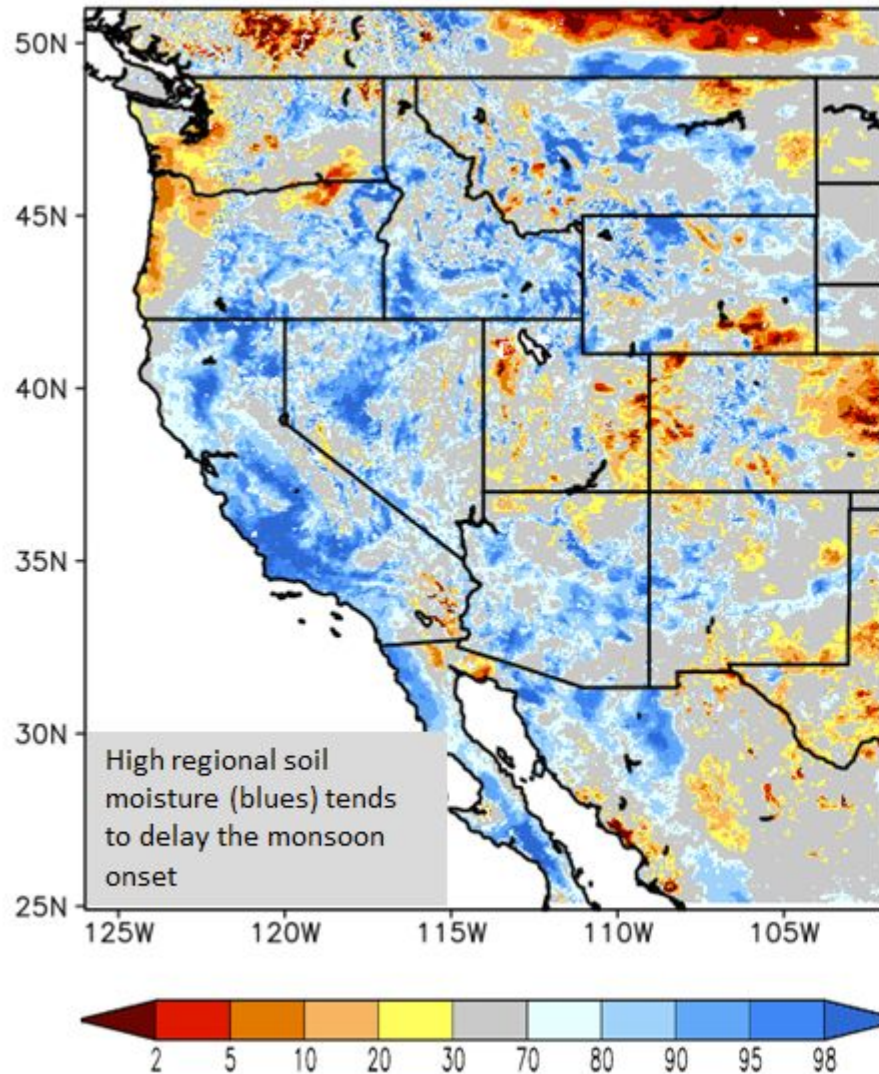


CFSv2 Mean 2m Temperature Anomaly (°C) from 00z07May2024 to 00z14May2024 (Days 22-28)  
Average of last 48 forecasts (12 runs x 4 members)  
Init: 06z Apr 13 2024 through 00z Apr 16 2024

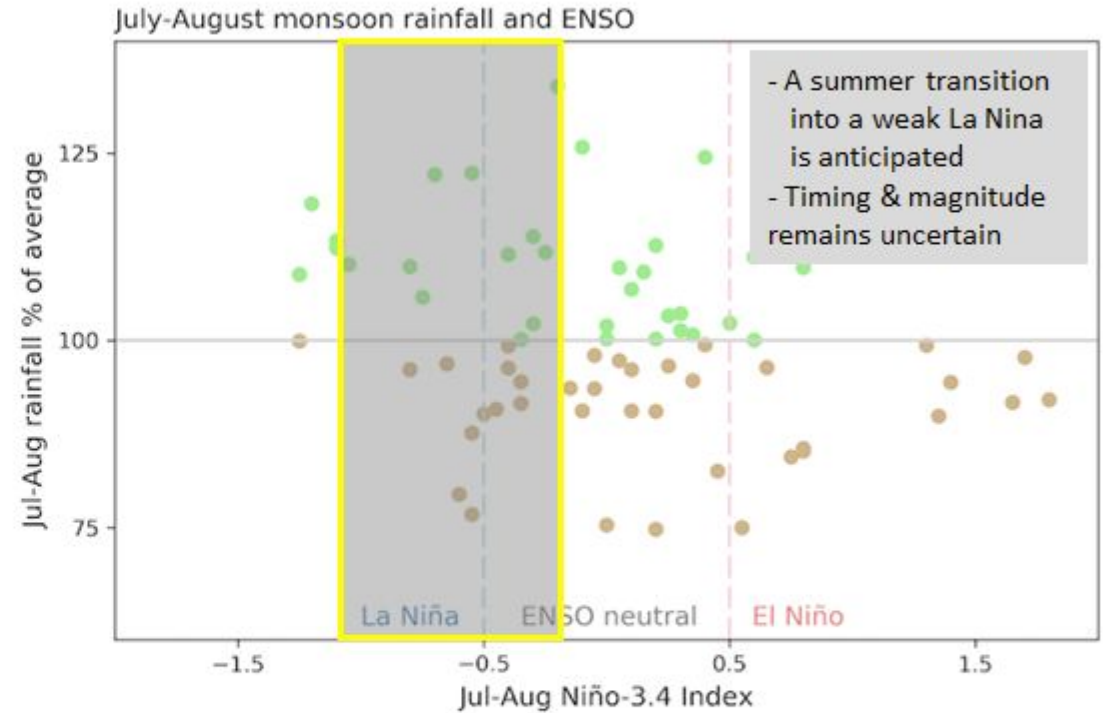


Agency - Utah Climate Center  
Presenter - Jon Meyer

# Looking Toward the Monsoon Outlook



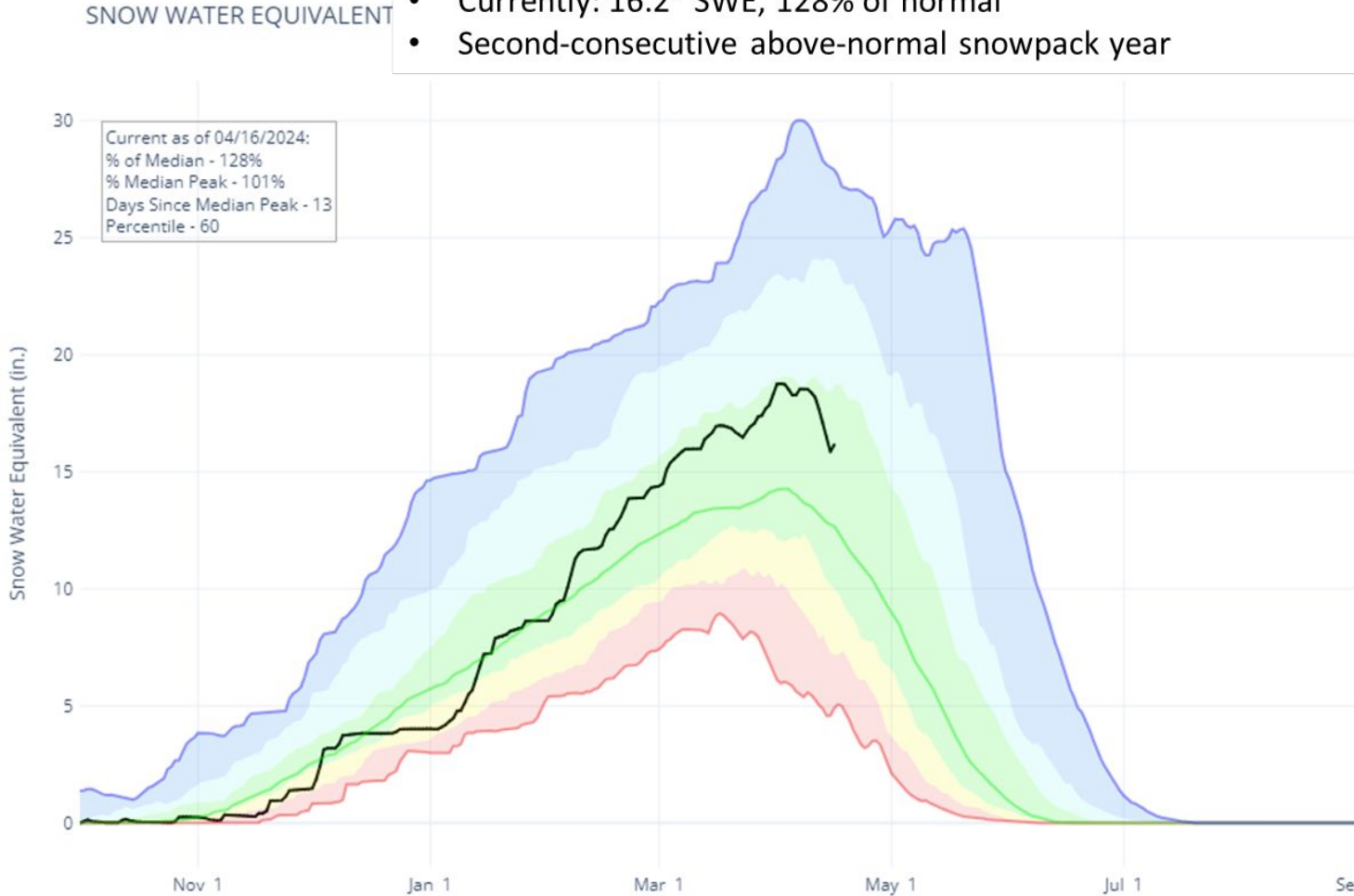
Vs.



July–August rainfall anomaly averaged over North American Monsoon region for every year 1950–2019 (y-axis) versus Niño-3.4 index (x-axis). Wetter-than-average monsoons (green dots) are slightly more common during La Niña years, while drier-than-average monsoons (brown dots) are slightly more common during El Niño years.

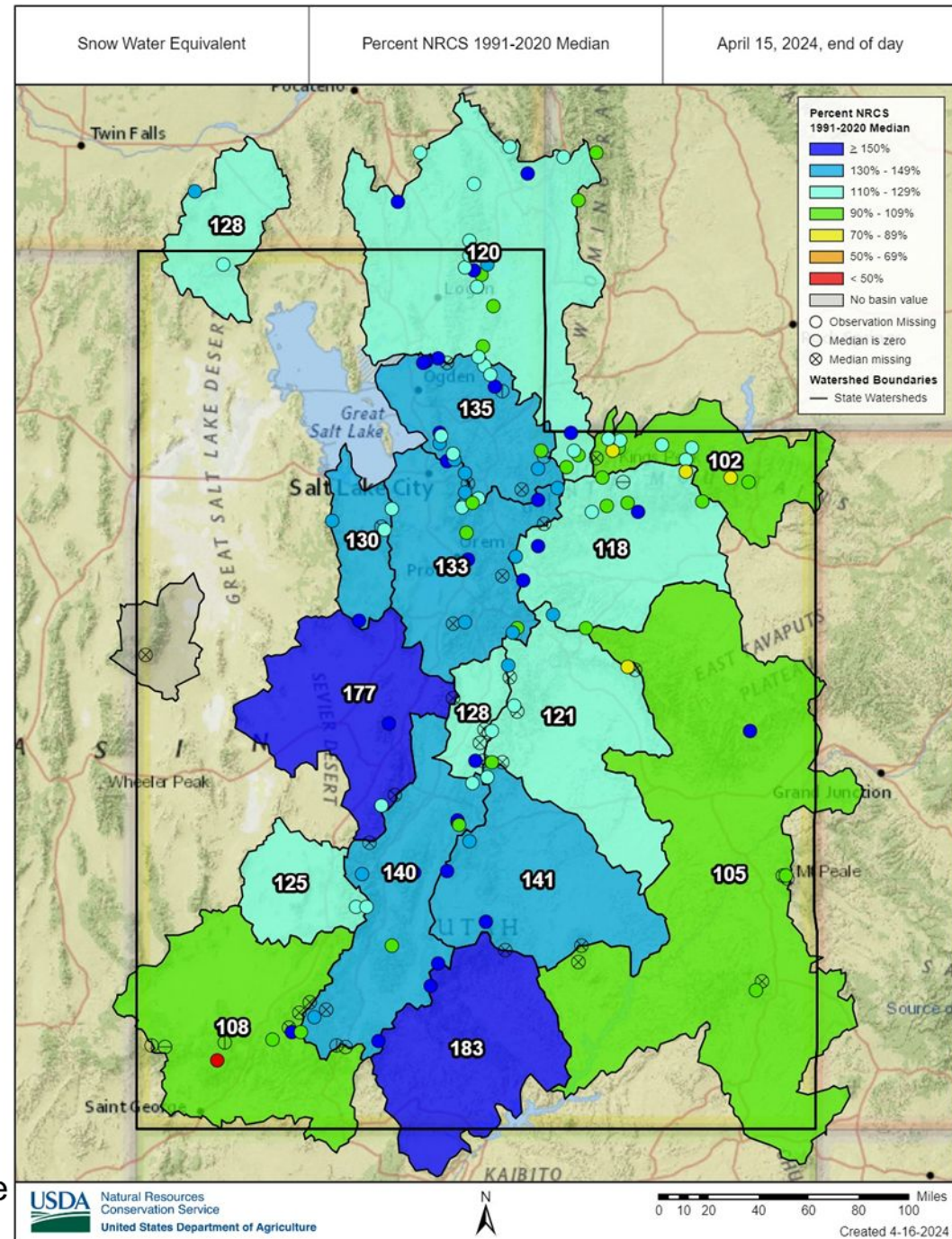
# Snowpack

- **Peaked on April 2nd at 131% of normal, 18.8" SWE**
  - March projection had been 17.6" SWE at peak
- Currently: 16.2" SWE, 128% of normal
- Second-consecutive above-normal snowpack year



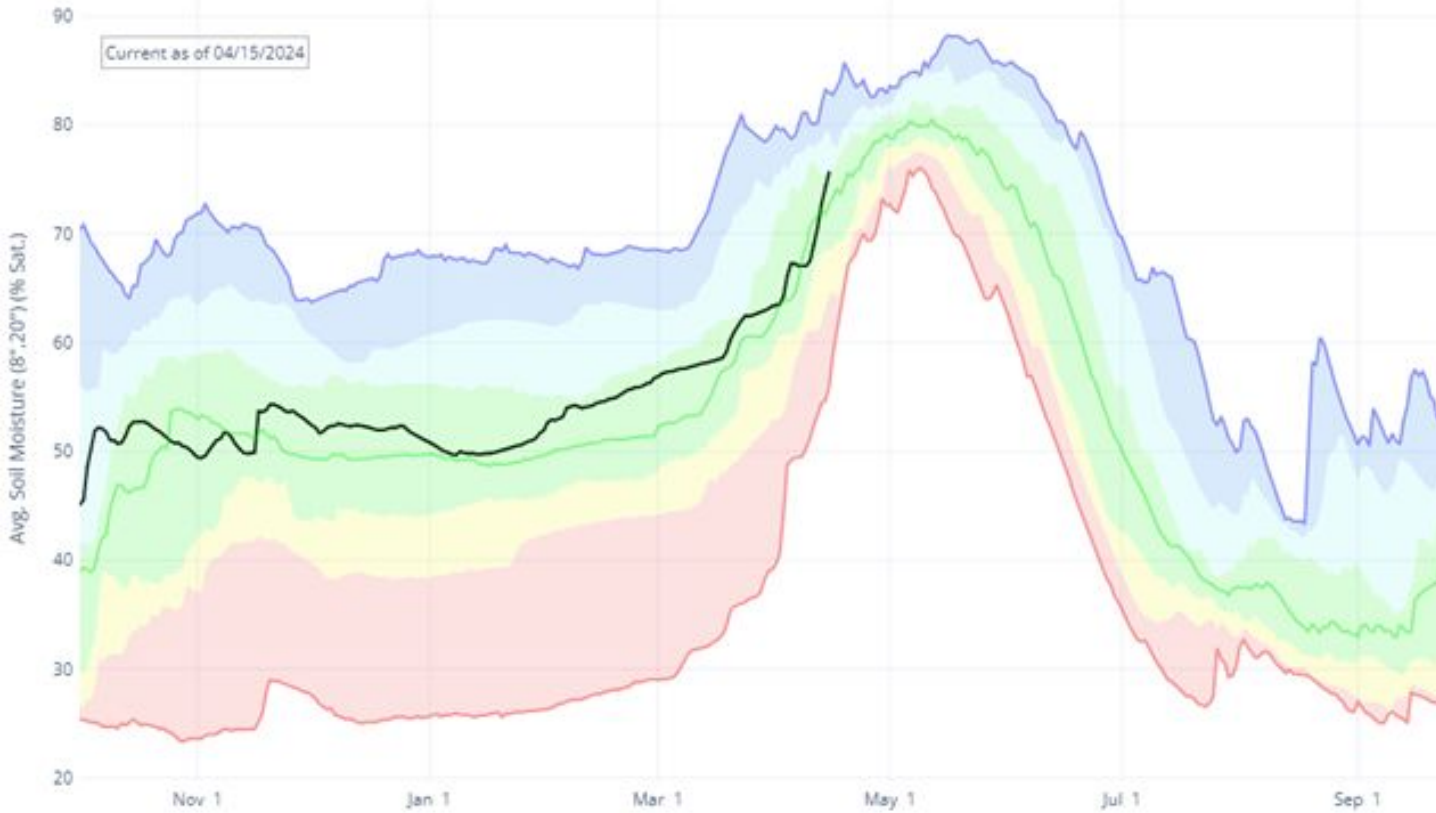
- All of Utah's major basins peaked at above-normal snowpack levels for the second year in a row!

Agency - NRCS Snow Survey  
 slide prepared by Jordan Clayton



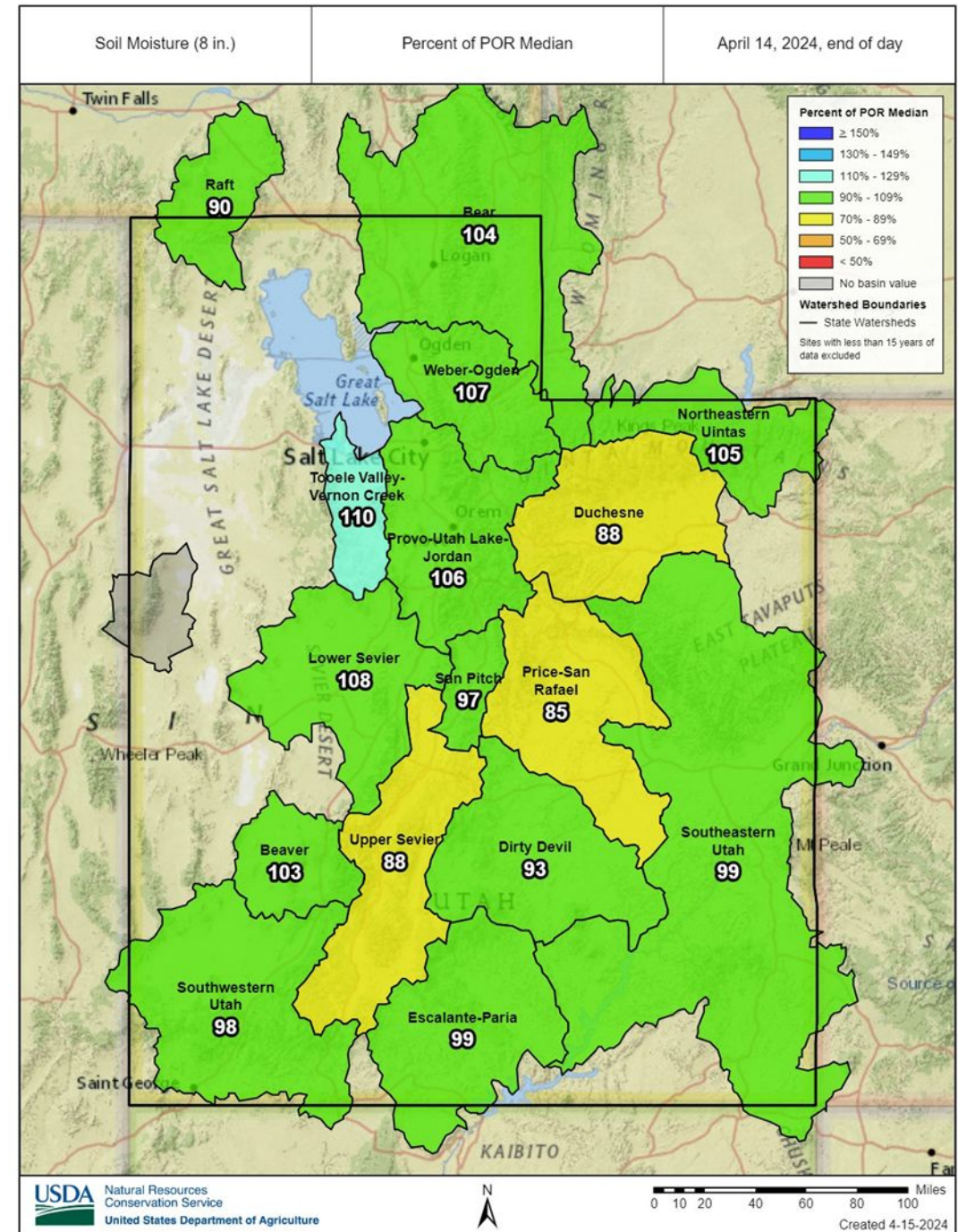
# Soil Moisture

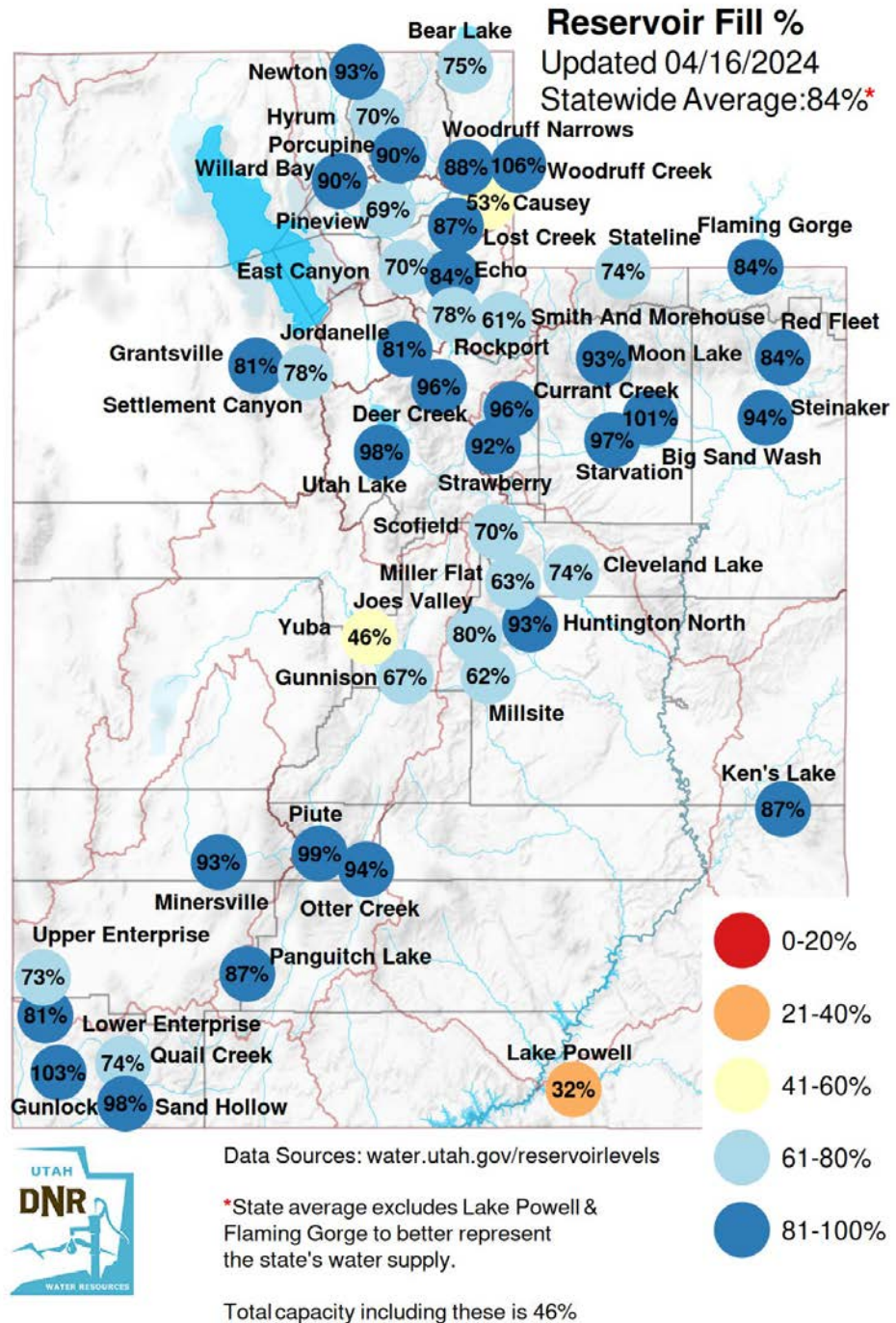
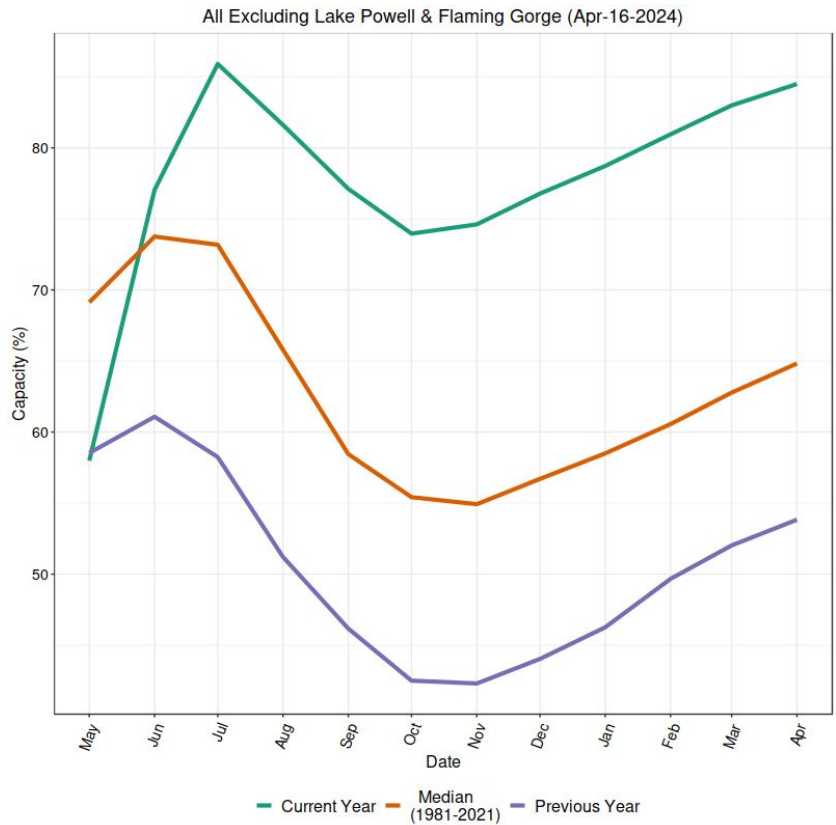
AVG. SOIL MOISTURE (8",20") IN STATE OF UTAH



- Statewide: around 76% saturated (above normal)
- Close to normal SM throughout
- Snowmelt phase has begun

Agency - NRCS Snow Survey slide prepared by Jordan Clayton





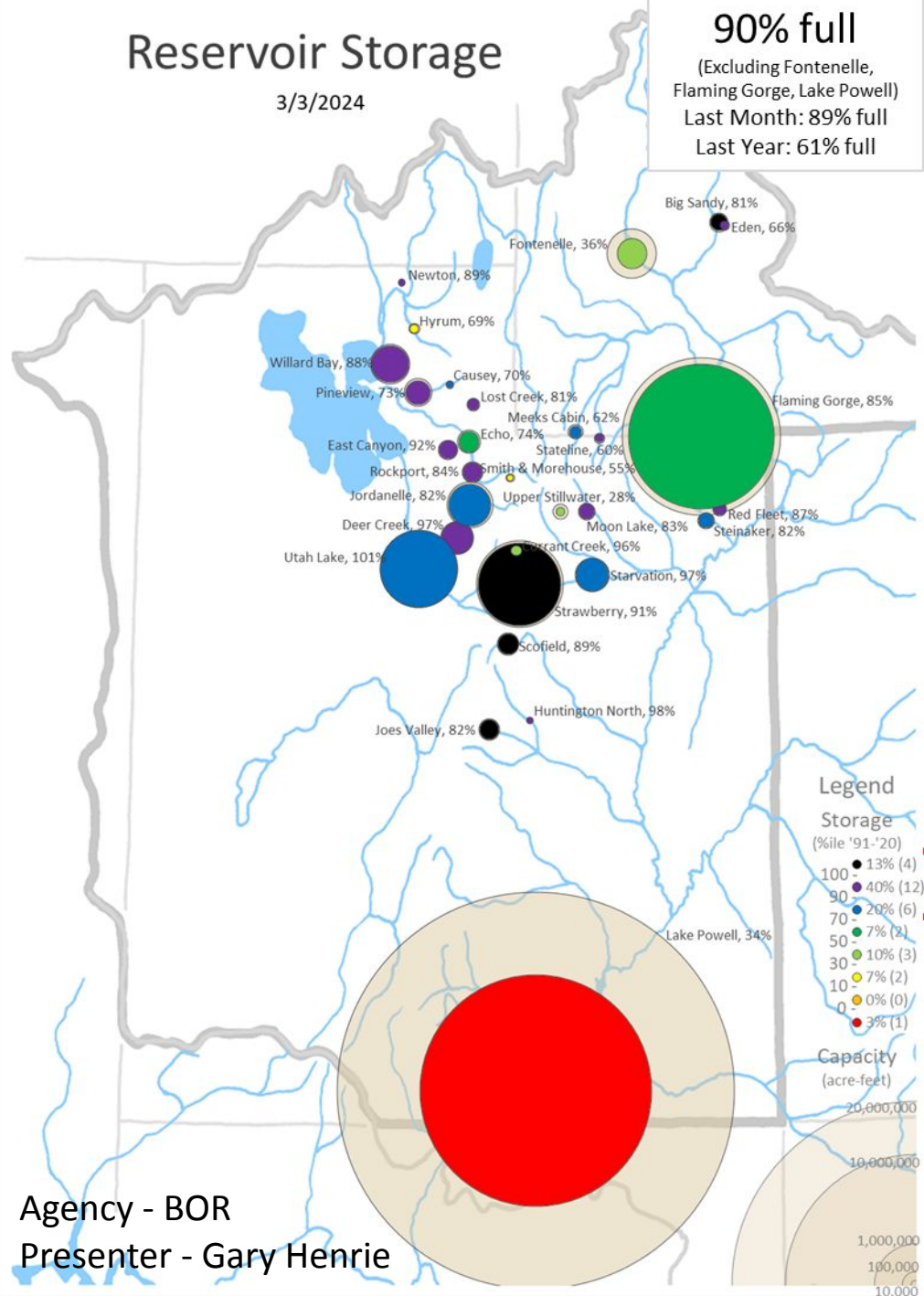
Agency - Division of Water Resources  
Presenter - Laura Haskell

# Reservoir Storage

3/3/2024

**90% full**

(Excluding Fontenelle,  
Flaming Gorge, Lake Powell)  
Last Month: 89% full  
Last Year: 61% full



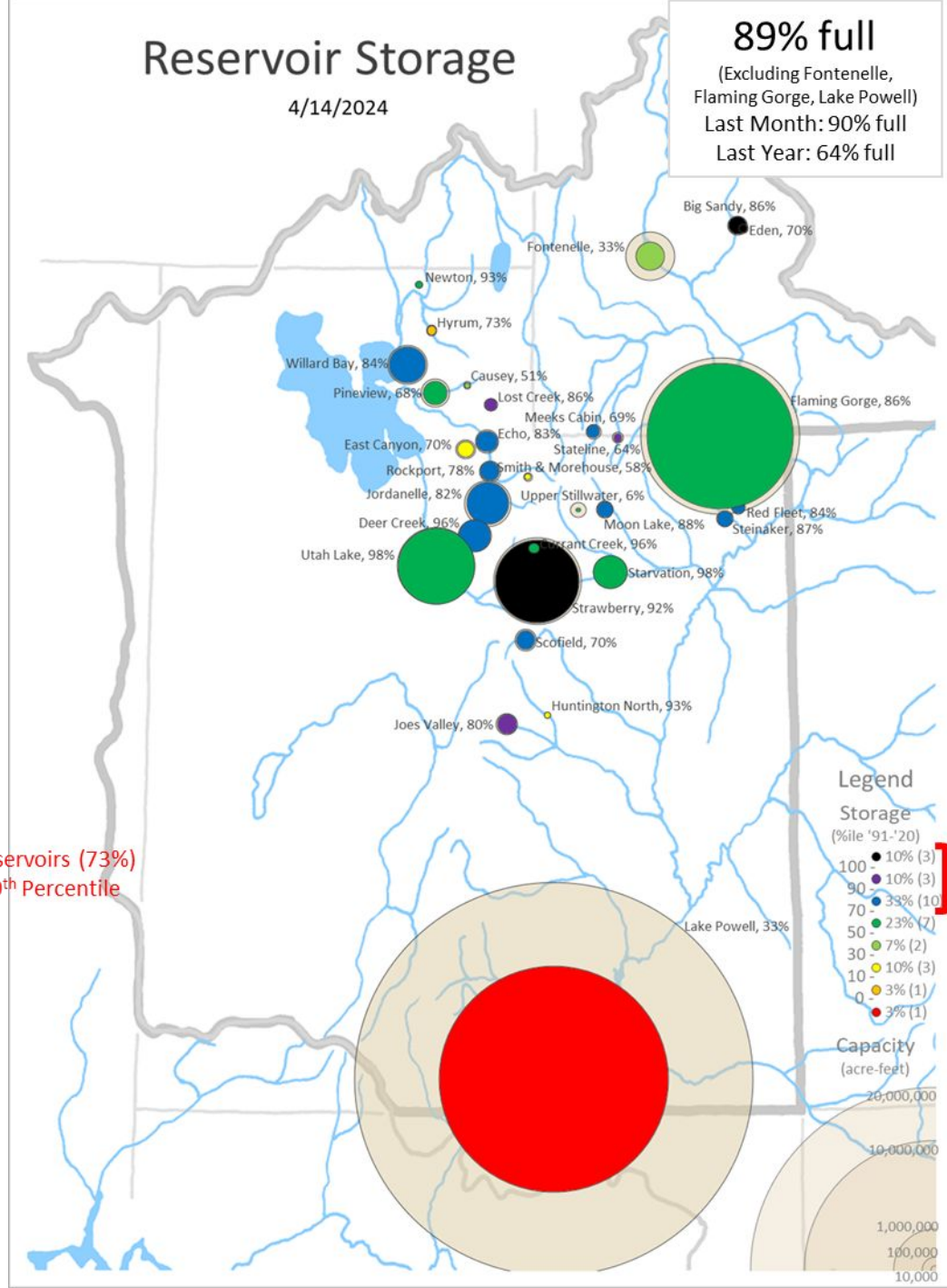
22/30 Reservoirs (73%)  
above 70<sup>th</sup> Percentile

# Reservoir Storage

4/14/2024

**89% full**

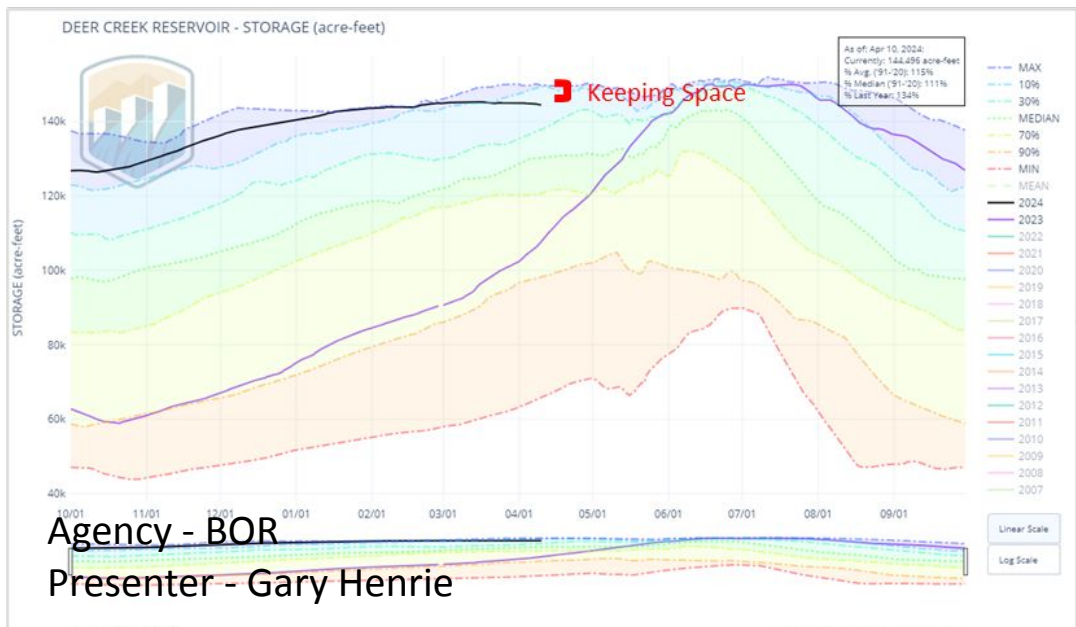
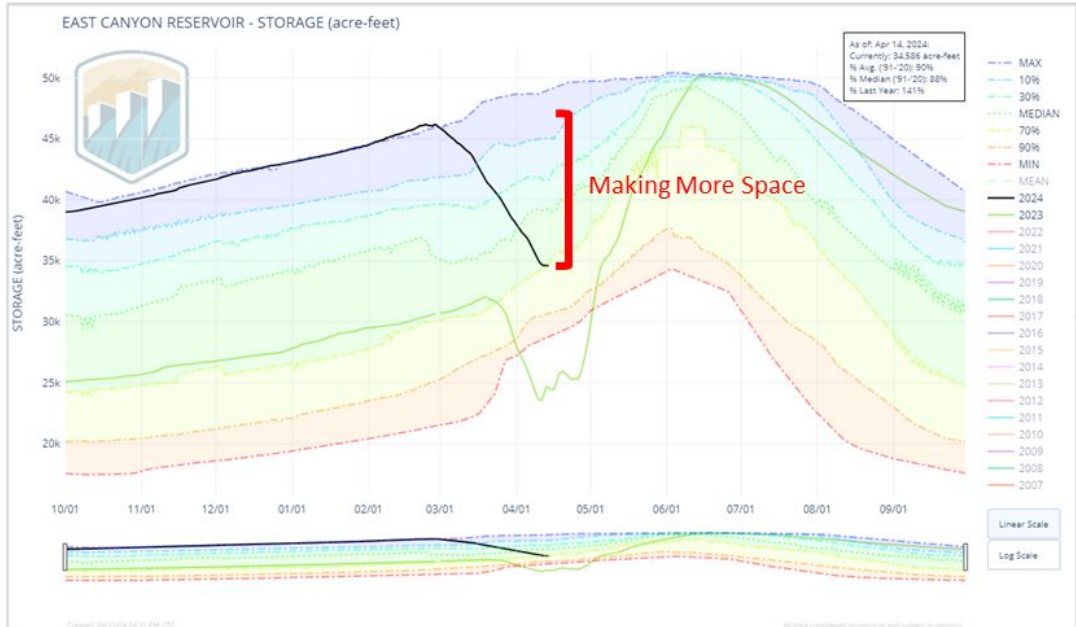
(Excluding Fontenelle,  
Flaming Gorge, Lake Powell)  
Last Month: 90% full  
Last Year: 64% full



16/30 Reservoirs (53%)  
above 70<sup>th</sup> Percentile

Agency - BOR  
Presenter - Gary Henrie

# Reservoir Levels

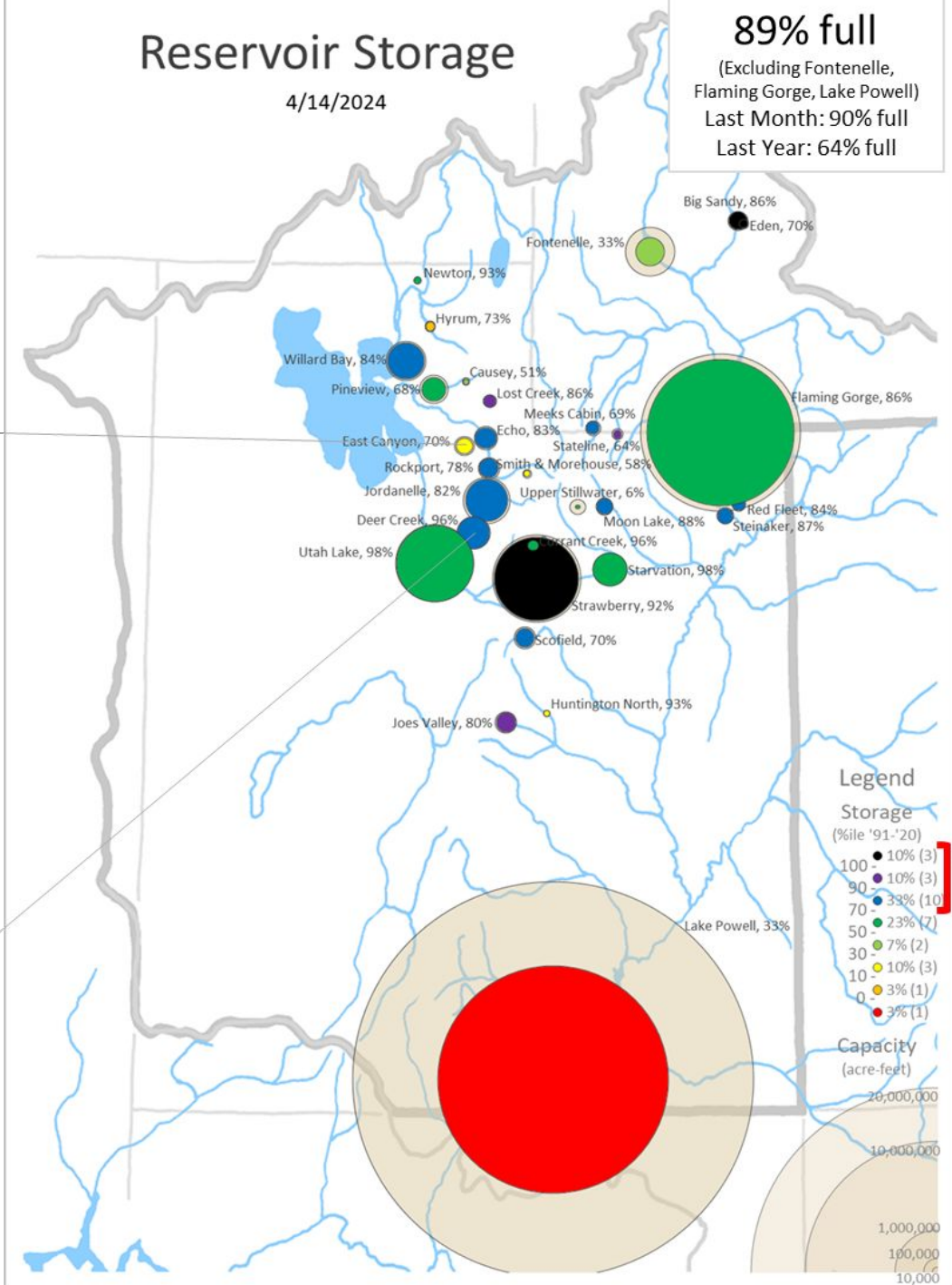


Agency - BOR  
 Presenter - Gary Henrie

# Reservoir Storage

4/14/2024

**89% full**  
 (Excluding Fontenelle,  
 Flaming Gorge, Lake Powell)  
 Last Month: 90% full  
 Last Year: 64% full



16/30 Reservoirs (53%)  
 above 70<sup>th</sup> Percentile



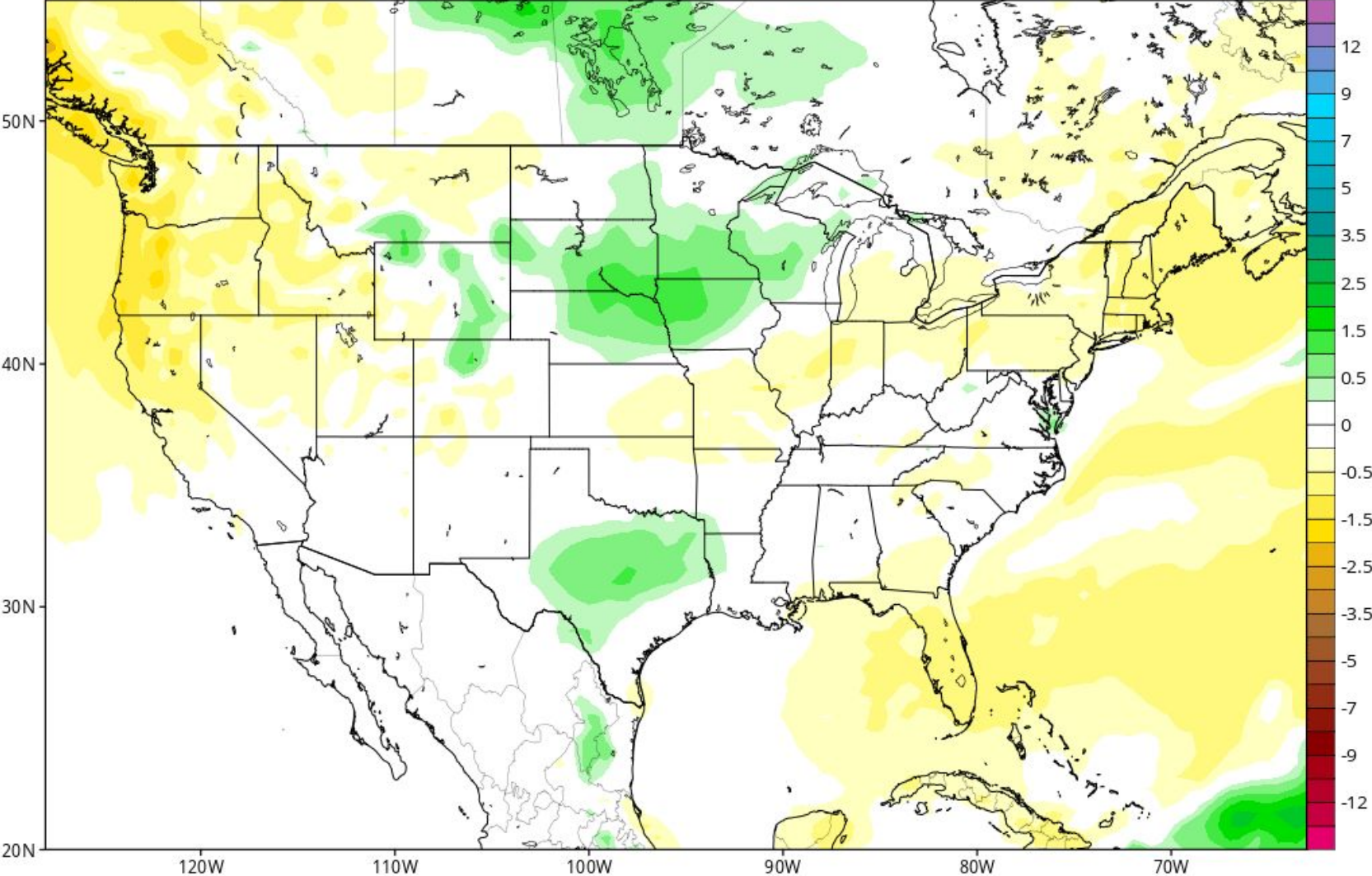
# Weather Forecast Office Utah Day 1-7 Outlook Precipitation



GEFS Accumulated Precip. Anomaly (in) from 12z15Apr2024 to 12z22Apr2024 (Days 1-7)

Init: 12z Apr 15 2024 Forecast Hour: [168] valid at 12z Mon, Apr 22 2024

TROPICALTIDBITS.COM



Agency - National Weather Service Weather Forecast Office  
Presenter - Hayden Mahan

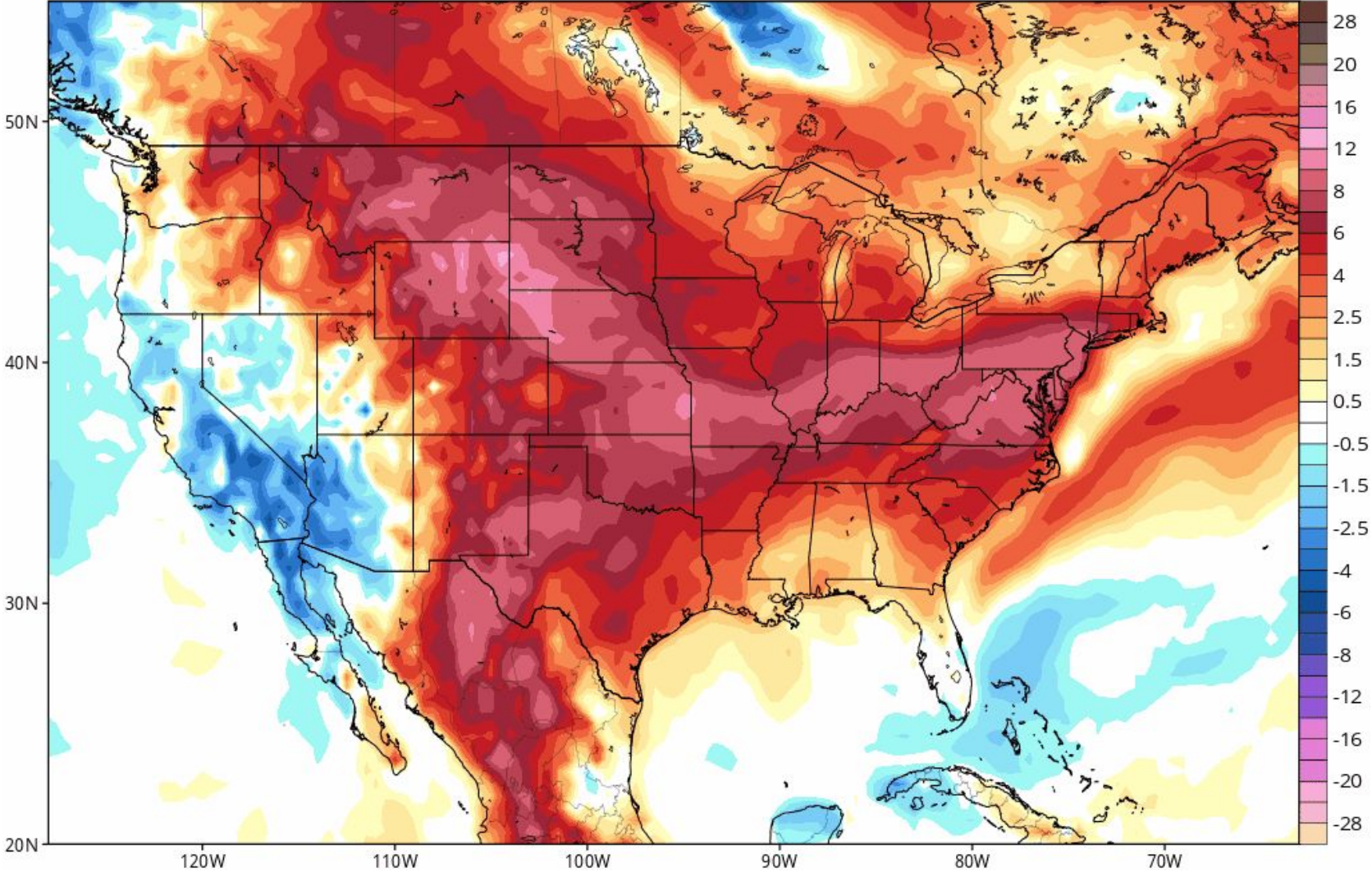
# Weather Forecast Office Utah Day 1-7 Outlook Temperature



GEFS 2-meter Temperature Anomaly (°C) (based on CFSR 1981-2010 Climatology)

Init: 12z Apr 15 2024 [Analysis] valid at 12z Mon, Apr 15 2024

TROPICALTIDBITS.COM



Agency - National Weather Service Weather Forecast Office  
Presenter - Hayden Mahan

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



Agency - National Weather Service Weather Forecast Office

Presenter - Hayden Mahan

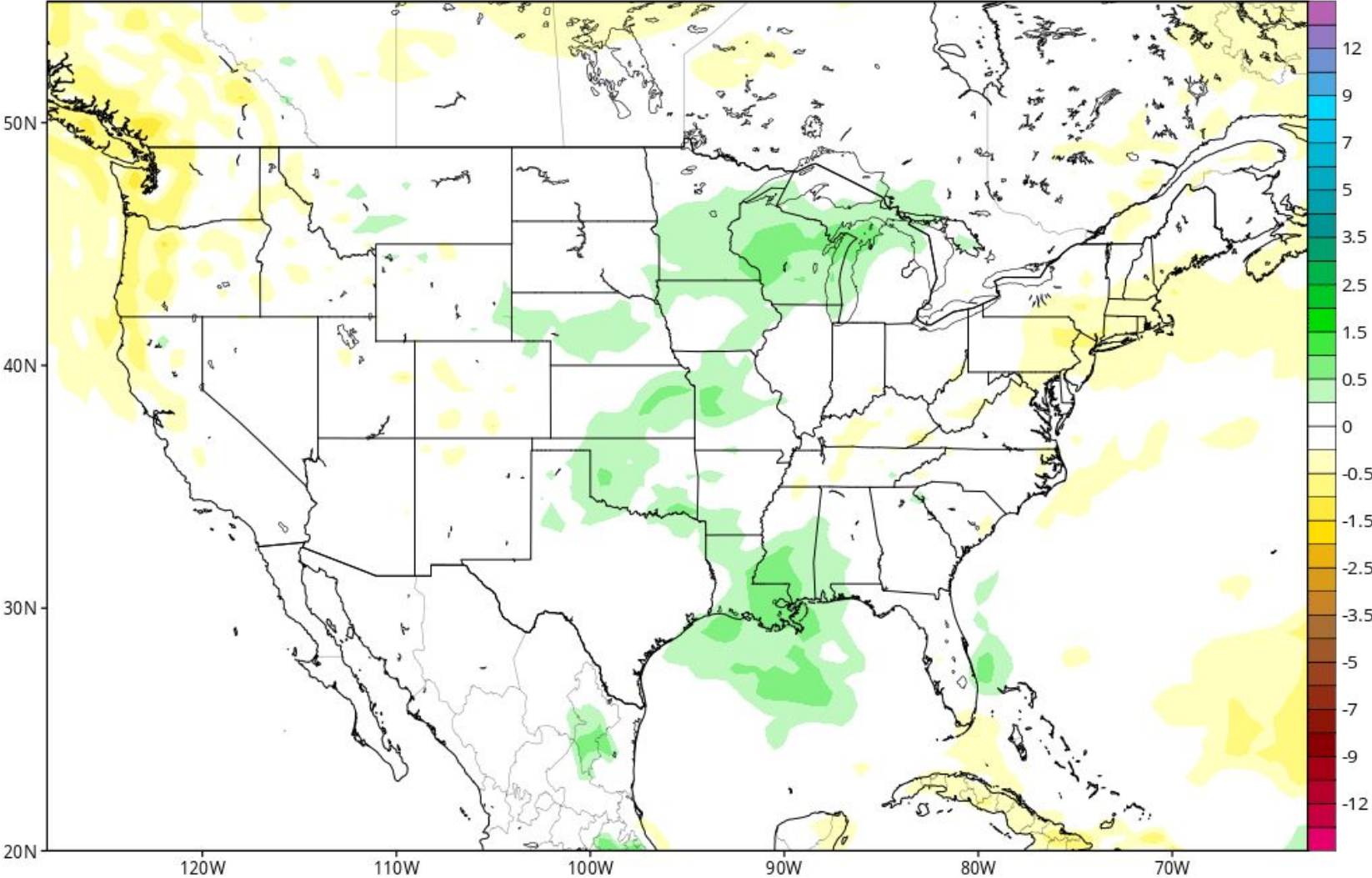
# Climate Prediction Center 8 to 14 Day Outlooks - Precipitation



GEFS Accumulated Precip. Anomaly (in) from 06z22Apr2024 to 06z29Apr2024 (Days 8-14)

Init: 06z Apr 15 2024 Forecast Hour: [336] valid at 06z Mon, Apr 29 2024

TROPICALTIDBITS.COM



Agency - National Weather Service Weather Forecast Office  
Presenter - Hayden Mahan

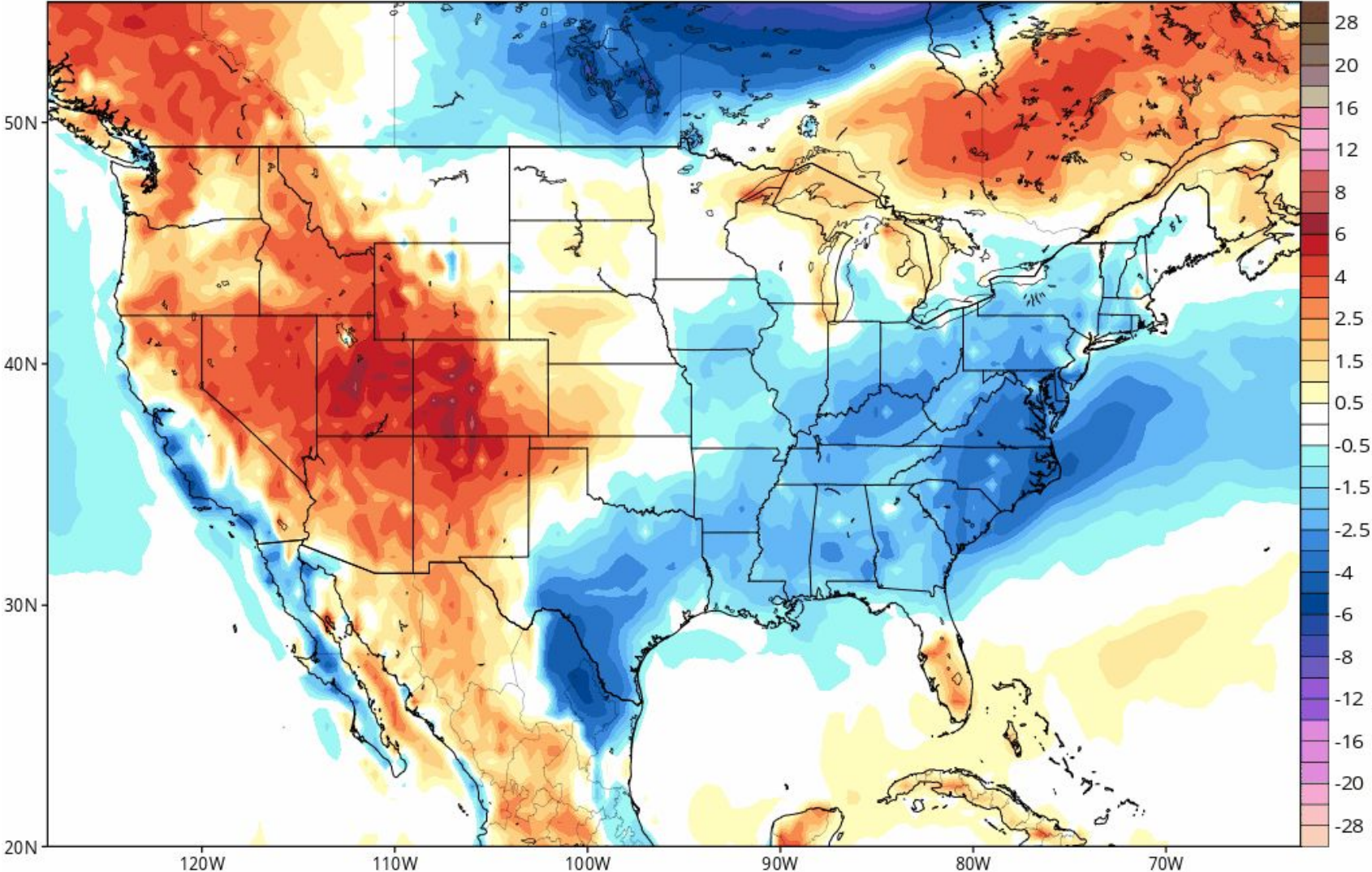
# Climate Prediction Center 8 to 14 Day Outlooks - Temperature



GEFS 2-meter Temperature Anomaly (°C) (based on CFSR 1981-2010 Climatology)

Init: 12z Apr 15 2024 Forecast Hour: [180] valid at 00z Tue, Apr 23 2024

TROPICALTIDBITS.COM



Agency - National Weather Service Weather Forecast Office  
Presenter - Hayden Mahan

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



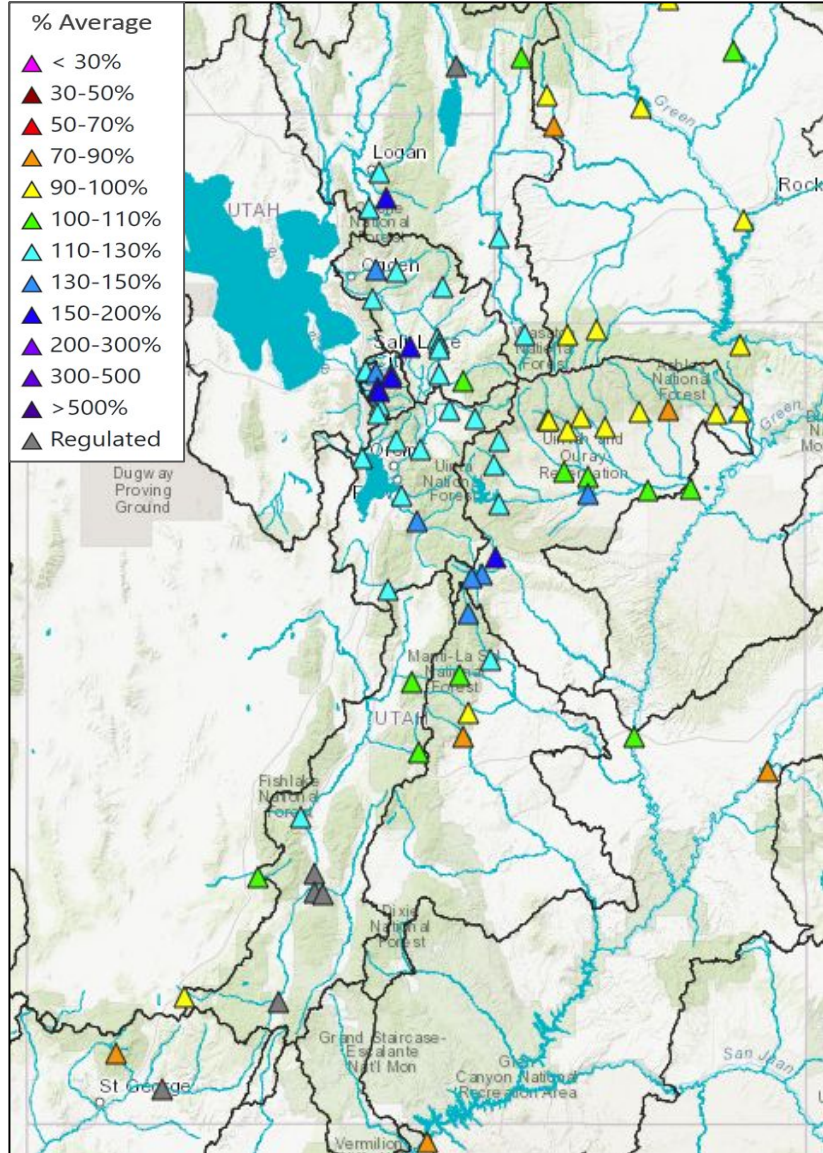
Agency - National Weather Service Weather Forecast Office

Presenter - Hayden Mahan

# CBRFC Utah Water Supply Forecasts



## April 1 Forecast April-July Volume (%avg)

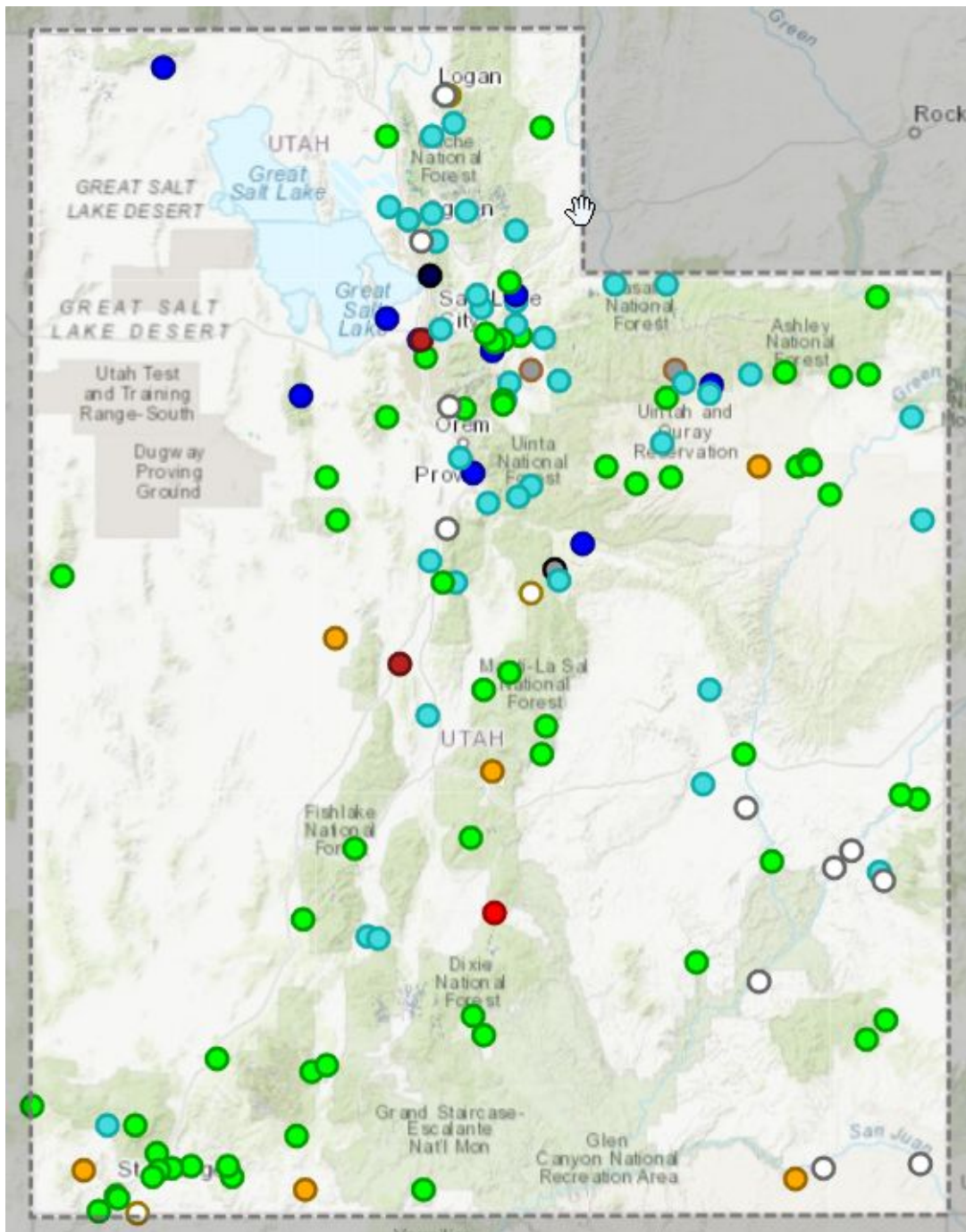


Colorado Basin River Forecast Center Water Supply Forecasts April 1, 2024			
UTAH			
Basin	Volume (KAF)	%Normal (1991-2020)	Period
Bear-UT/WY State Line	120	110	Apr-Jul
Weber-Oakley	120	108	Apr-Jul
Big Cottonwood Creek	42	124	Apr-Jul
Provo-Woodland	110	115	Apr-Jul
Duchesne-Tabiona	110	107	Apr-Jul
Sevier-Hatch (*Regulated)	46	96	Apr-Jul
Virgin-Virgin (*Regulated)	55	98	Apr-Jul

April 1 forecast for April-July volumes are generally higher than March 1 forecast

The timing and magnitude of spring runoff is ultimately a result of SWE conditions, spring weather, and antecedent soil moisture conditions

Water Supply Forecasts (April - July) Summary					
Watershed	Apr 2024 Forecast Range (% Avg)	April 2024 Median	March 2024 Median	Feb 2024 Median	Jan 2024 Median
Bear River Basin	100% - 150%	118%	102%	84%	80%
Weber River Basin	110% - 150%	120%	107%	87%	74%
Six Creeks Basin	120% - 165%	149%	133%	107%	92%
Provo River Basin	110% - 135%	118%	104%	88%	75%
Duchesne River Basin	90% - 135%	103%	98%	73%	62%
Virgin and Sevier River Basins	90% - 140%	103%	87%	83%	68%



### USGS Station Summary ✕

---

#### Day-of-Year Status

All-time high for this day-of-year	1	0.7%	
Much above normal for this day-of-year	9	6.5%	■
Above normal for this day-of-year	41	29.5%	■
Normal for this day-of-year	62	44.6%	■
Below normal for this day-of-year	6	4.3%	■
Much below normal for this day-of-year	2	1.4%	■
All-time low for this day-of-year	1	0.7%	
Not ranked - insufficient record	11	7.9%	■
Not ranked - no measurement	2	1.4%	
Not ranked - stream not flowing	3	2.2%	
Not ranked - no recent measurement	1	0.7%	

---

#### Increasing and Decreasing

Value increasing	19	13.7%	■
Value not changing	69	49.6%	■
Value decreasing	47	33.8%	■
No measurement	3	2.2%	
No recent measurement	1	0.7%	

---

#### Flagged Values

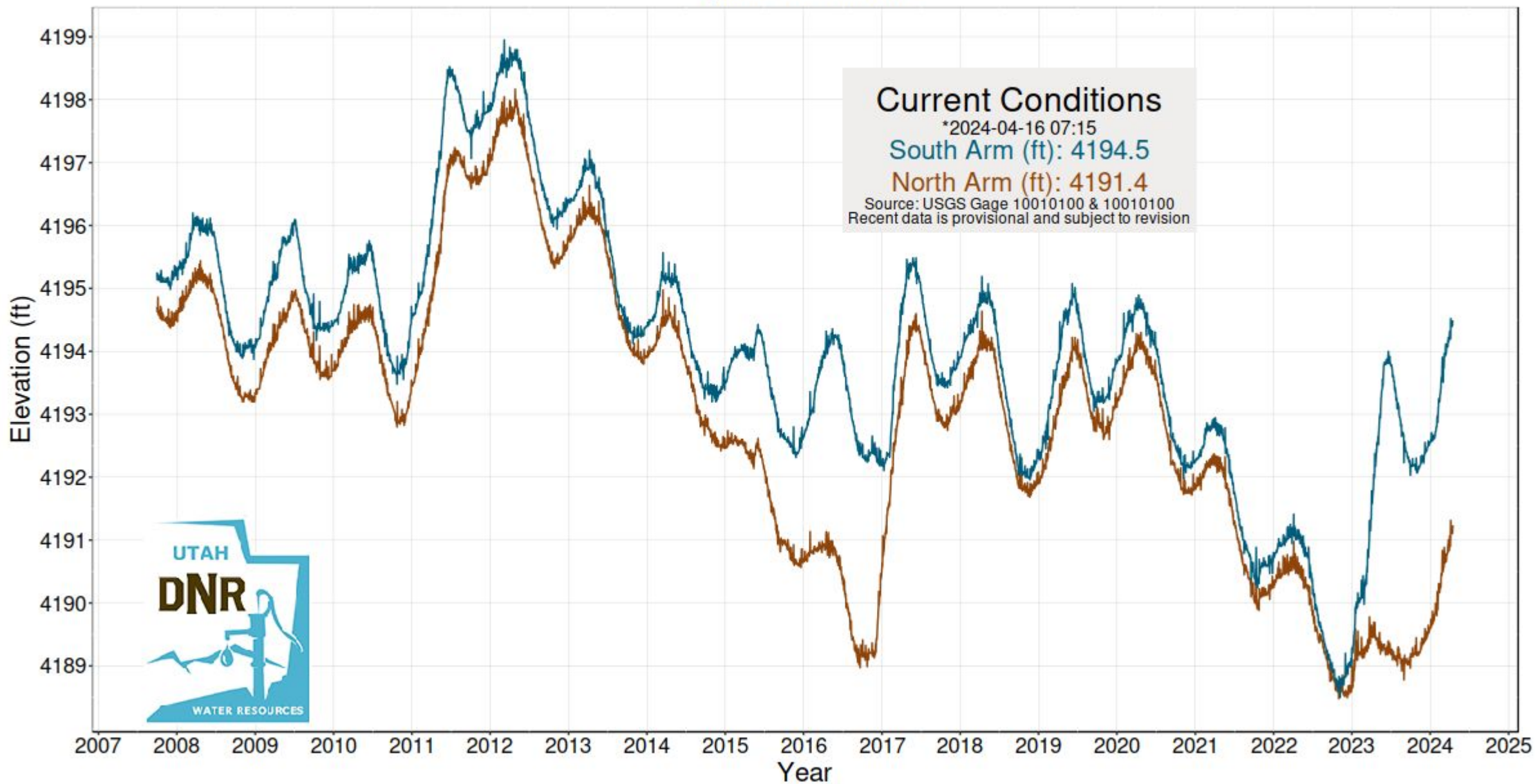
No value flag	137	98.6%	■
(ICE) Affected by ice	1	0.7%	
(RAT) Rating being developed	1	0.7%	

---

Conditions as of Tue Apr 16 2024 10:18:14 GMT-0600 (Mountain Daylight Time) ✕ Close

# Great Salt Lake Elevations

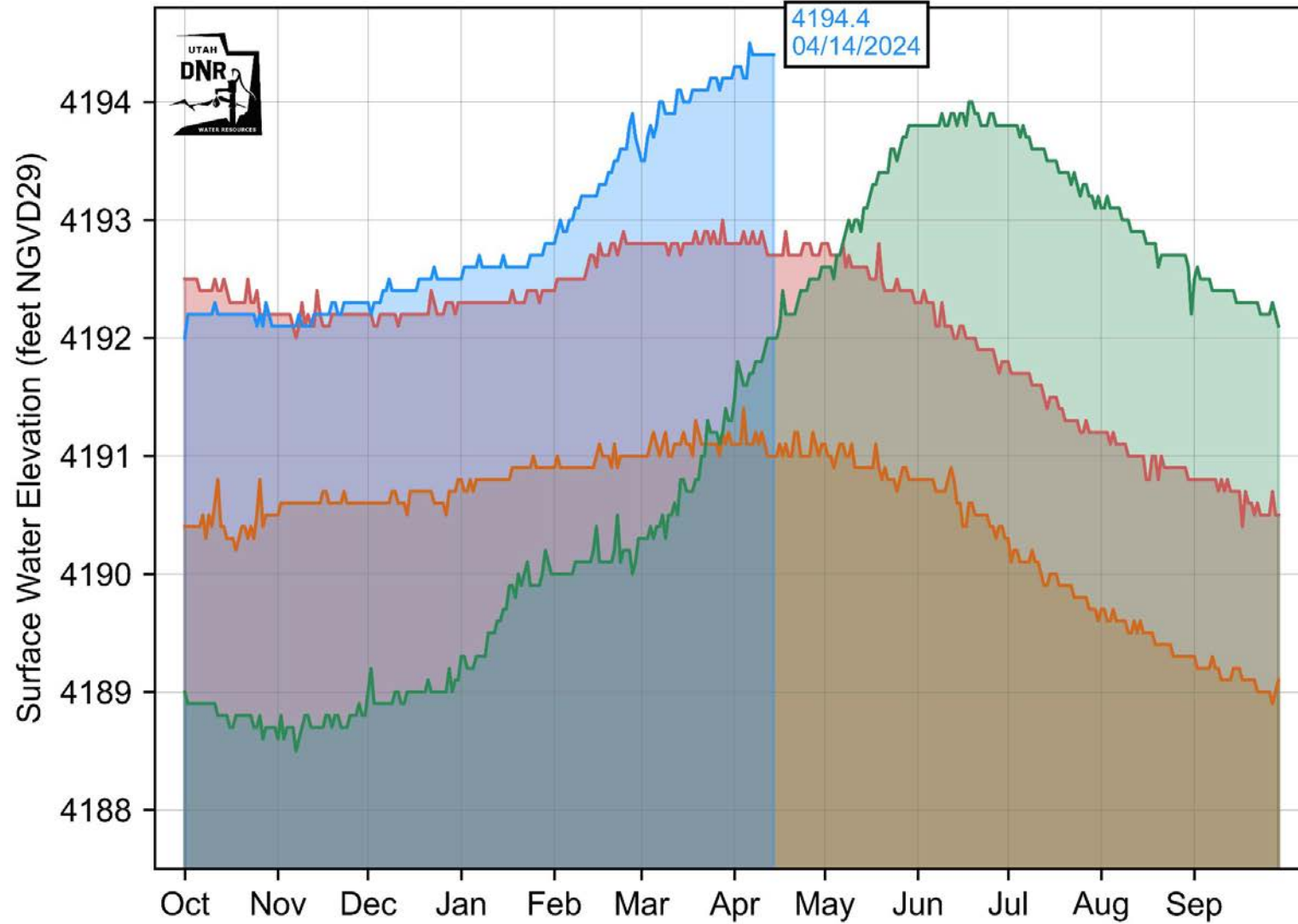
Updated 04/16/2024



**Current Conditions**  
\*2024-04-16 07:15  
**South Arm (ft): 4194.5**  
**North Arm (ft): 4191.4**  
Source: USGS Gage 10010100 & 10010100  
Recent data is provisional and subject to revision



# Great Salt Lake South Arm Elevation



Source: USGS Saltair Boat Harbor Station 10010000; USGS South Side of Causeway 10010024 when Saltair gage is unavailable. Recent data is provisional and subject to revision.

Water surface elevation labeled on the graph is the 5-day mean.

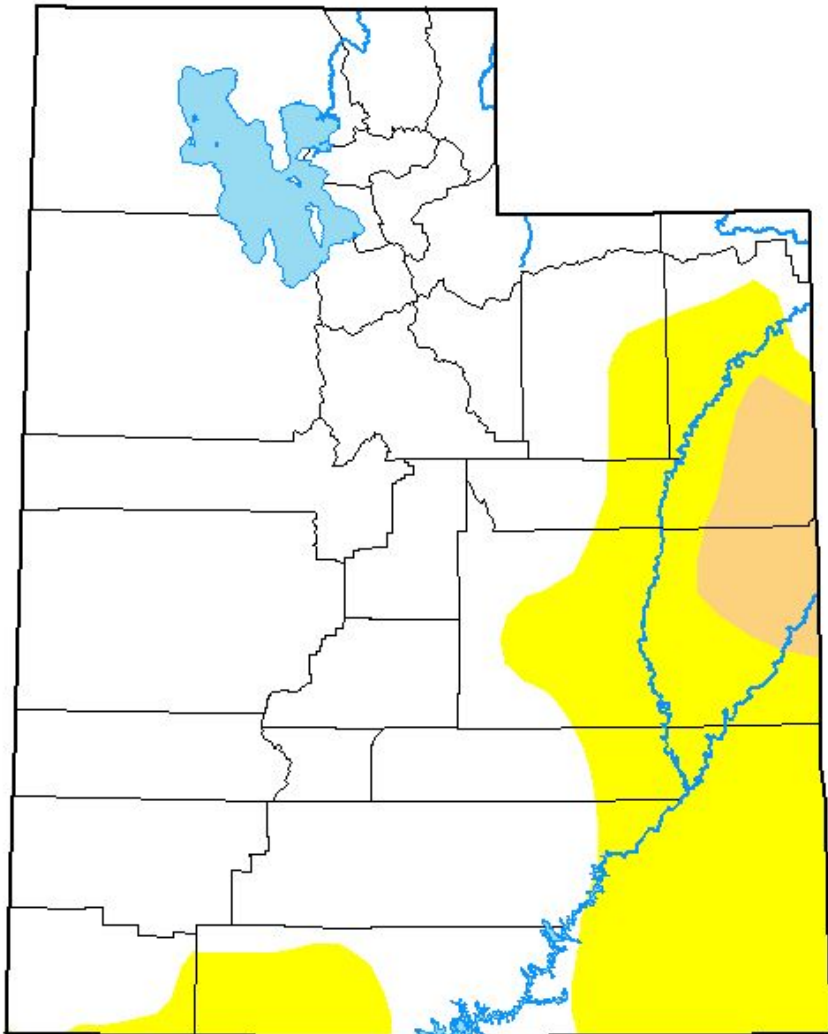
# U.S. Drought Monitor

## Utah







April 9, 2024

(Released Thursday, Apr. 11, 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:

Brad Pugh  
CPC/NOAA



[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)