Utah Water Assessment & Conditions Monitoring
(Drought Webinar)

The meeting will begin shortly

UTAH CLIMATE CENTER

NOAA

USGS science for a changing world

BUREAU OF RECLAMATION

NRCS Natural Resources Conservation Service

UDAF

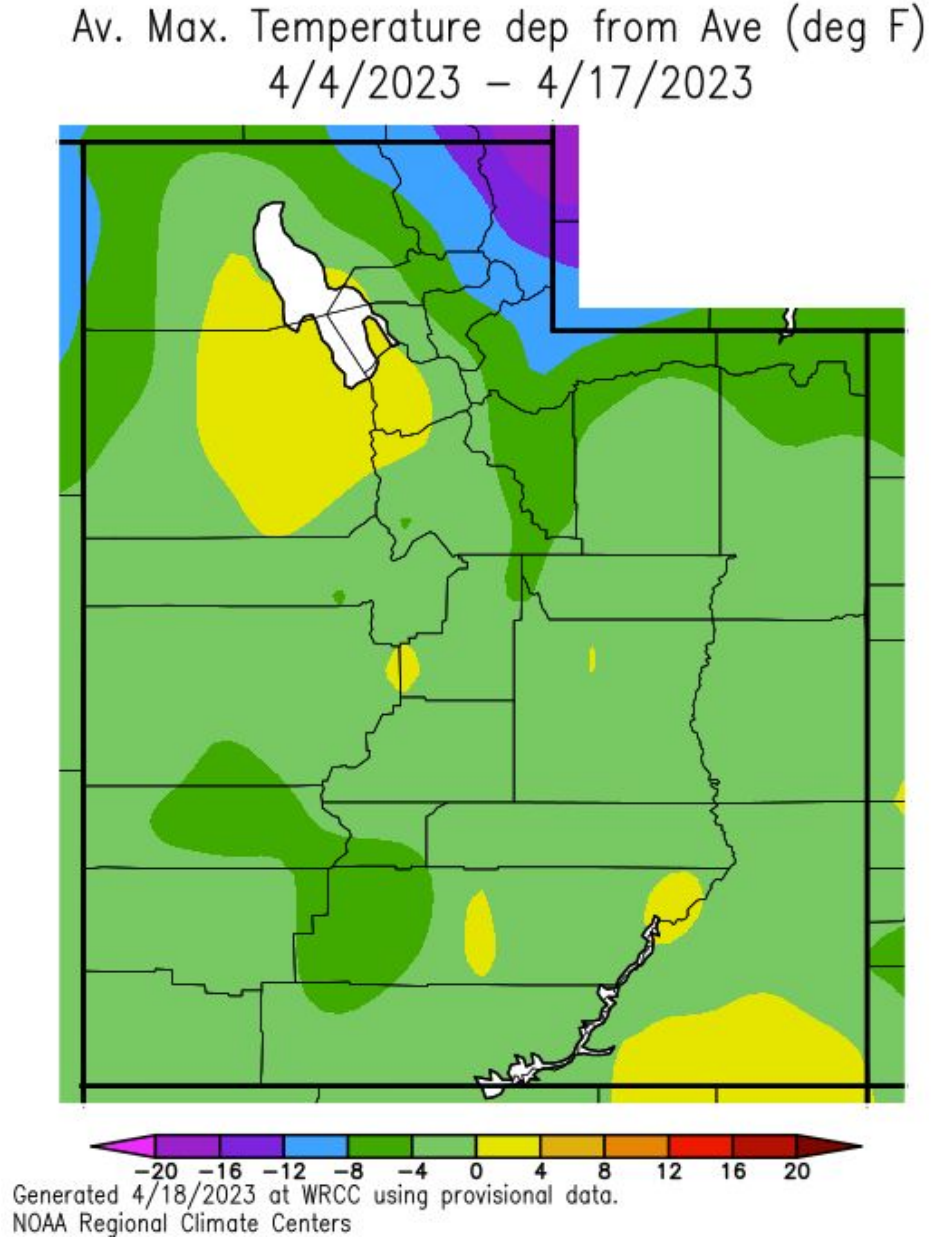
UTAH DNR WATER RESOURCES

Thank you to our contributors

Utah Water Assessment & Conditions Monitoring Webinar

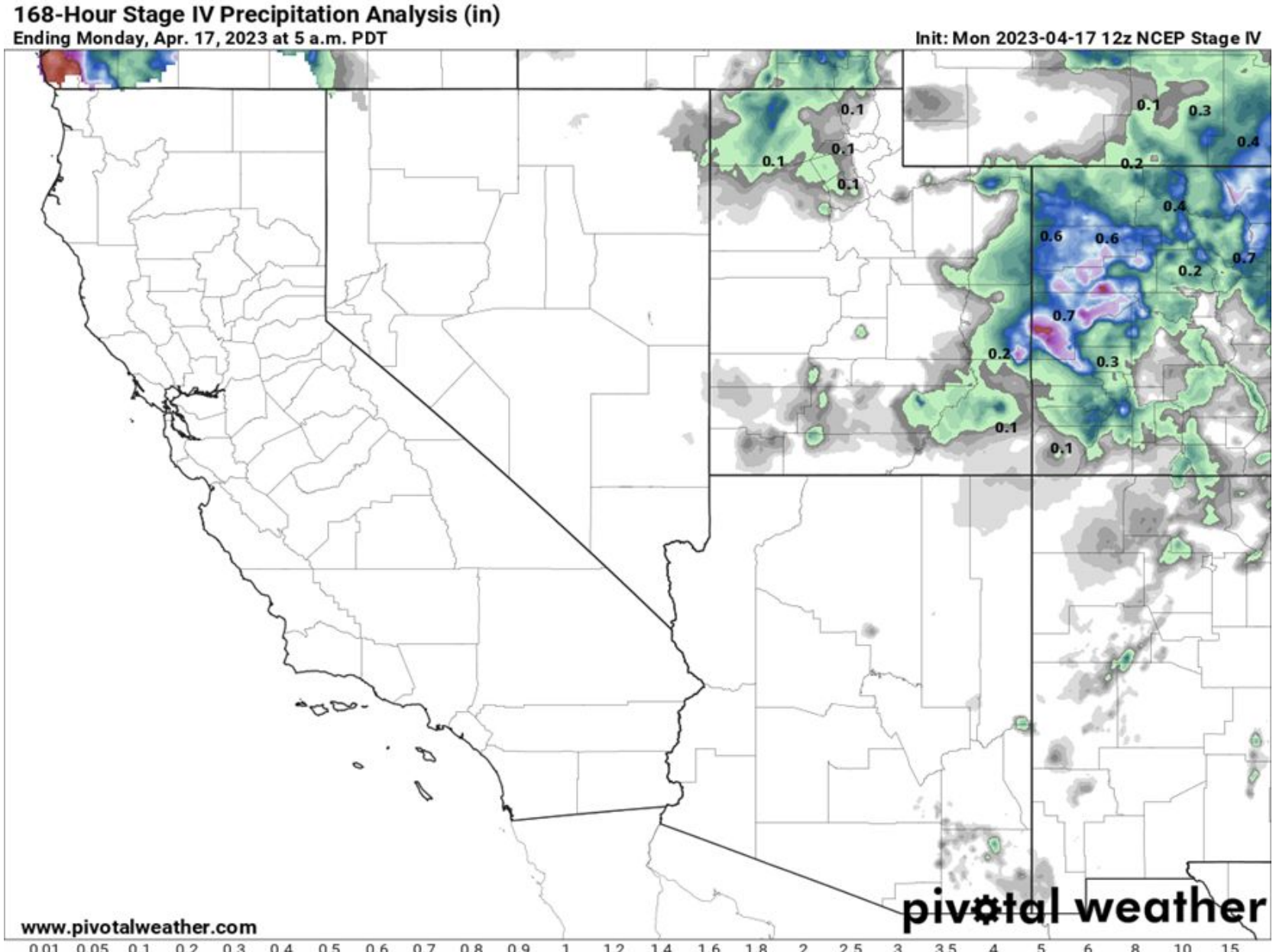
April 18, 2023

2-week Temperature Departure From Average



Agency - Utah Climate Center
Presenter - Jon Meyer

7-Day Precipitation



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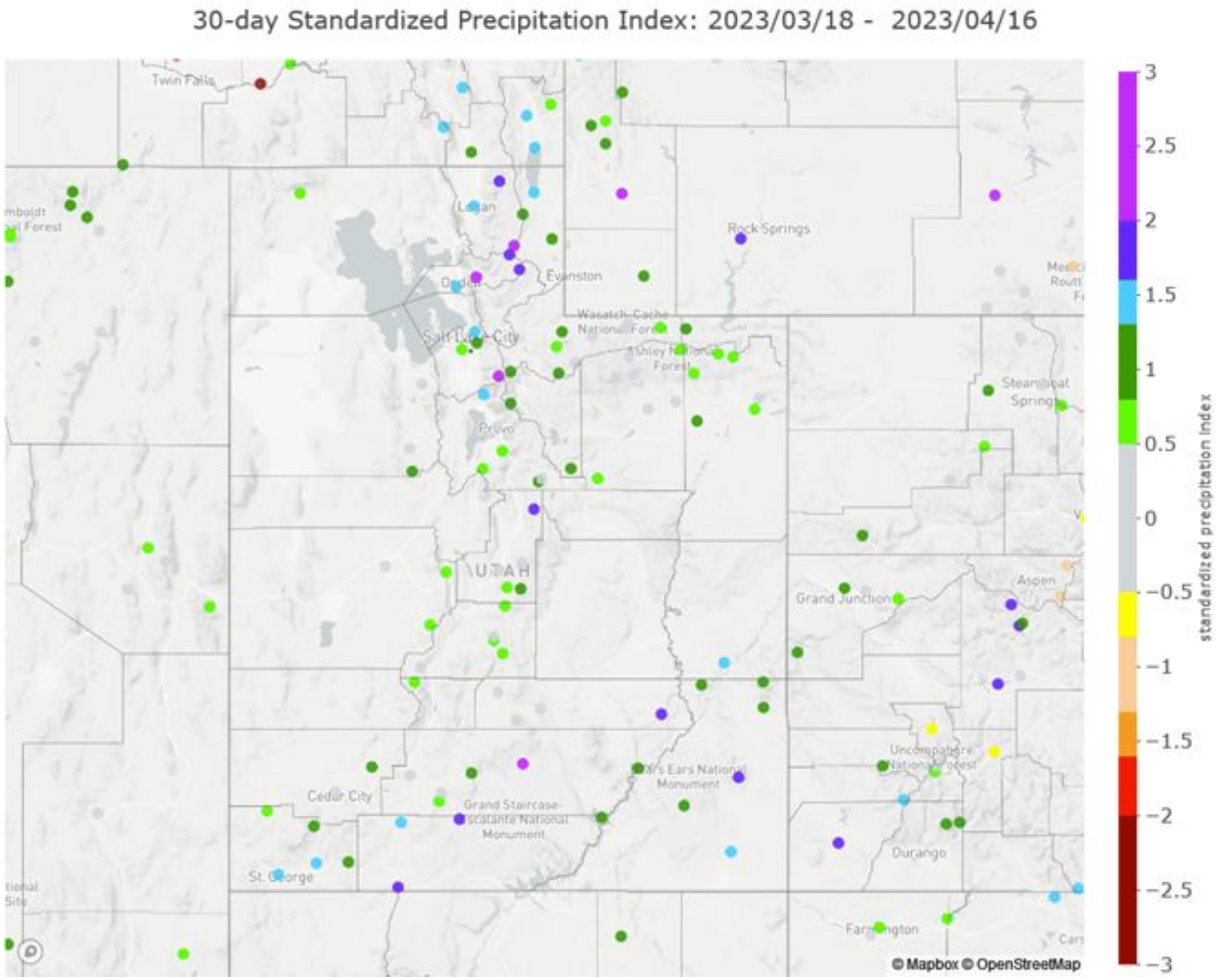
30-day Standardized Precipitation Index (SPI)



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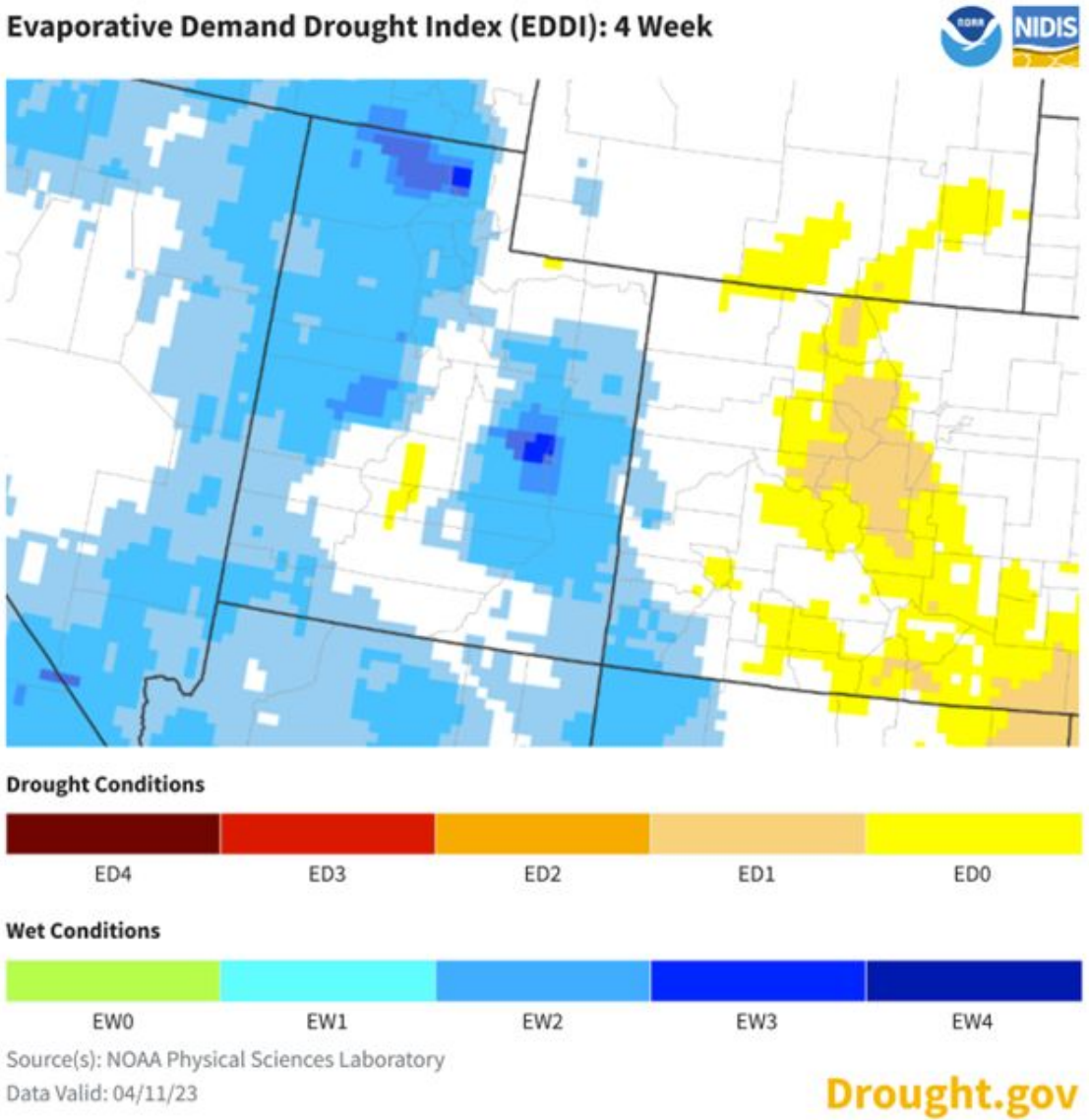
Presenter - Jon Meyer

One Month Evaporative Demand Drought Index (EDDI)



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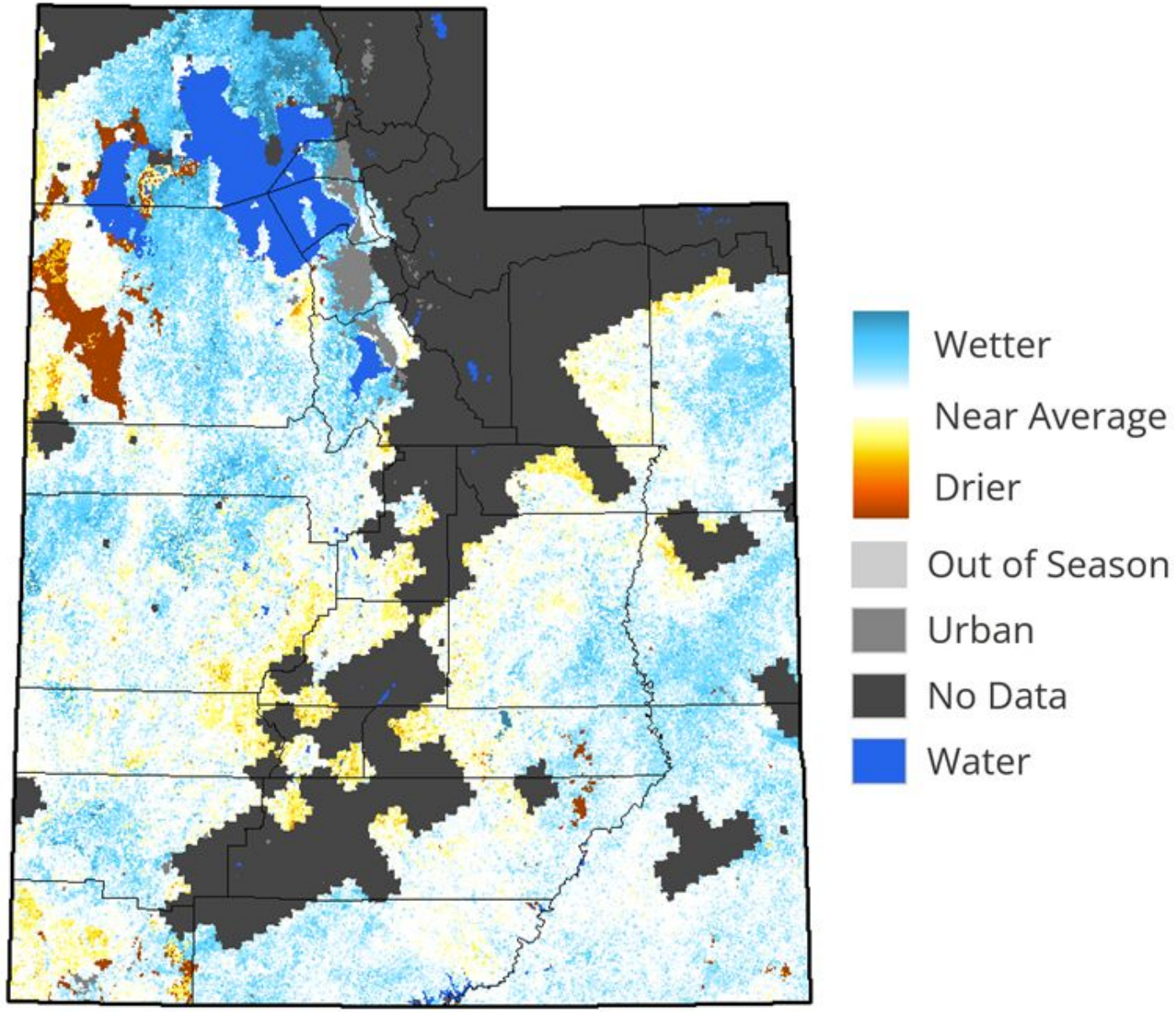
Quick Drought Response Index (Quick DRI)



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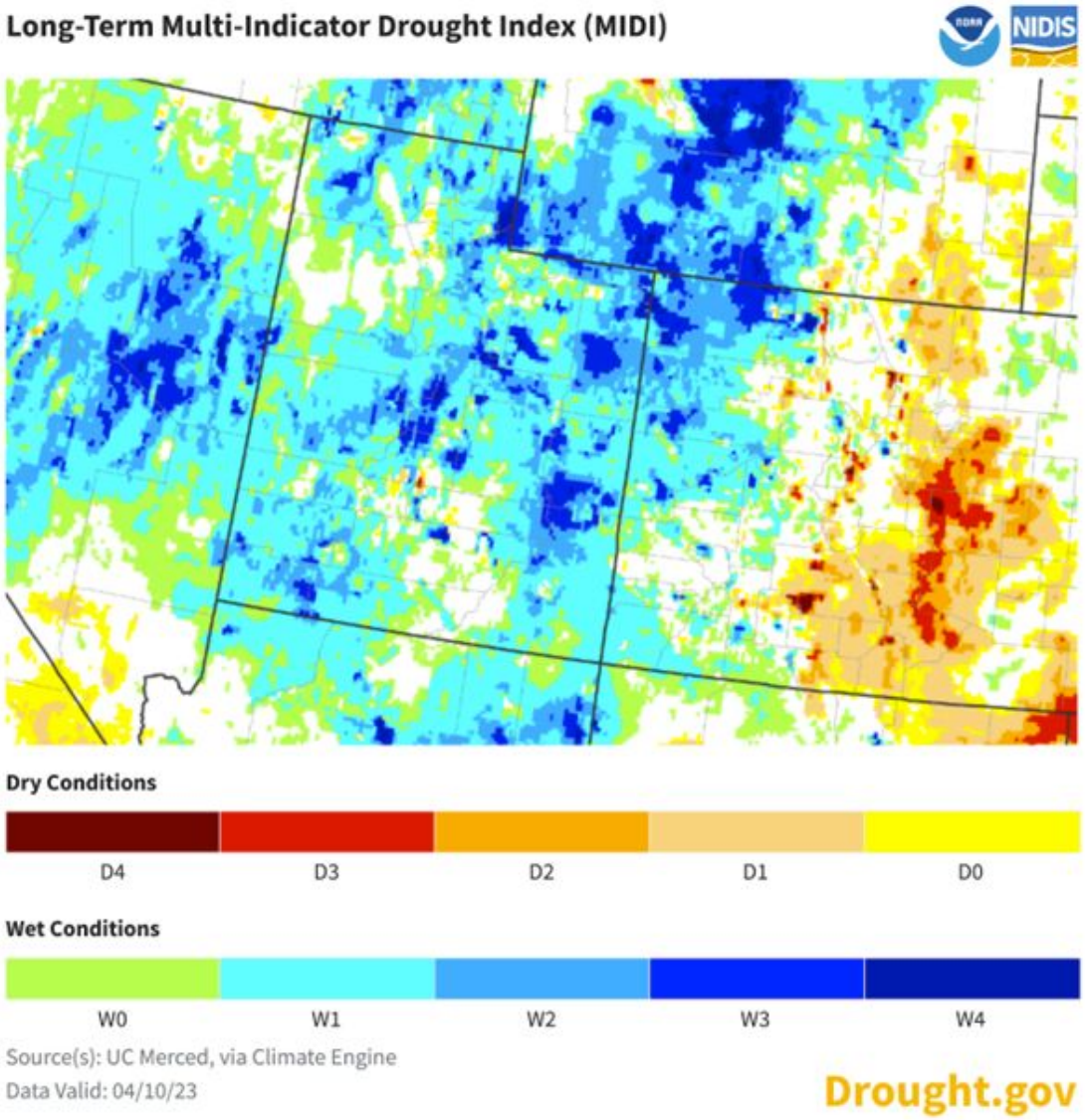
NIDID Long-Term Multi-Indicator Drought Index



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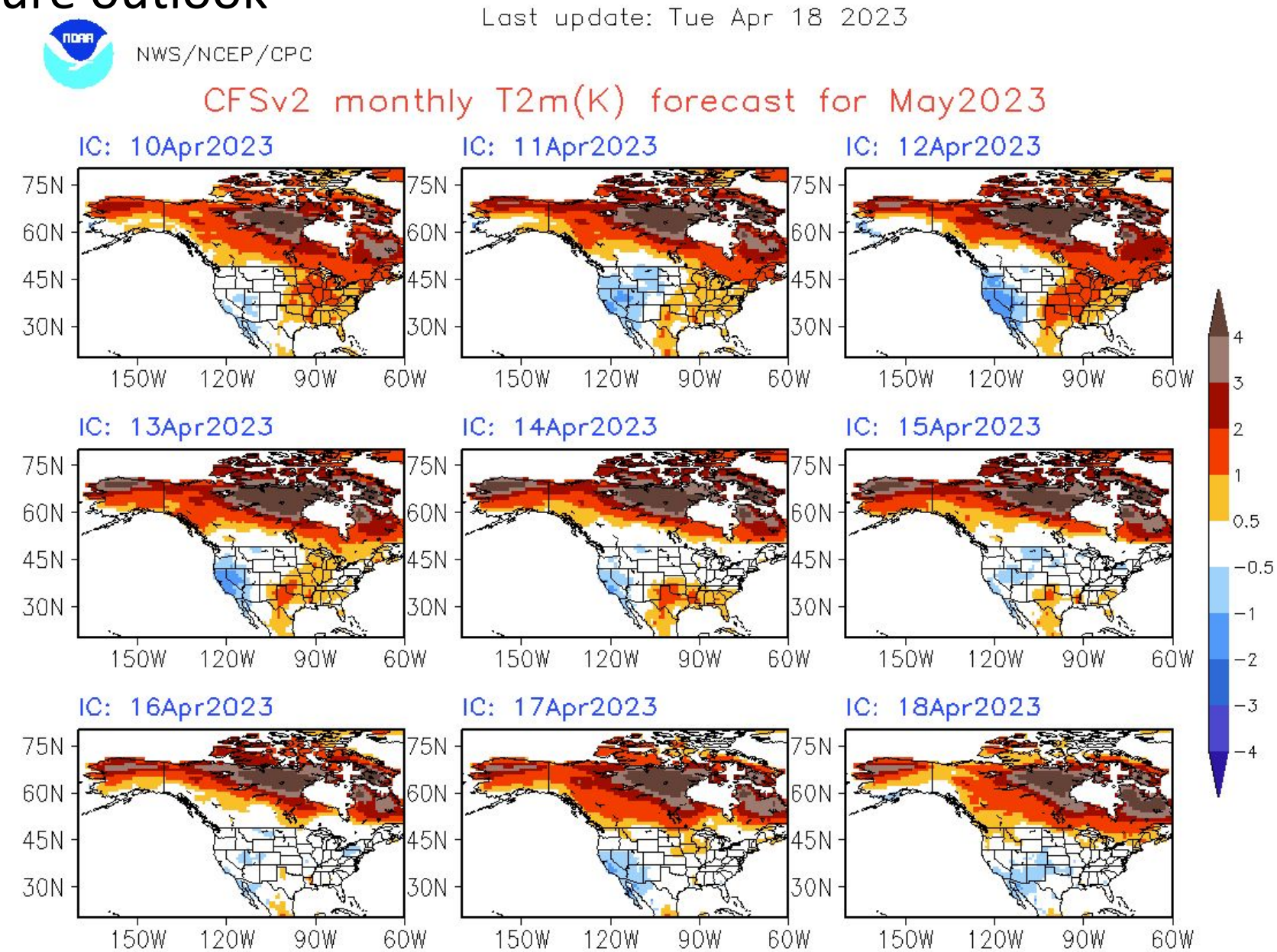
Presenter - Jon Meyer

CFSv2 May temperature outlook



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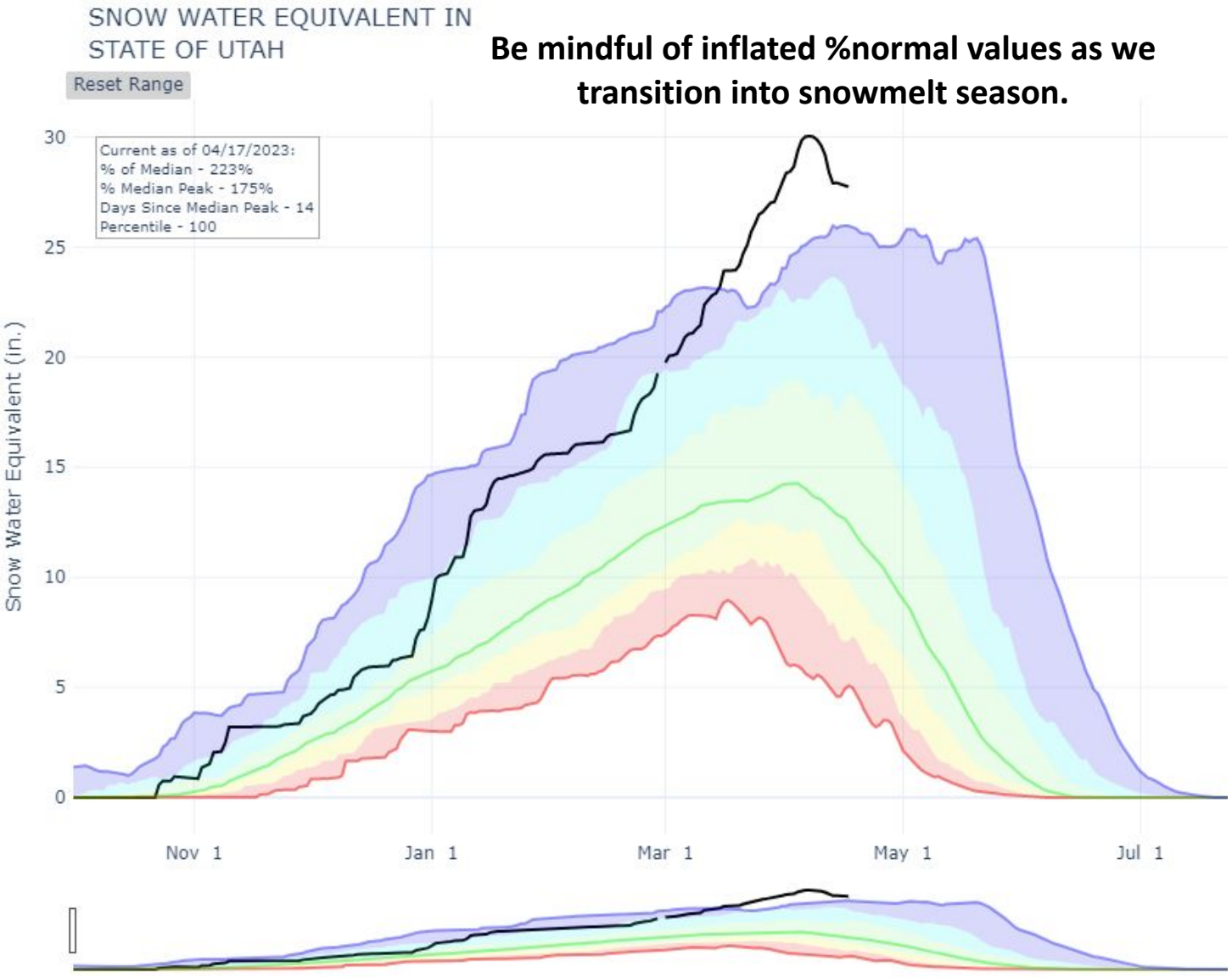
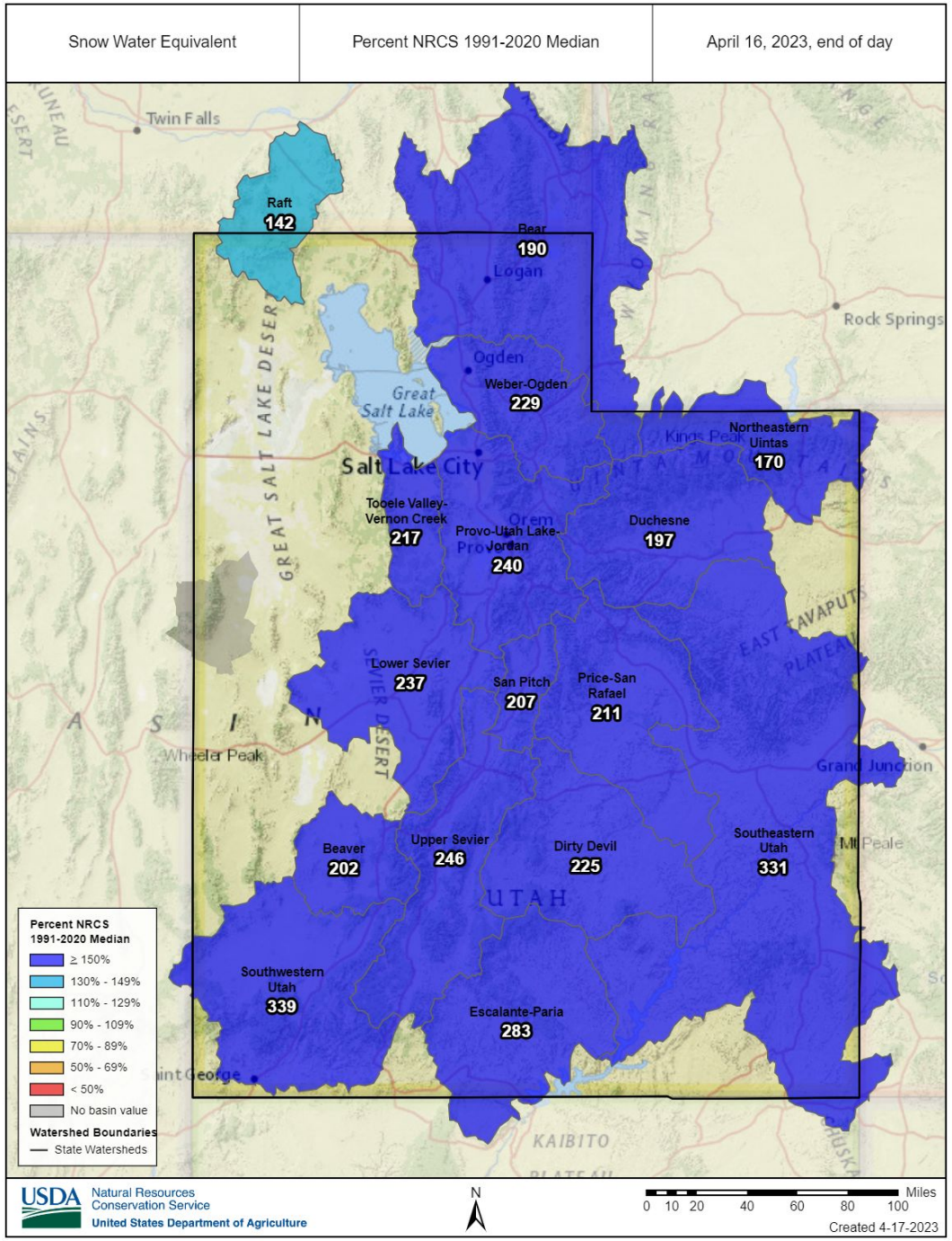
Presenter - Jon Meyer

Snowpack

Statewide snowpack is still above previous observations.

Be mindful of inflated %normal values as we transition into snowmelt season.



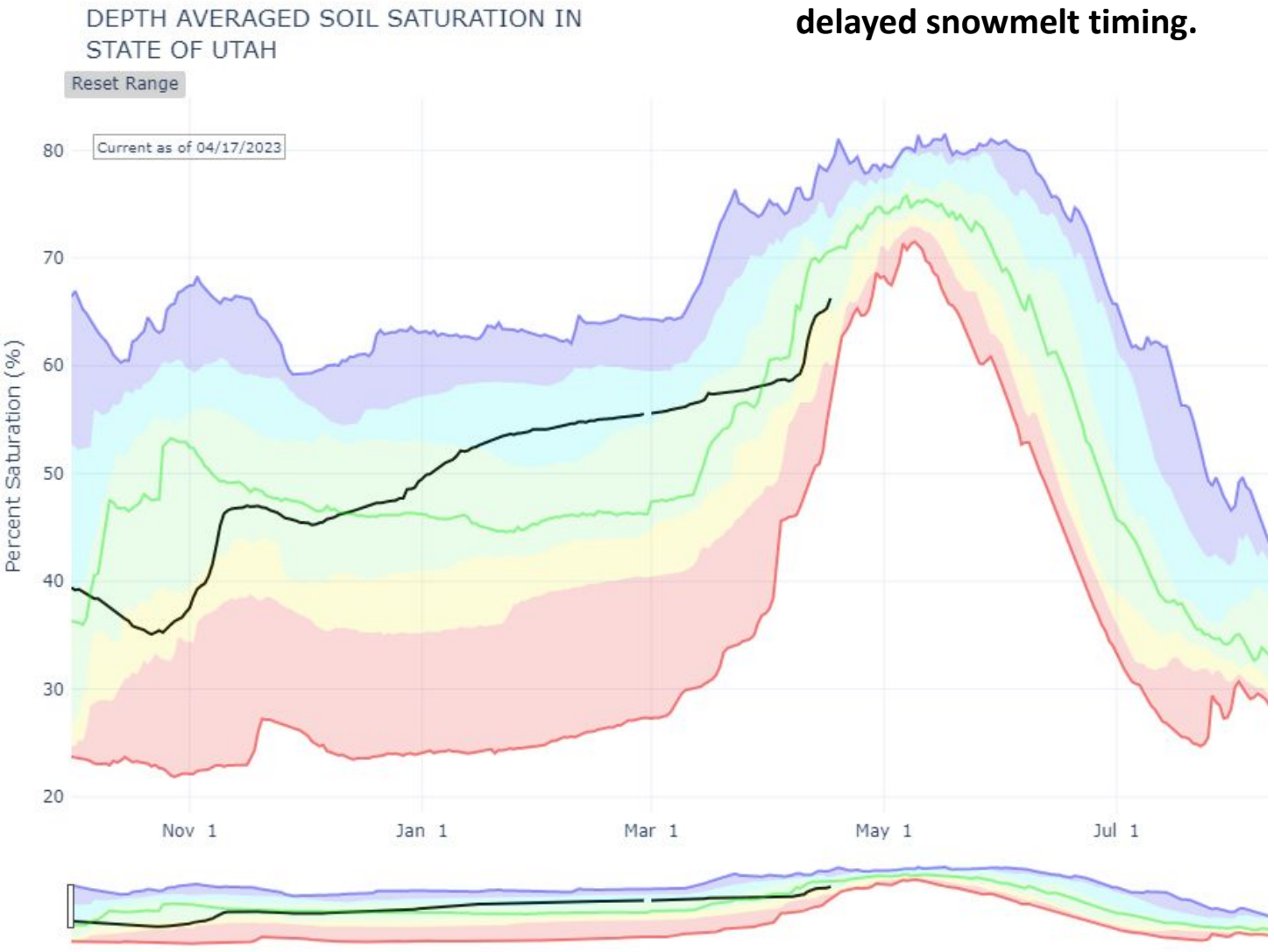


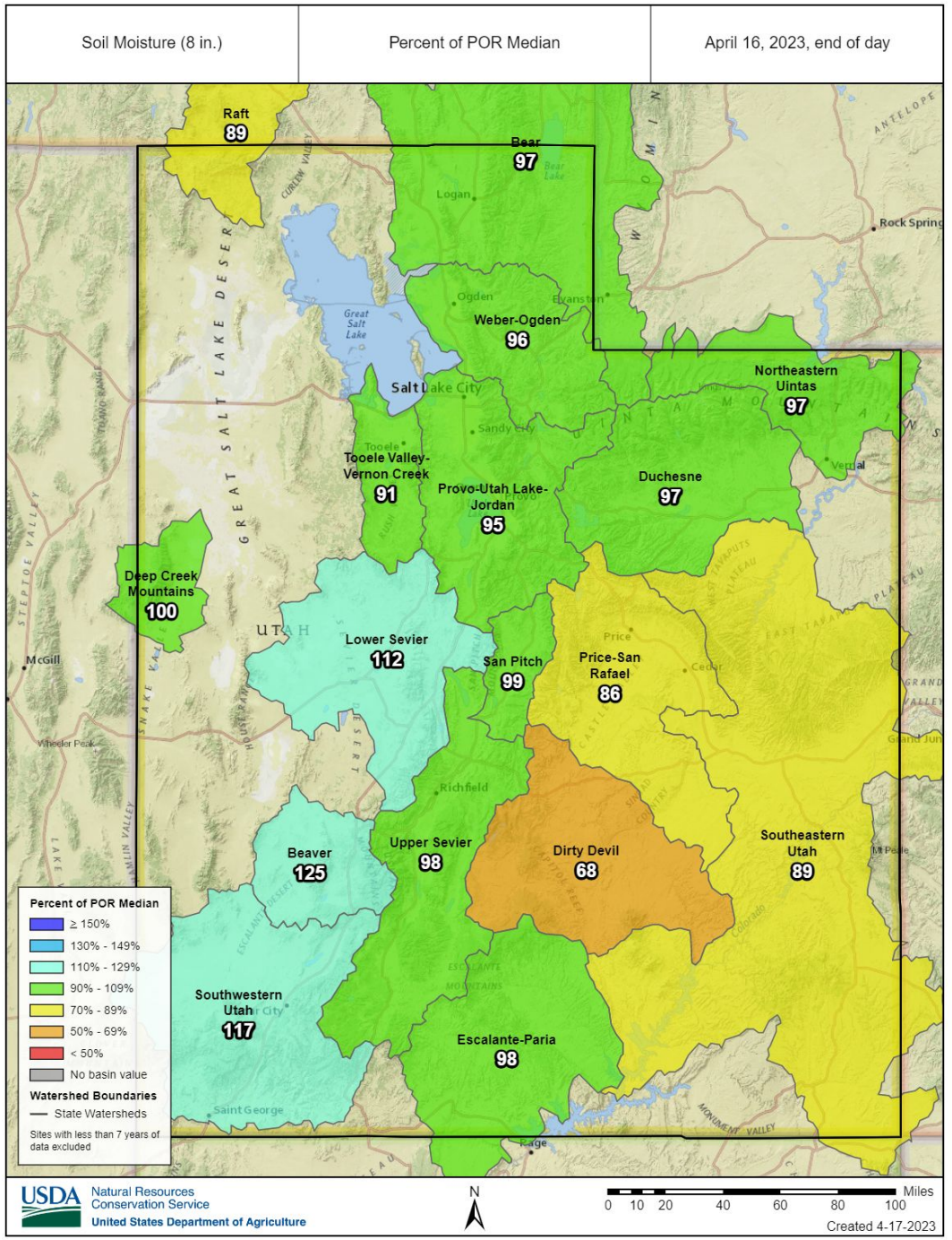
Agency - NRCS Snow Survey

Presenter - TBD, slide prepared by Jordan Clayton

Soil Moisture

Below normal soil moisture conditions are simply due to delayed snowmelt timing.



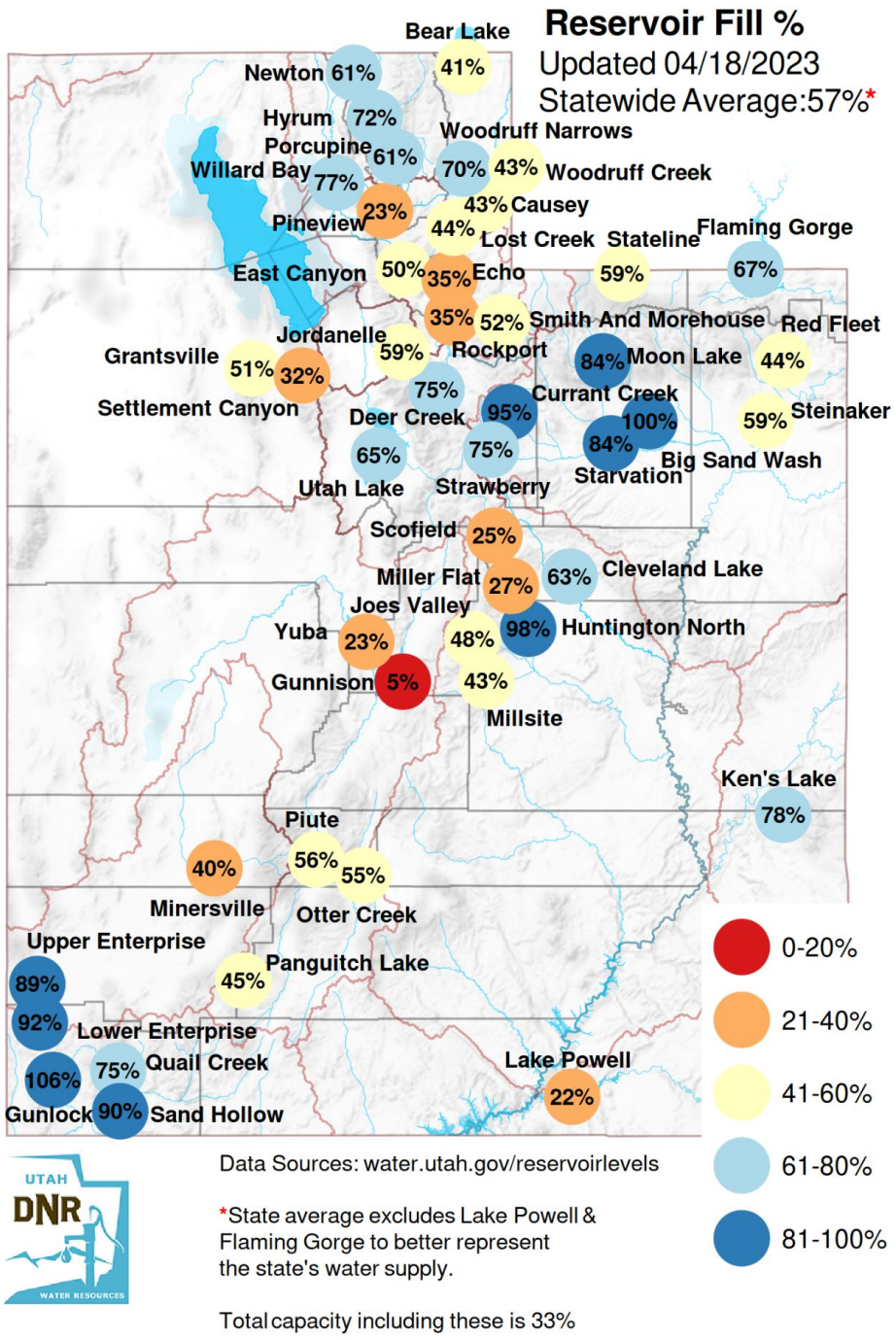


Agency - NRCS Snow Survey

Presenter - TBD, slide prepared by Jordan Clayton

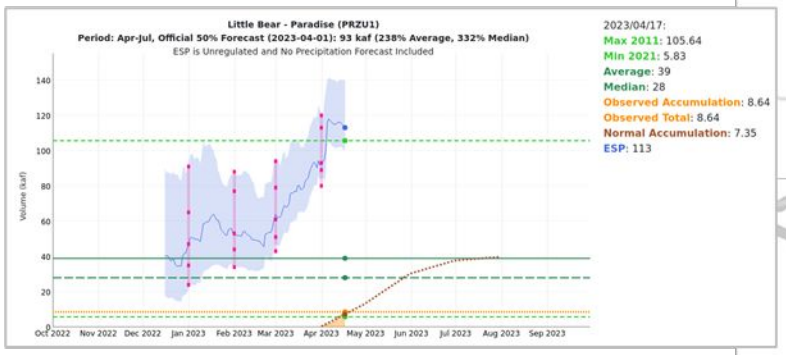
Scofield: 15% low in November, expected to fill
Deer Creek: 27% low in November, expected to fill
Pineview: 17% low in November, expected to fill

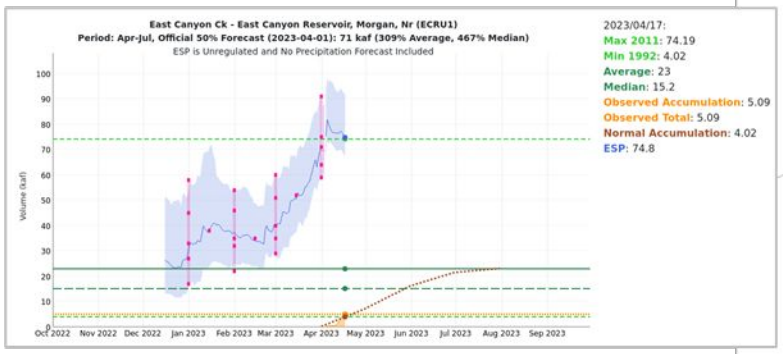
Great Salt Lake: new record low in November, not likely to come up to Strike Team ideal level

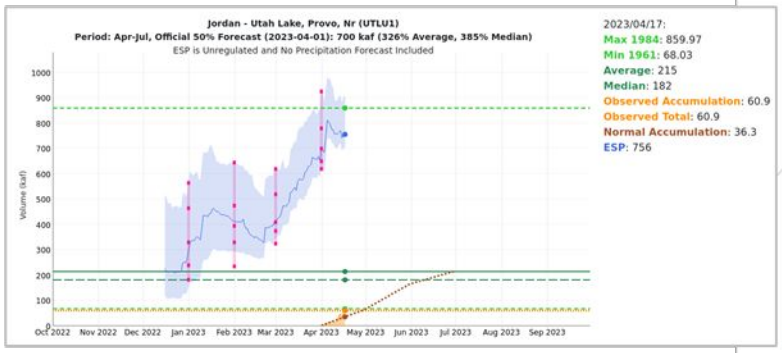


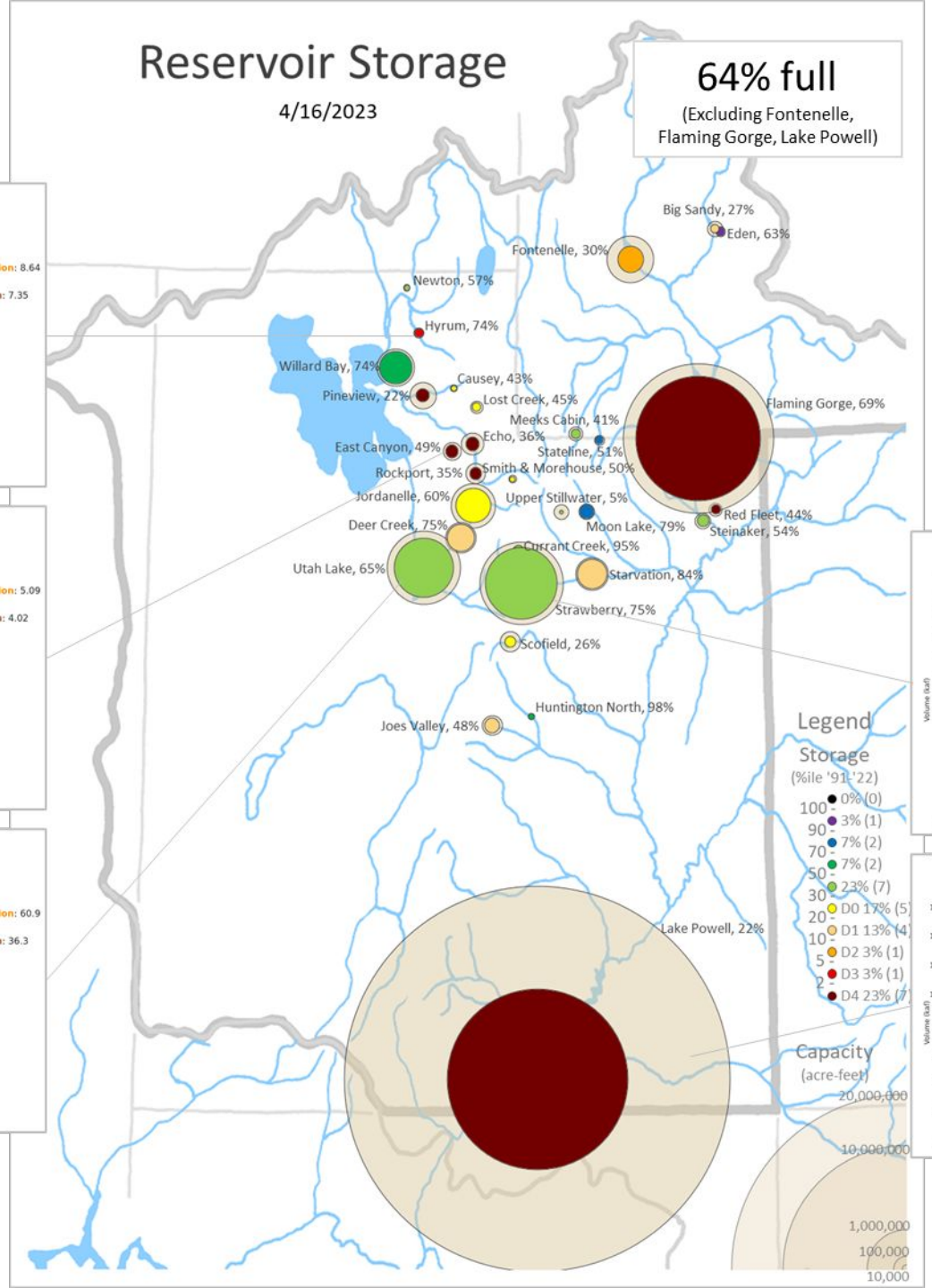
Agency - Division of Water Resources
Presenter - Laura Haskell

Reservoir Levels



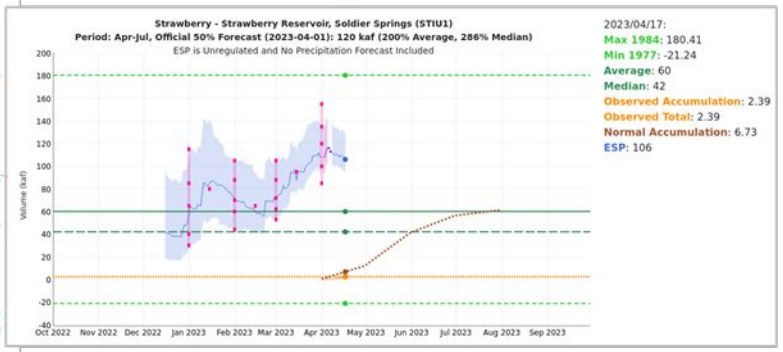


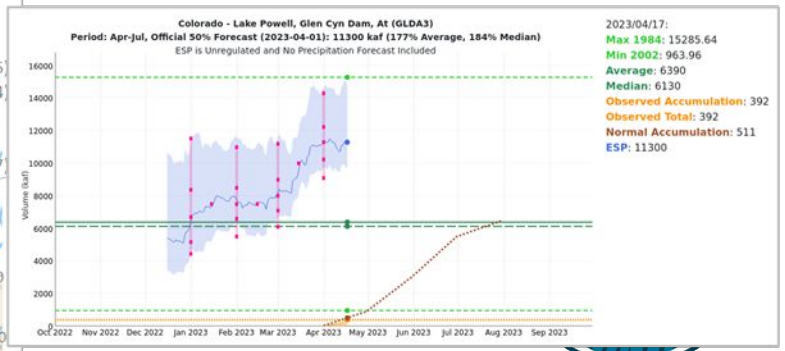




Since last meeting:

- Many April-July Runoff Volume Forecasts have increased.
- Reservoir inflows are starting to increase.
- Rain-on-snow concerns for low elevation reservoirs.
- Many reservoirs are releasing water prior to peak runoff.





Agency - BOR
Presenter - Gary Henrie

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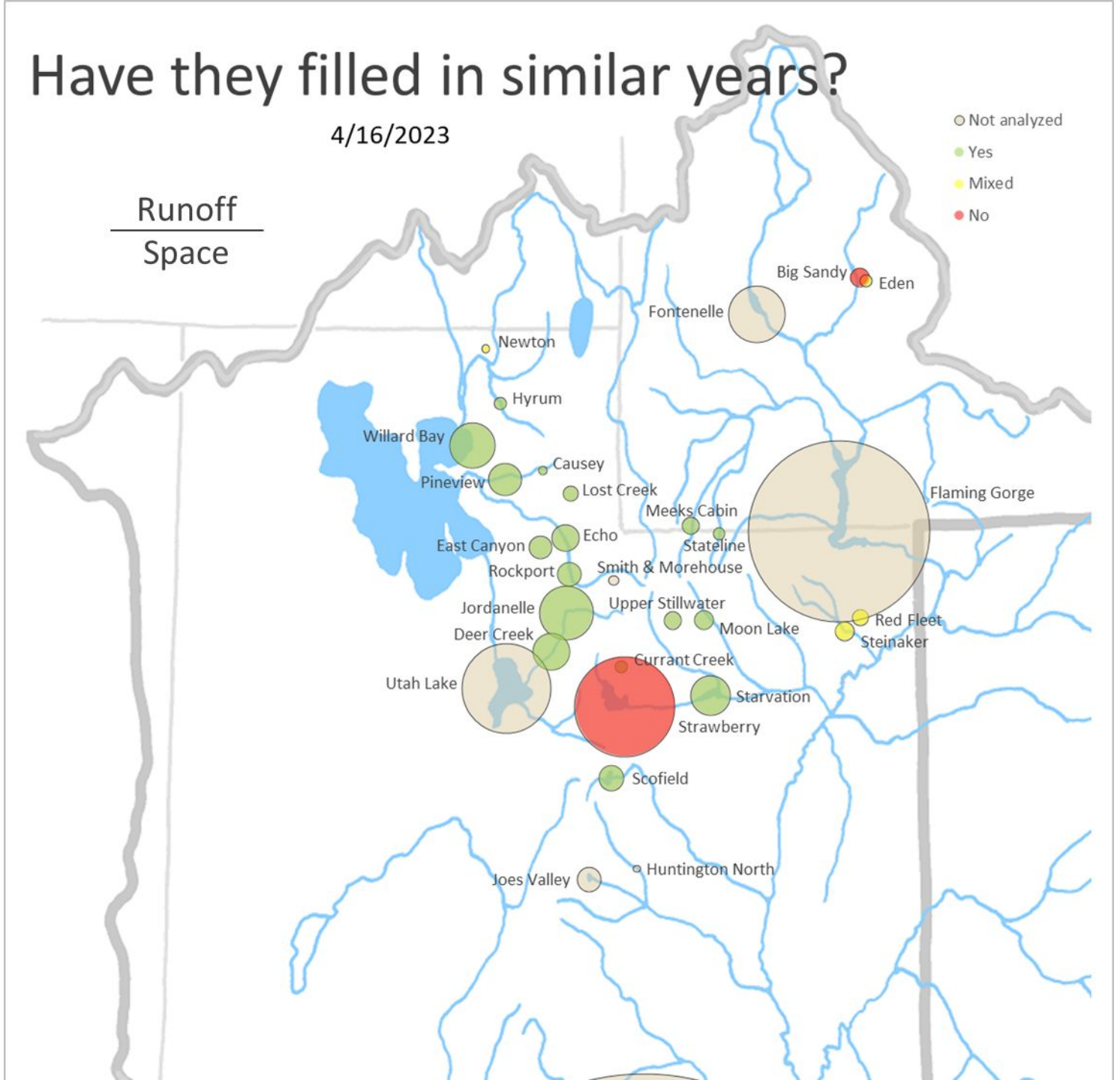
Reservoir Levels



Agency - BOR
Presenter - Gary Henrie

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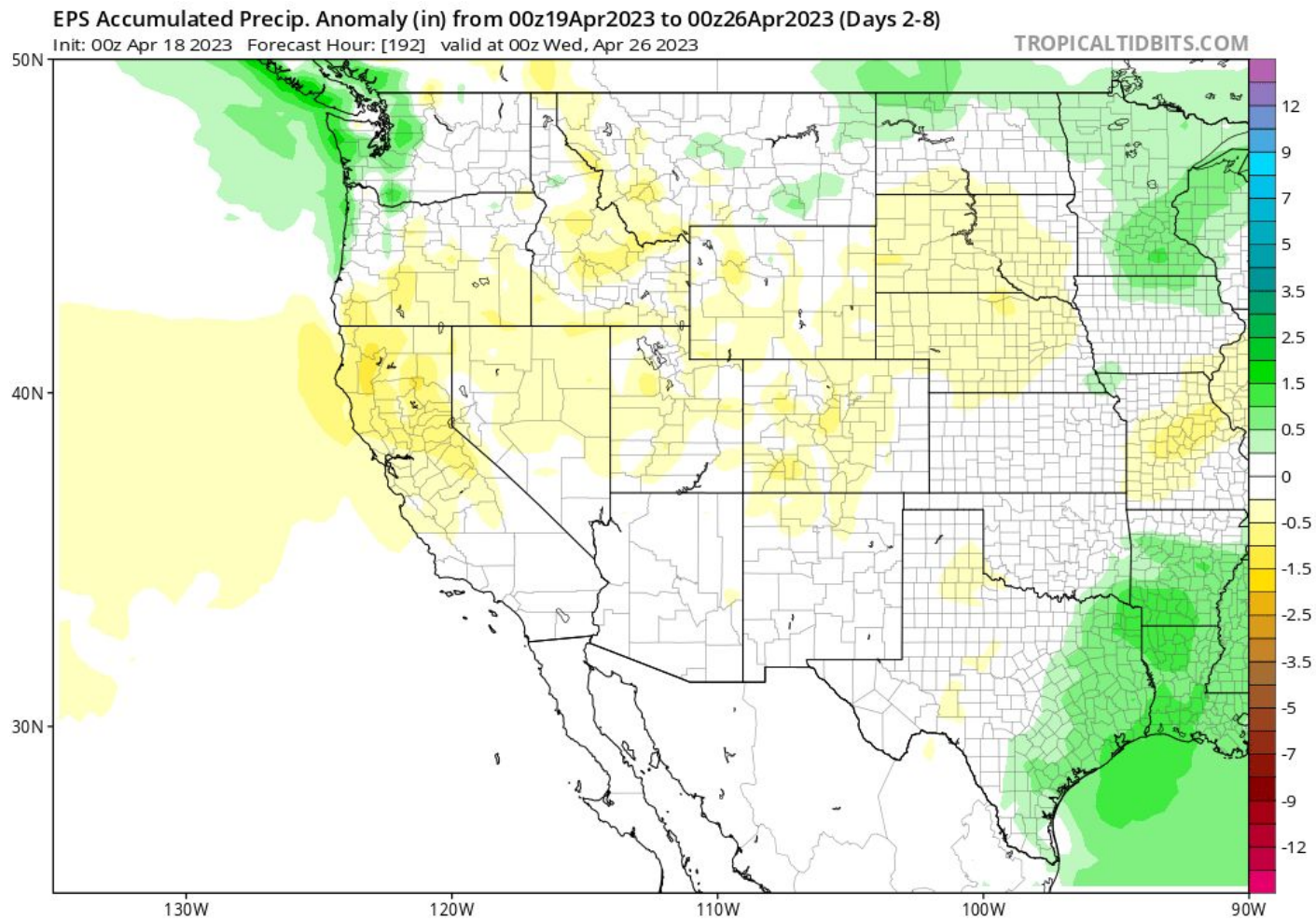
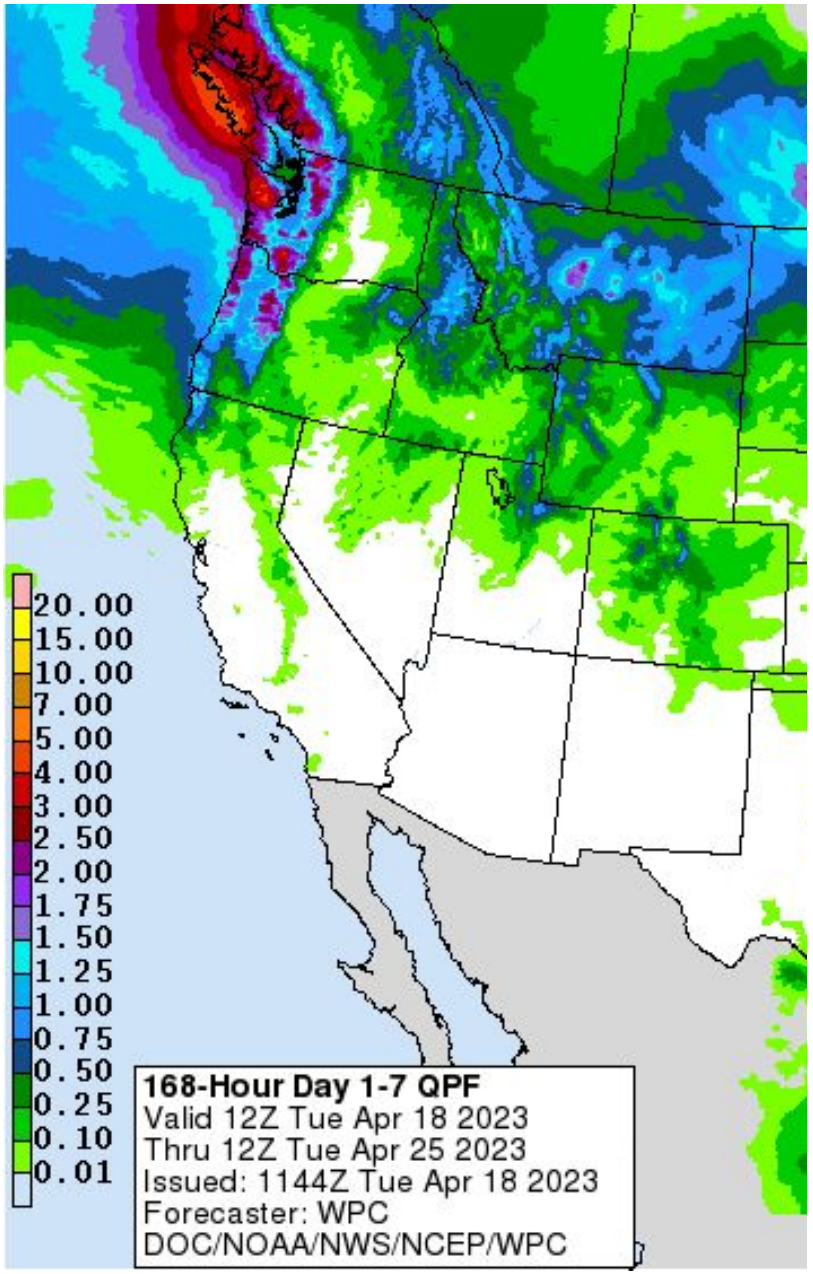
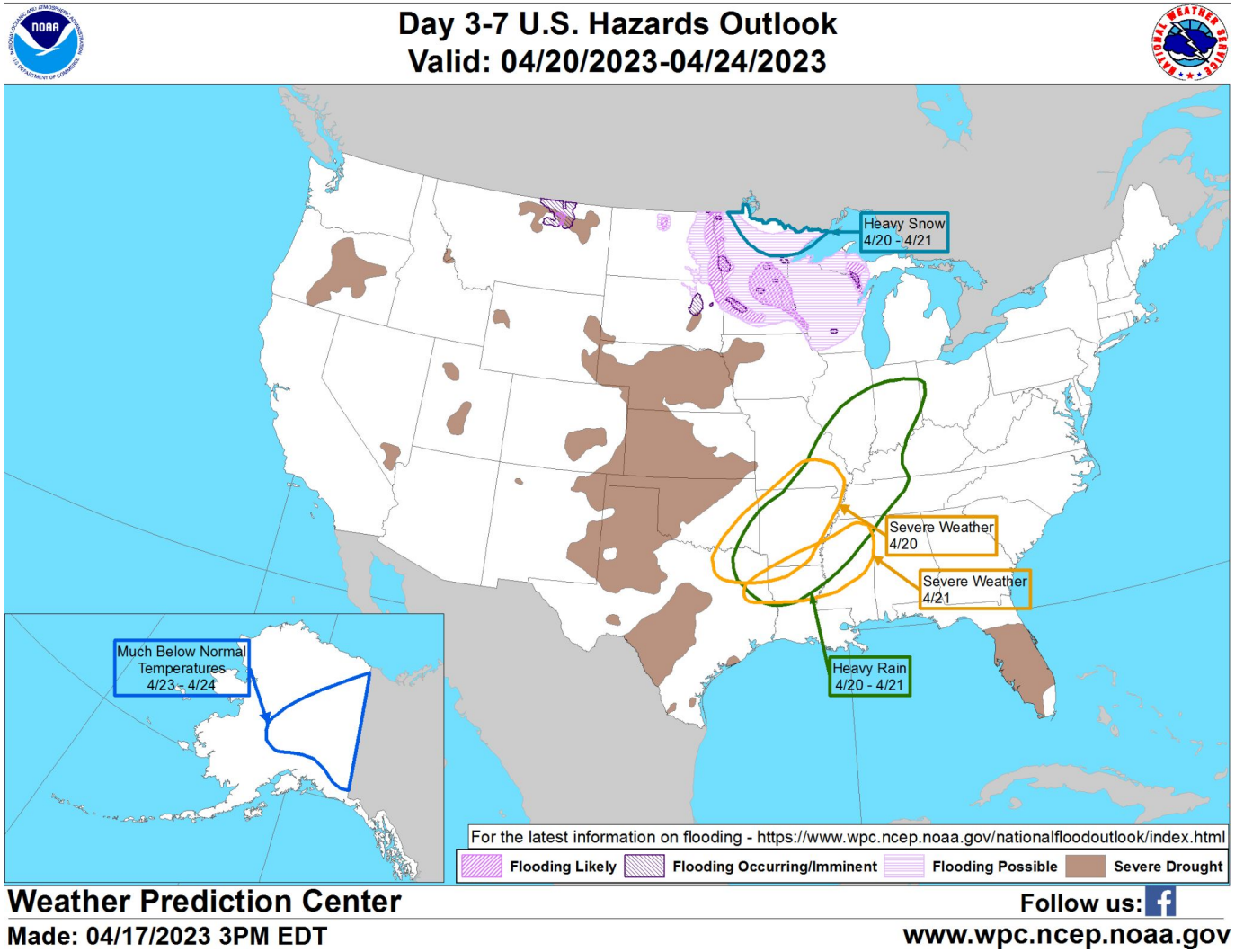
Weather Forecast Office Utah Day 1-7 Outlook





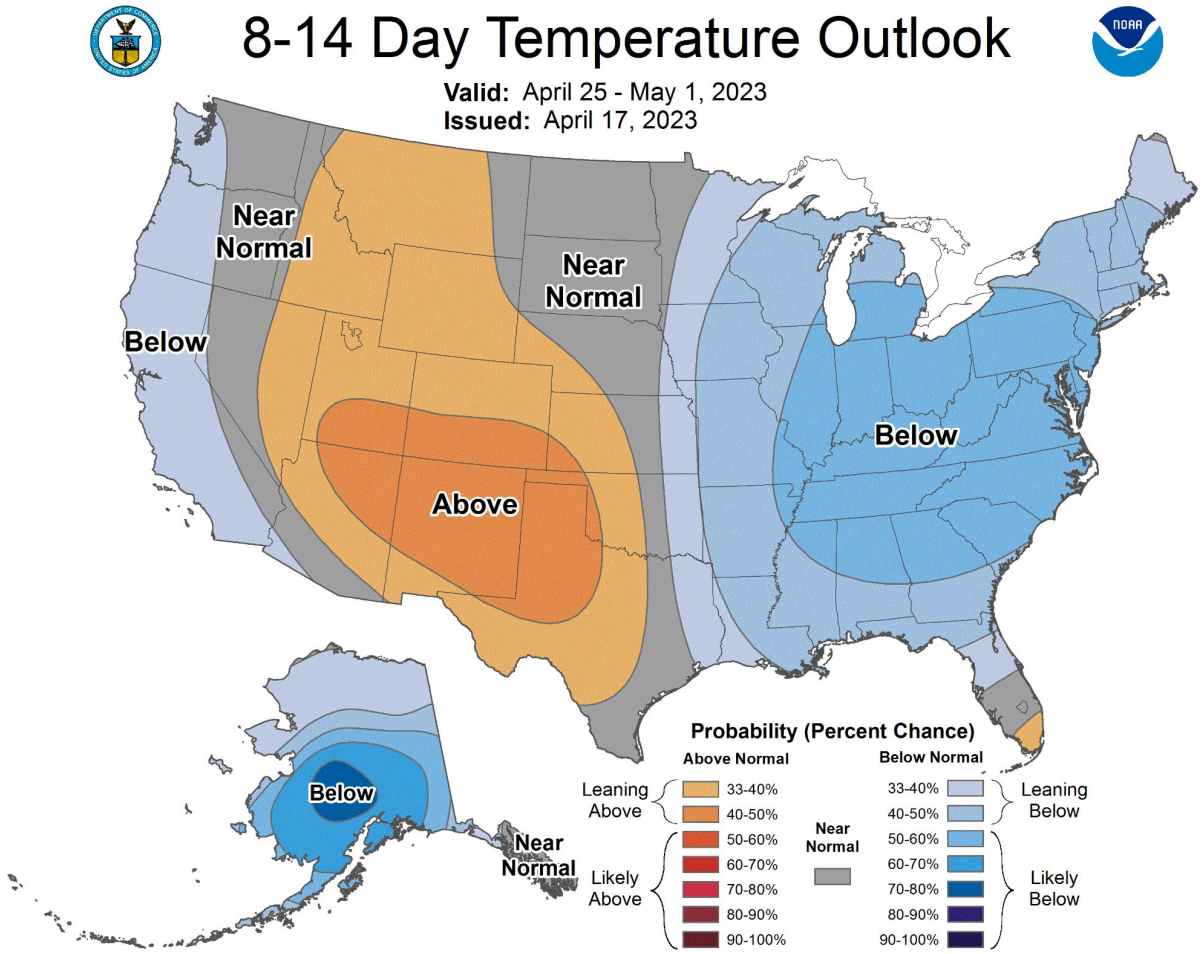
Agency - National Weather Service Weather Forecast Office
Presenter - Glen Merrill

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



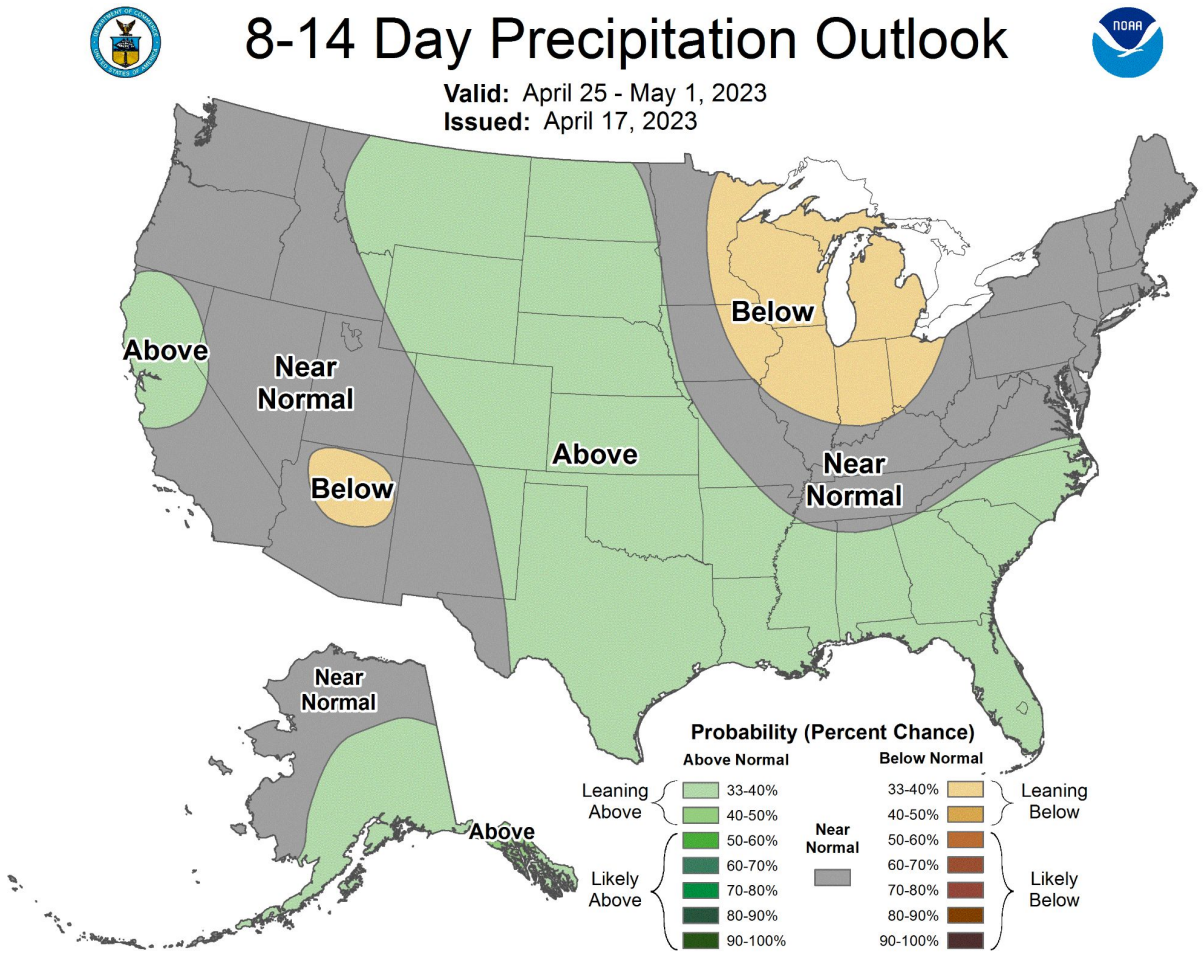
Agency - National Weather Service Weather Forecast Office
Presenter - Glen Merrill

Climate Prediction Center 8 to 14 Day Outlooks - Temperature



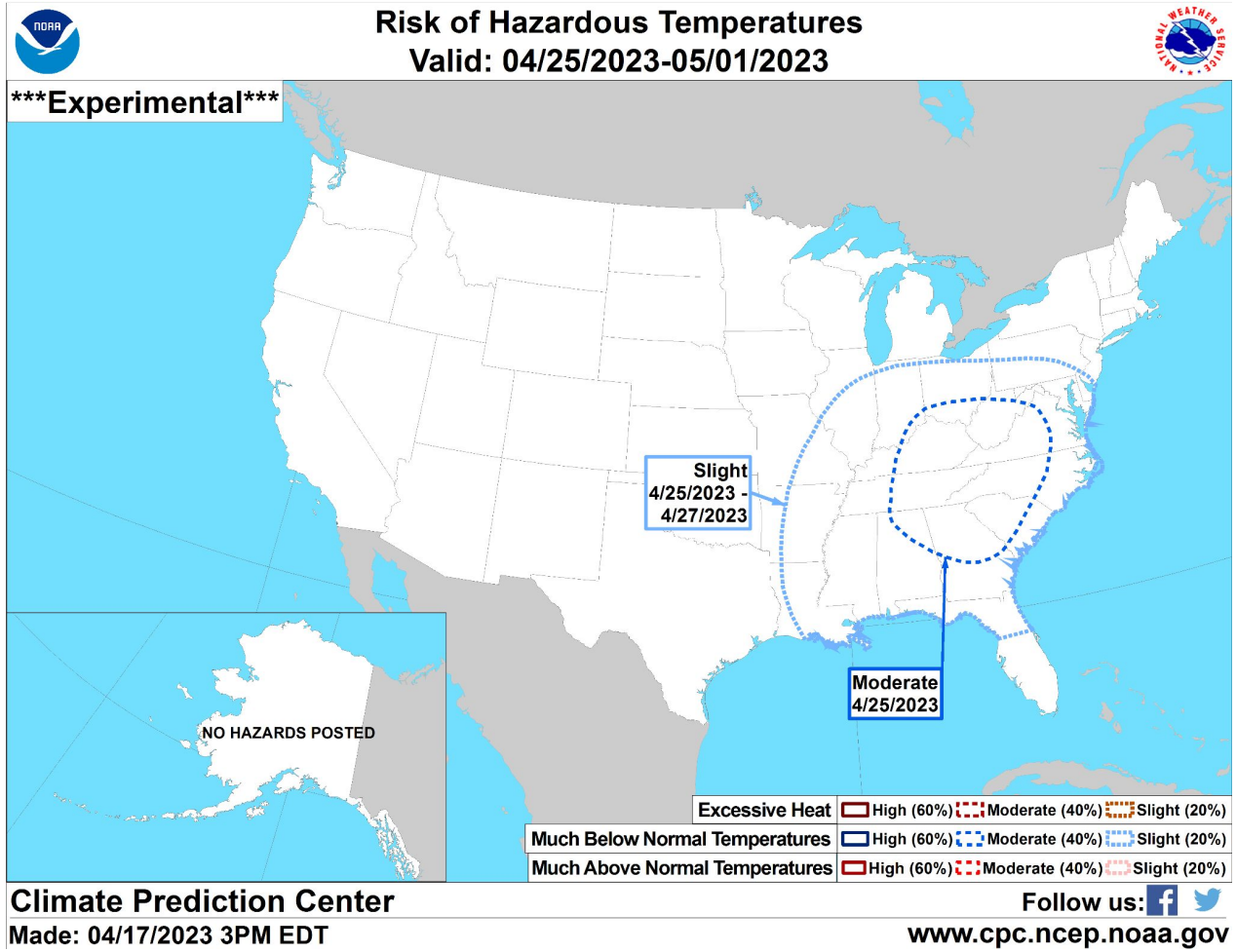
Agency - National Weather Service Weather Forecast Office
Presenter - Glen Merrill

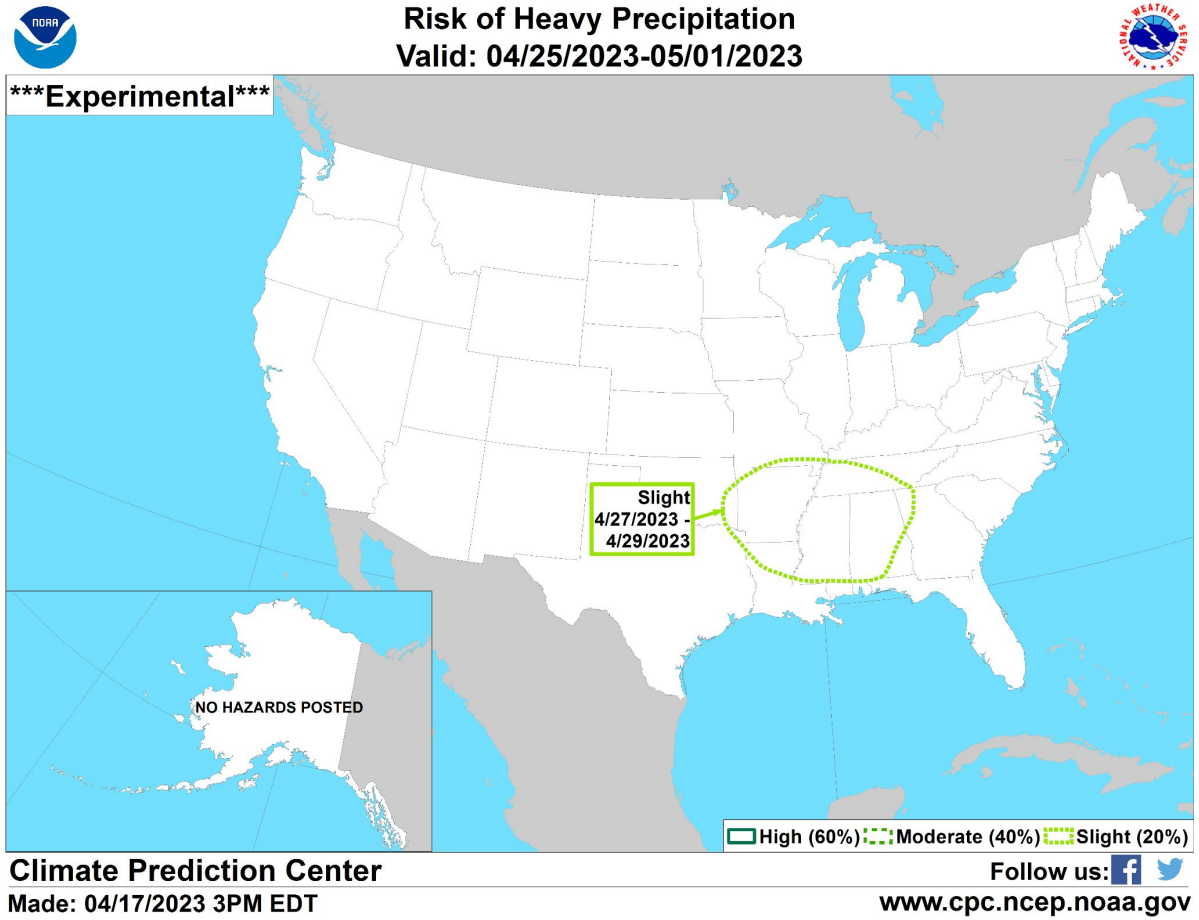
Climate Prediction Center 8 to 14 Day Outlooks - Precipitation



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

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

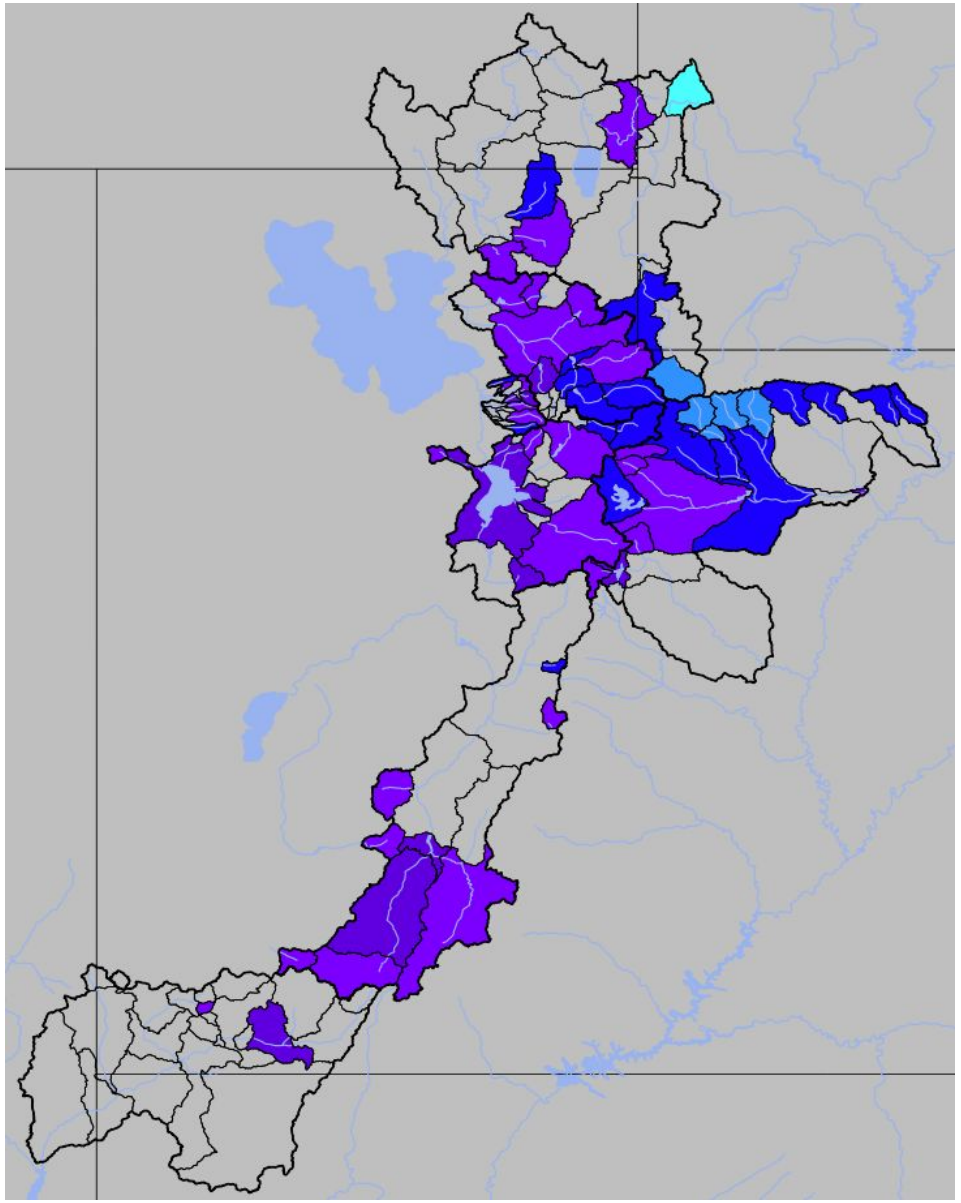




Agency - National Weather Service Weather Forecast Office
Presenter - Glen Merrill

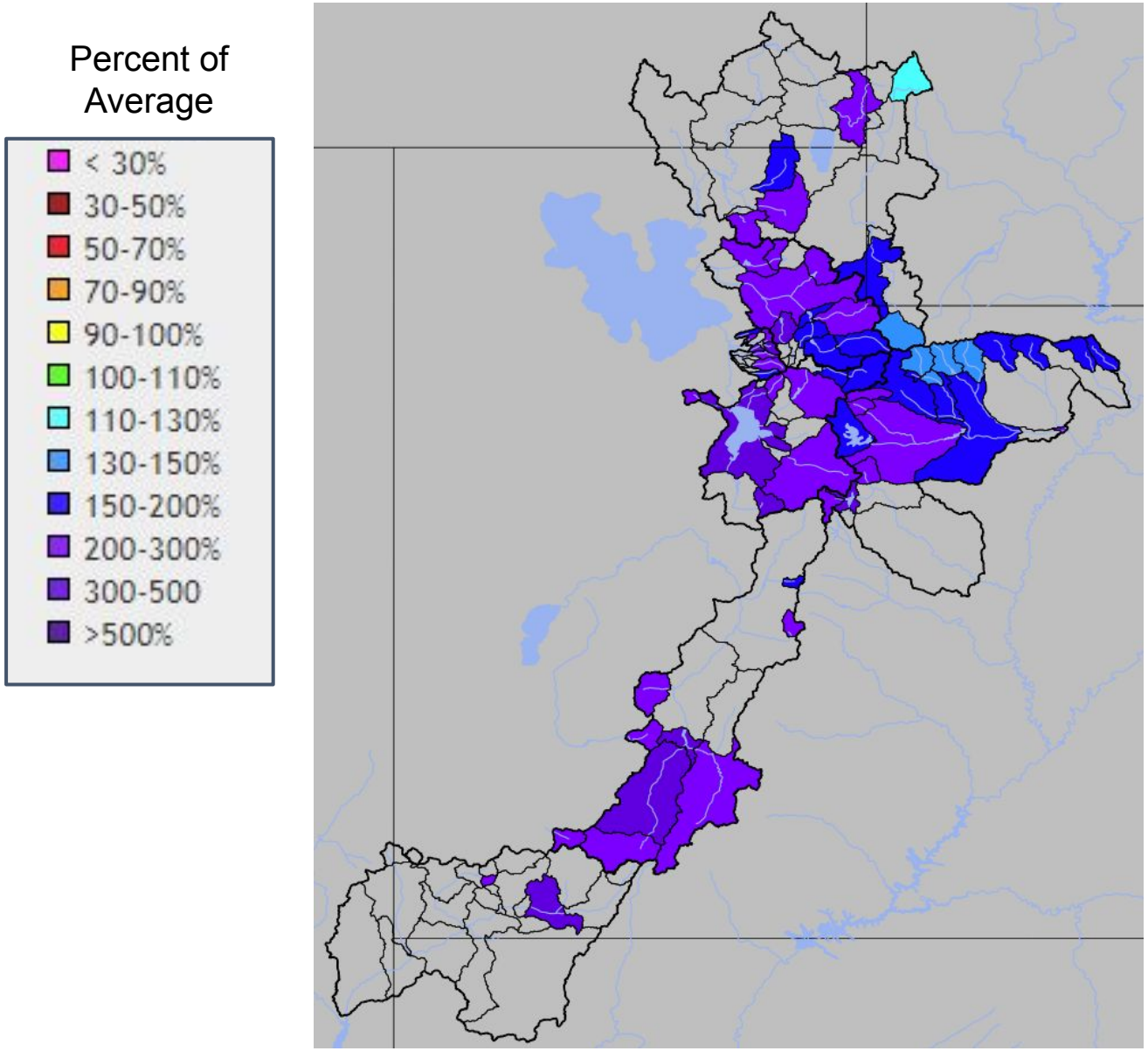
Water Supply Forecasts / Runoff (Percent of Average)

Map of seasonal water supply forecasts
Summary of conditions at:
Weber
Bear
Six Creeks
Utah Lake
Sevier
Green River
San Juan
Lake Powell



Agency - CBRFC
Presenter - Patrick Kormos

Utah Water Supply Forecasts

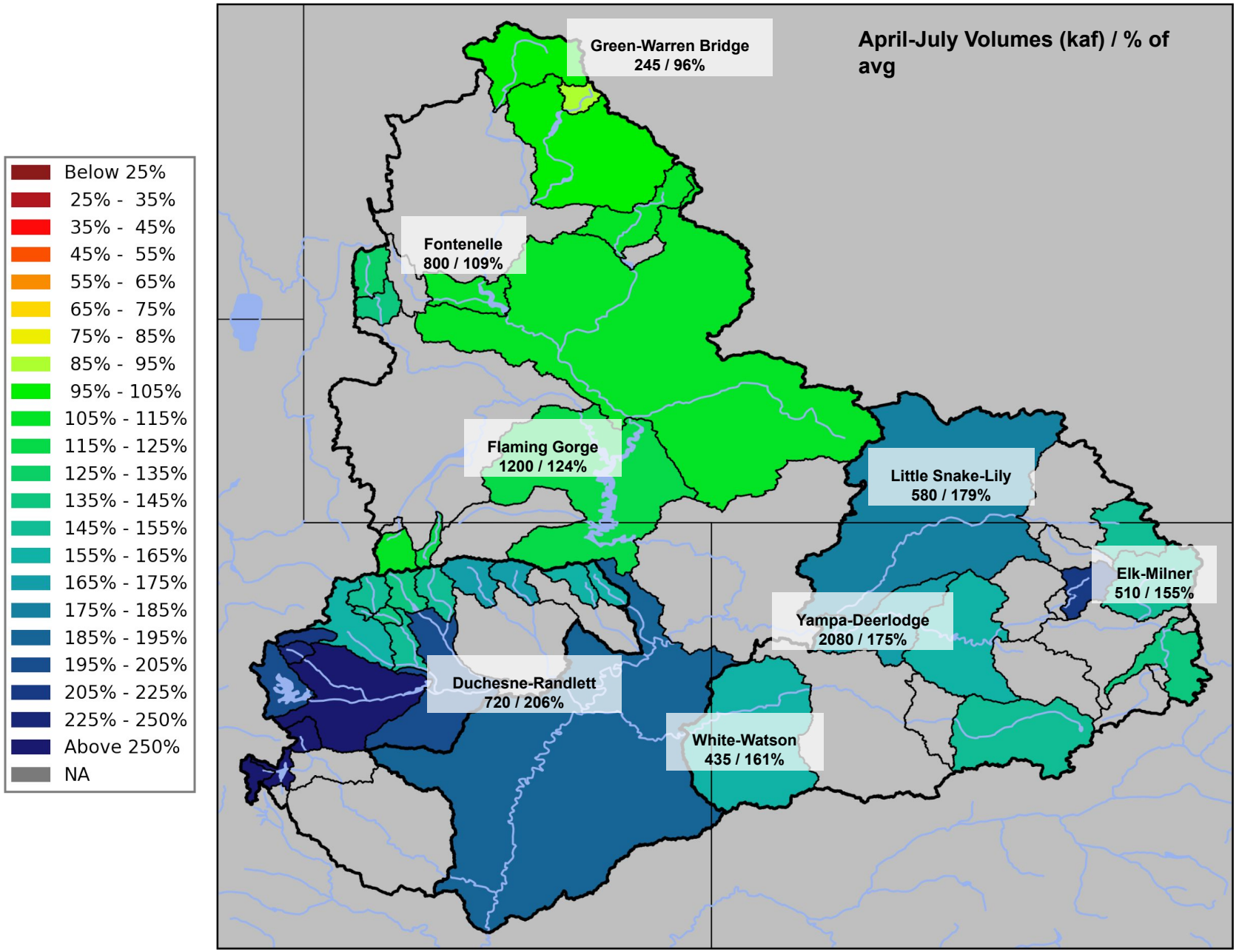


- April 1 forecast for April-July volume
- April-July forecast streamflow volumes are in percent of 1991-2020 average.

Median forecasts by forecast group.

Bear	160
Weber	215
Six Creeks	235
Provo / Utah Lake	260
Sevier	245
Duchesne	165
Virgin	305

April 1st Water Supply Forecasts: Green, Yampa, White, Duchesne



April 1st 2023 Forecasts

Volume (kaf) / % of 1991-2020 avg

<u>Forecast Ranges & (1-month Trend)</u>

Upper Green: 95 -145%
(10-40% increase)

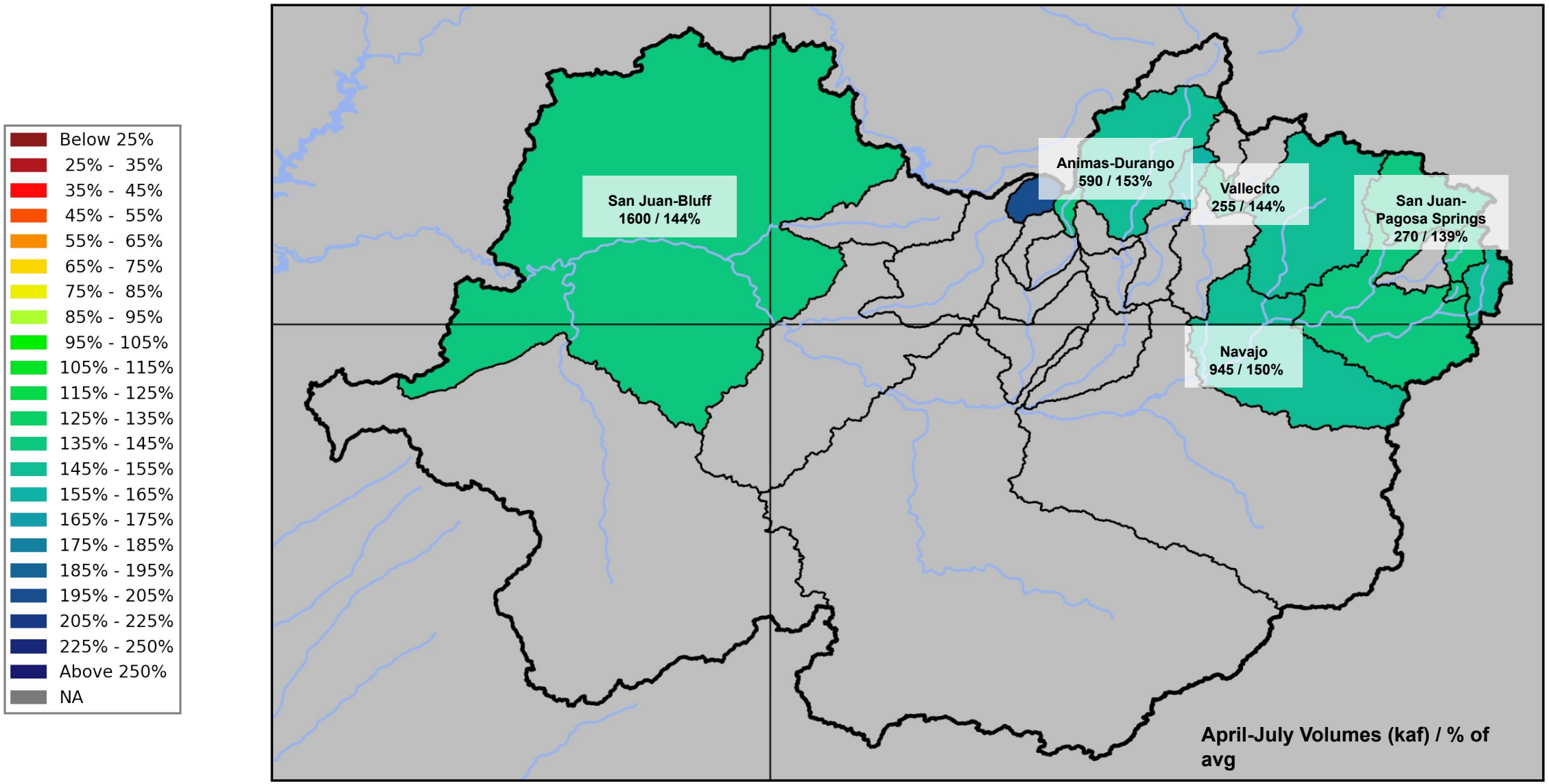
Yampa/White: 135 - 210%
(15-40% increase)

Duchesne: 140 - 260%
(25-125% increase)

April 1st Water Supply Forecasts: San Juan

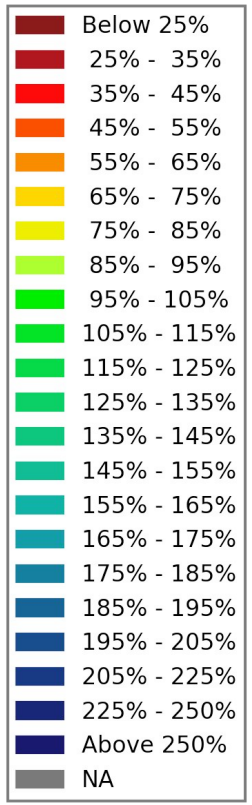
Forecast Range & (1-month Trend):

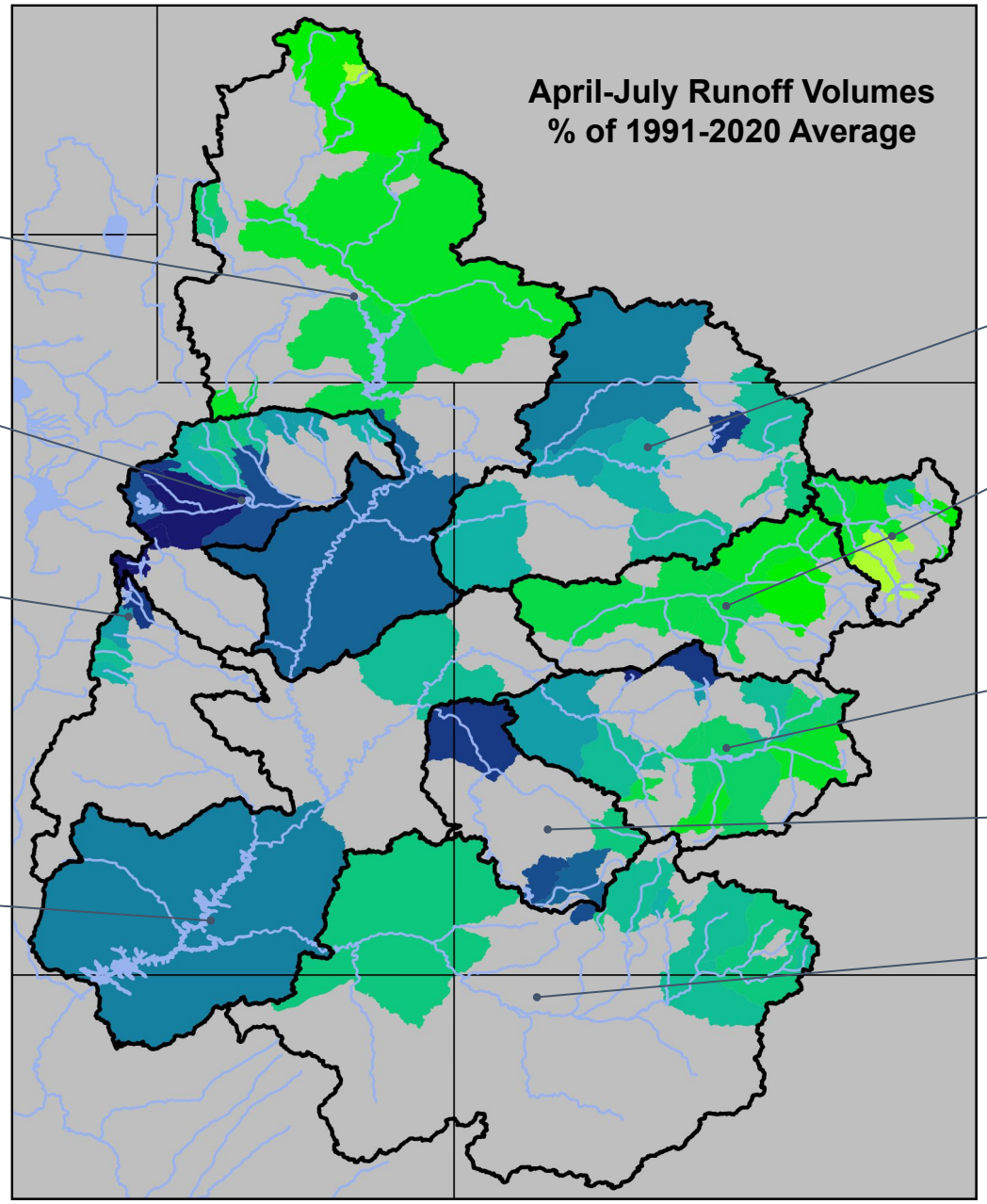
135 - 200% of average (25-35% increase)



April 1st Water Supply Forecasts: Upper Colorado

Water supply forecast volumes increased over the past month across the Colorado River Basin as a result of above normal March precipitation.





Upper Green: 95-145%

Duchesne: 140-260%

San Rafael/Dirty Devil: 150-305%

Lake Powell: 177%

Lake Powell summarizes the hydrologic conditions throughout the Upper Colorado River Basin.

White/Yampa: 135-210%

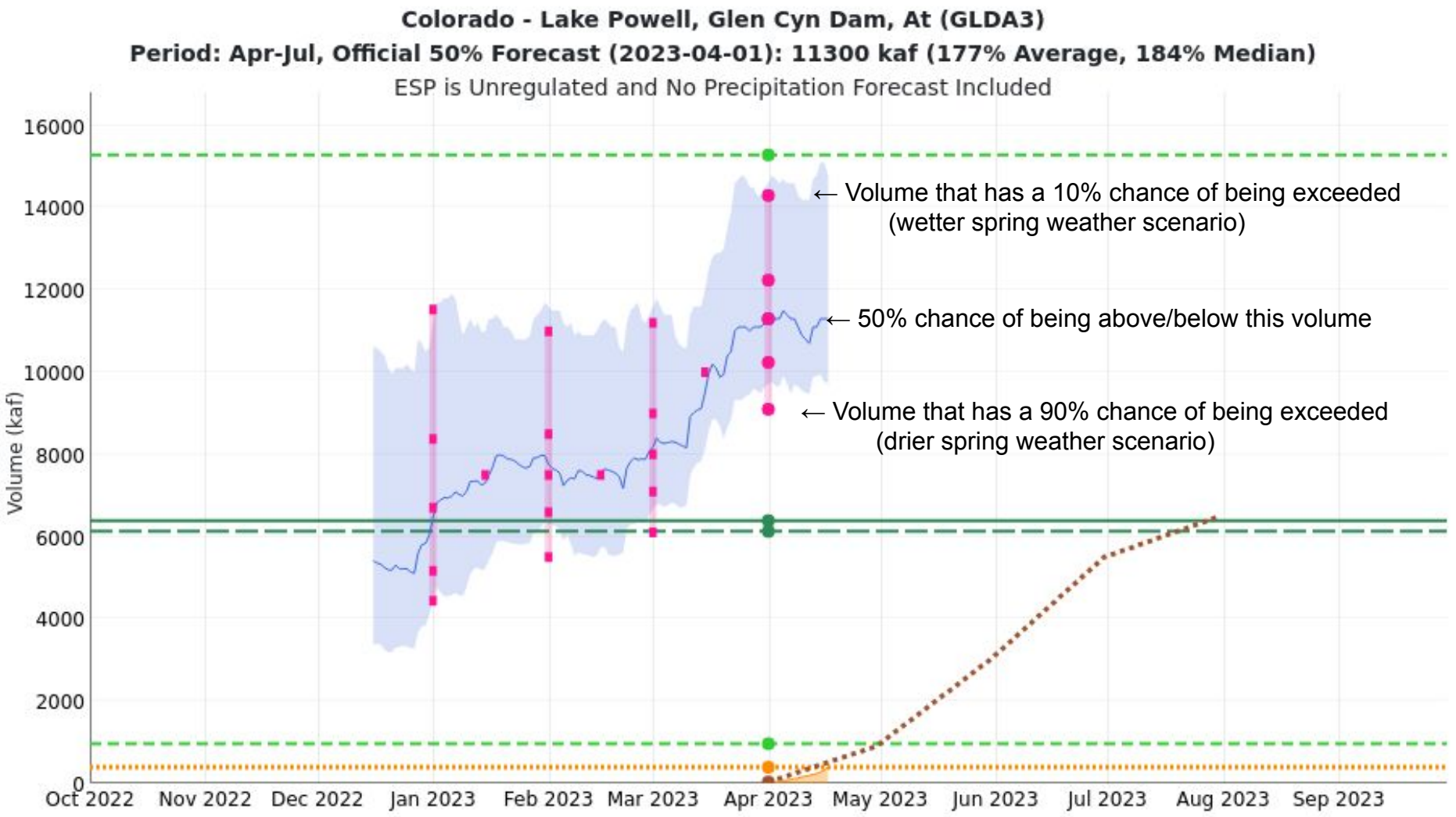
Upper CO: 90-150%

Gunnison: 110-225%

Dolores: 140-210%

San Juan: 135-200%

April 1st Water Supply Forecast - Lake Powell

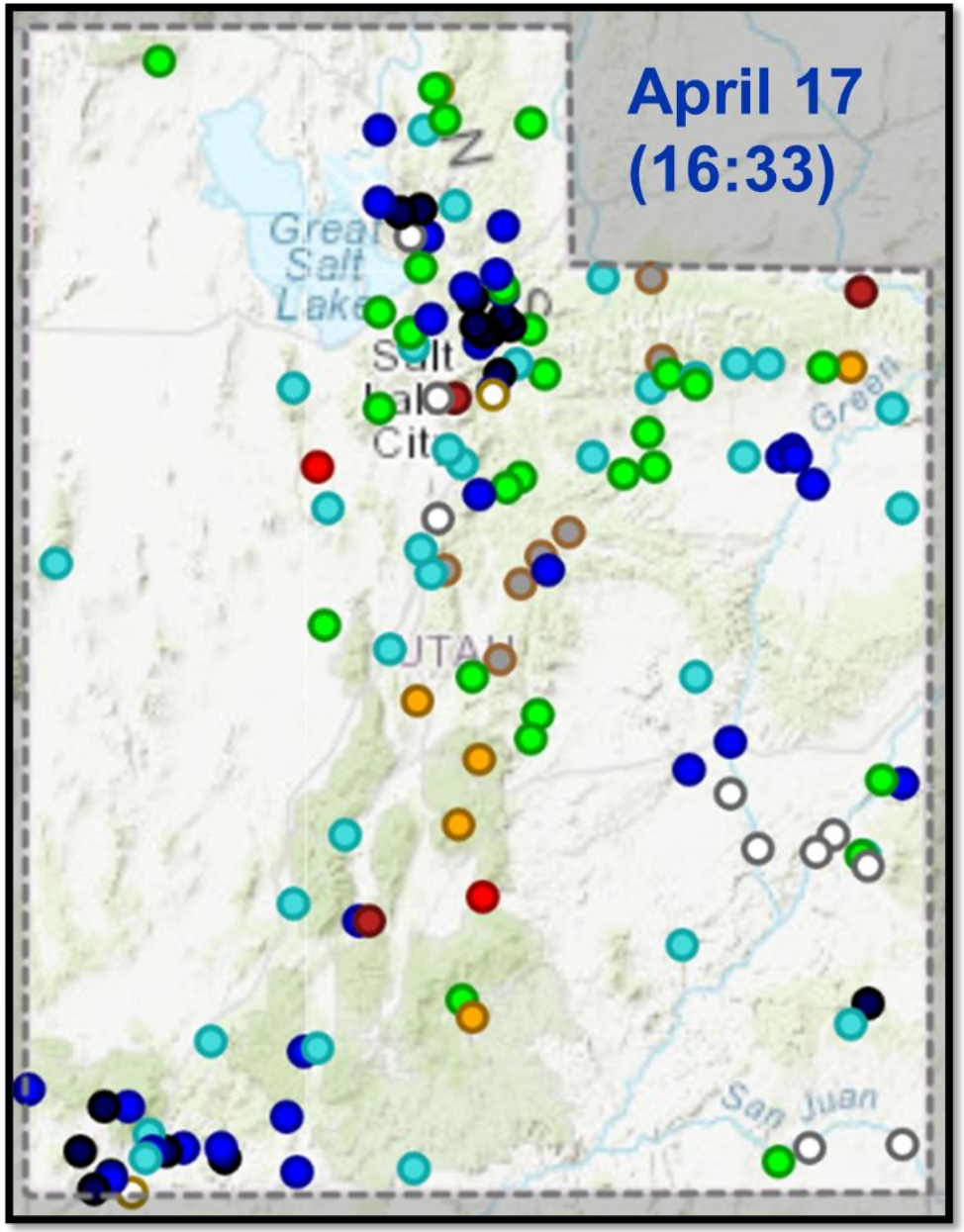


2023/04/01:

Max 1984: 15285.64
Min 2002: 963.96
Average: 6390
Median: 6130
Observed Total: 392
Normal Accumulation: 30.1
ESP: 11300
Official 10: 14300
Official 30: 12240
Official 50: 11300
Official 70: 10240
Official 90: 9100

20% chance observed runoff volume could be outside of the 10/90 forecast range.

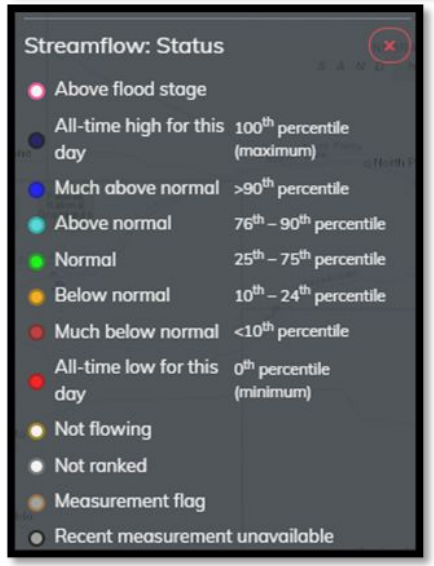
Current Streamflow Conditions



National Water Dashboard

Provisional data subject to revision

Day-of-Year Status	Mar 28 % Gages	Apr 17 % Gages
All-time high for this day-of-year	1.5%	13.1%
Much above normal for this day-of-year	3.6%	21.2%
Above normal for this day-of-year	10.9%	23.4%
Normal for this day-of-year	24.1%	20.4%
Below normal for this day-of-year	9.5%	2.9%
Much below normal for this day-of-year	13.1%	2.9%
All-time low for this day-of-year	5.8%	1.5%
Not ranked - insufficient record	7.3%	7.3%
Not ranked - no measurement	19.7%	4.4%
Not ranked - no recent measurement	1.5%	0.7%
Not ranked - stream not flowing	2.9%	2.2%



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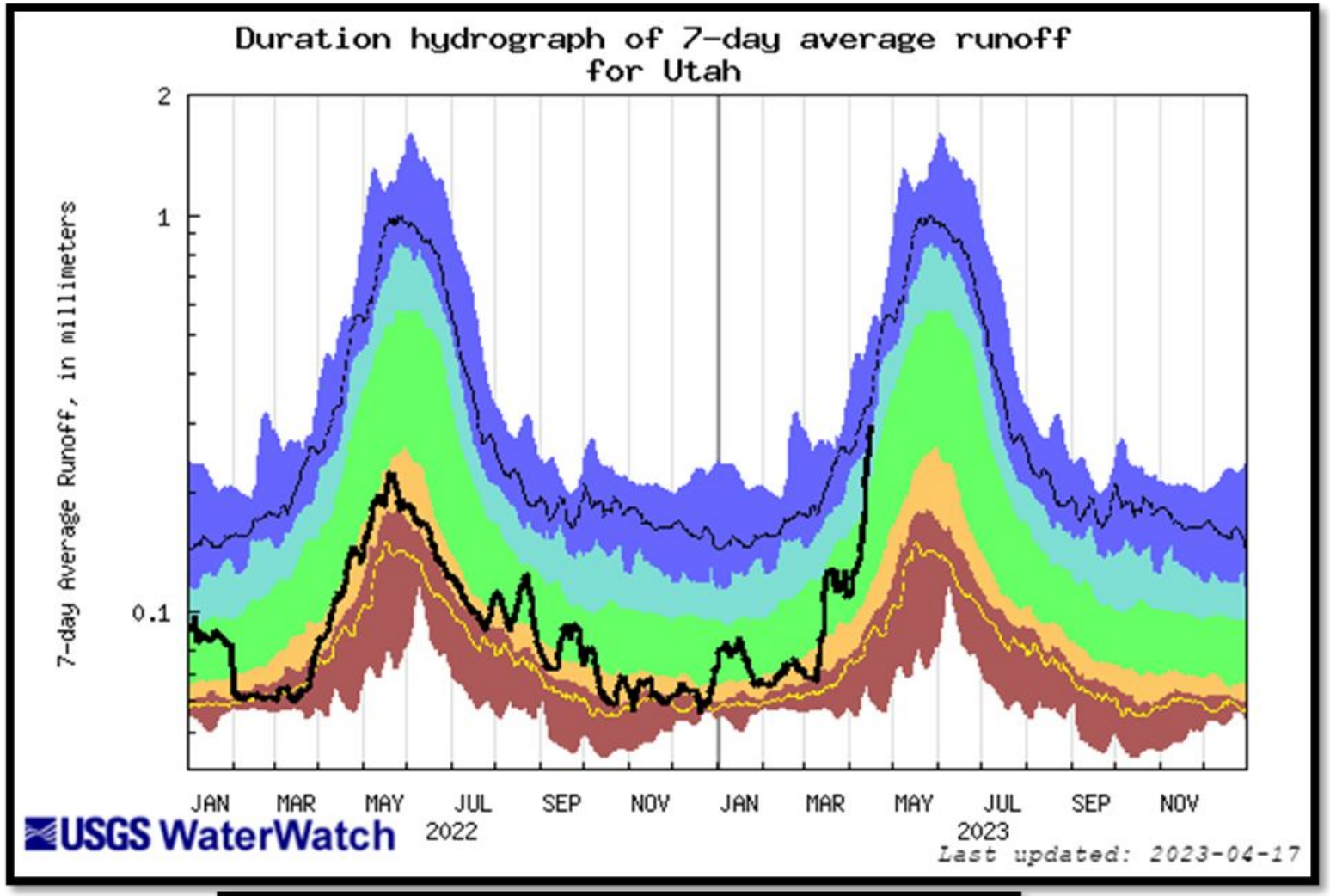
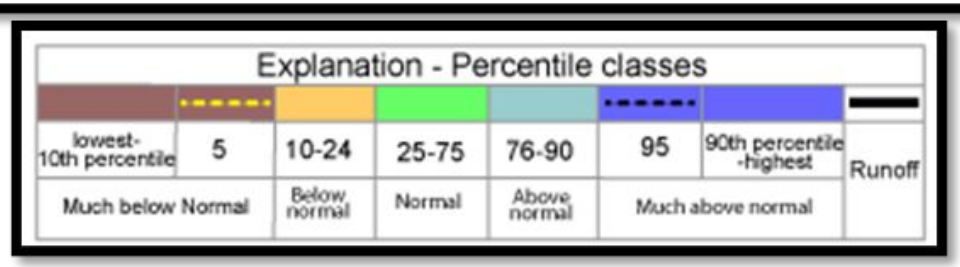
Presenter -

USGS science for a changing world

Utah Area-Based Runoff Duration Hydrograph





Provisional data subject to revision

- **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.**

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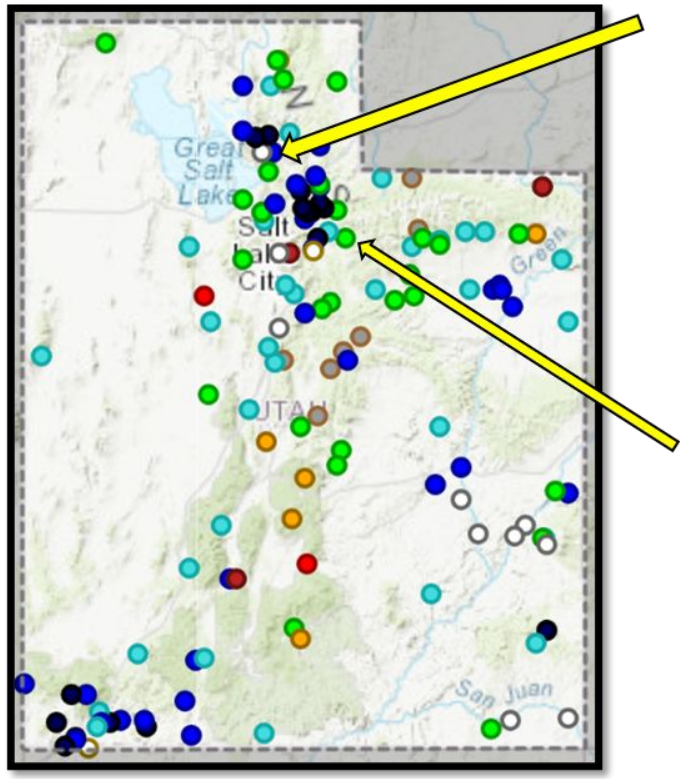
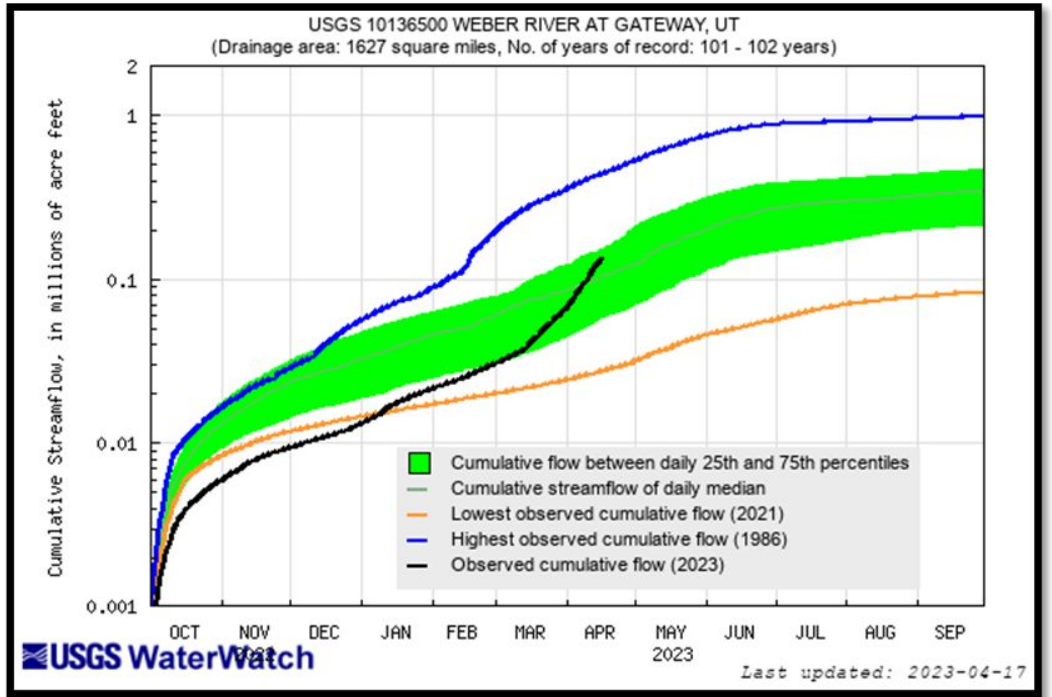
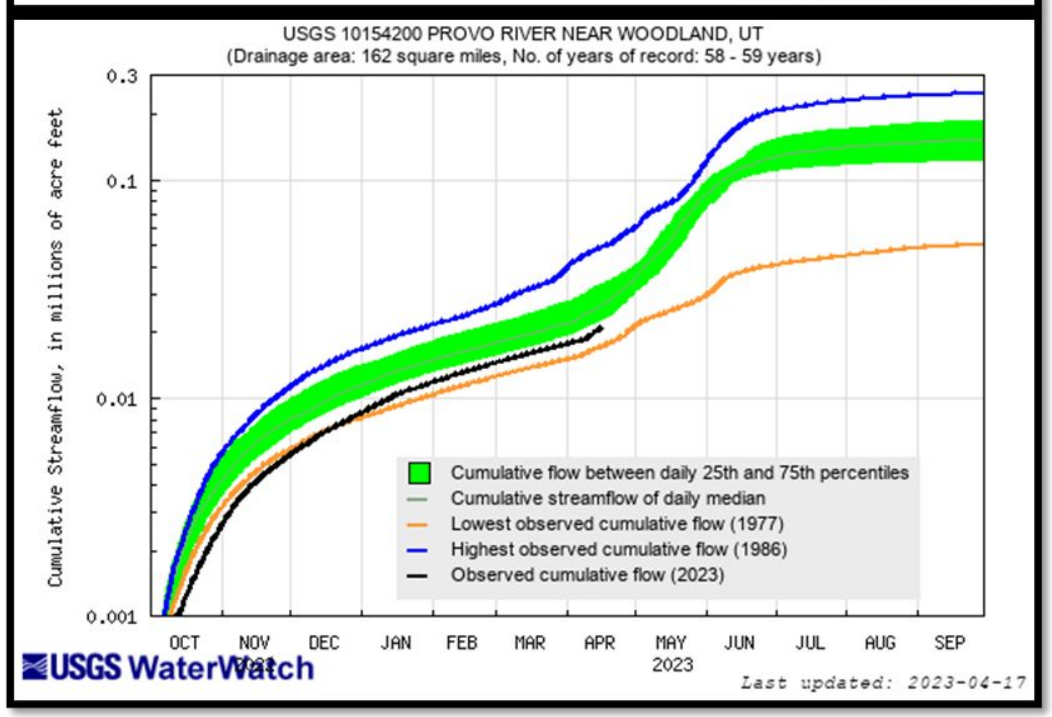
Cumulative streamflow for Selected Gages







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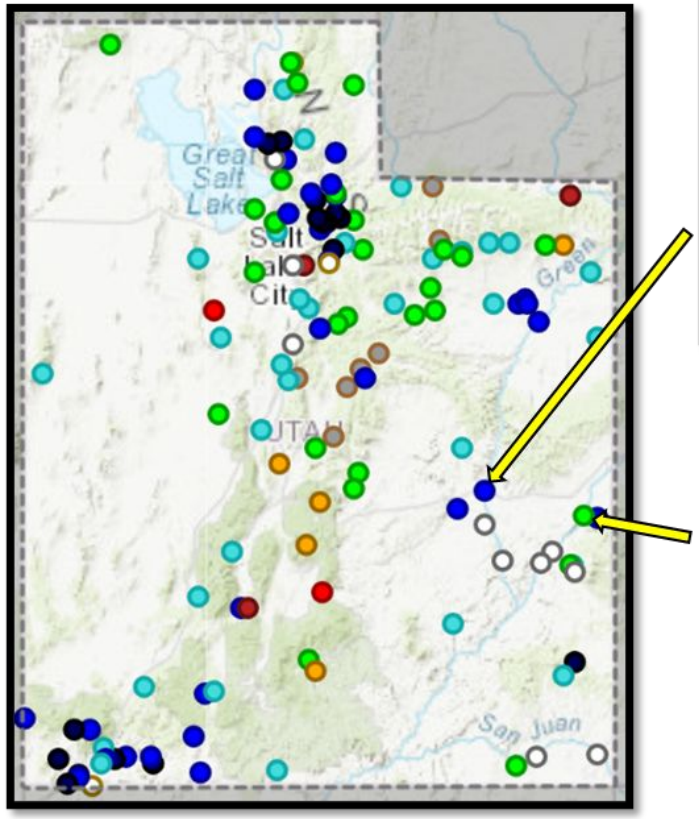
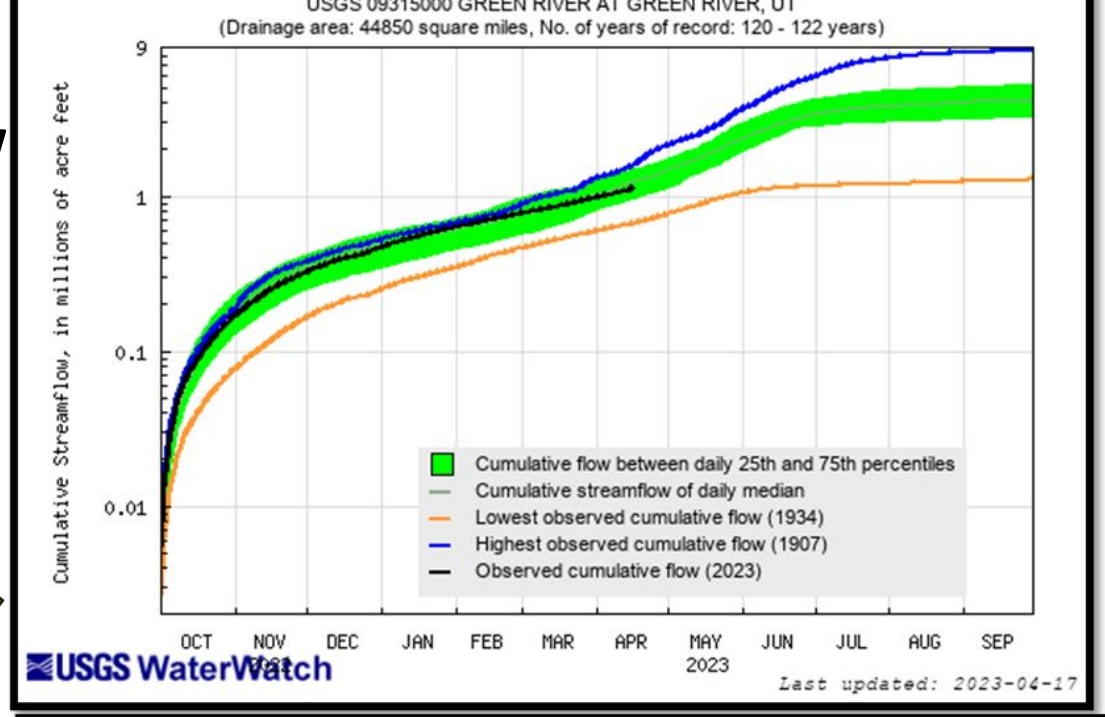
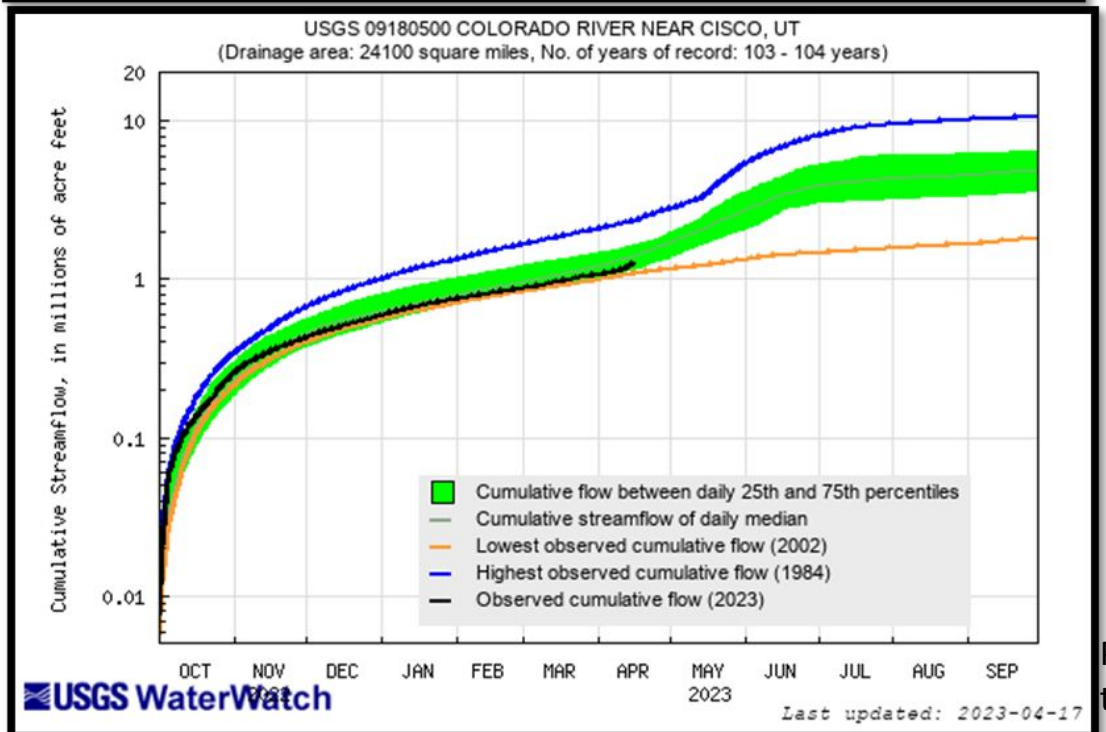
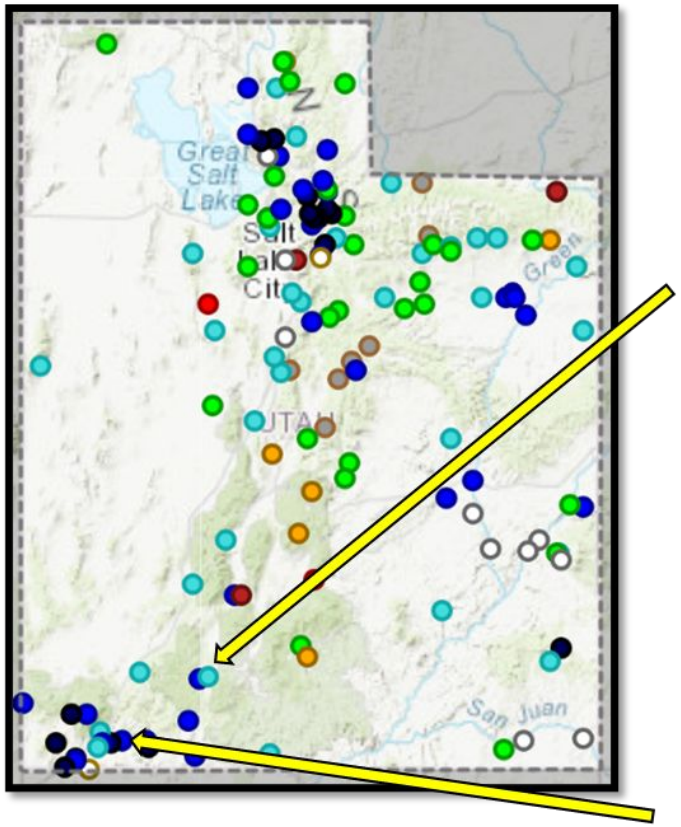
Cumulative streamflow for Selected Gages

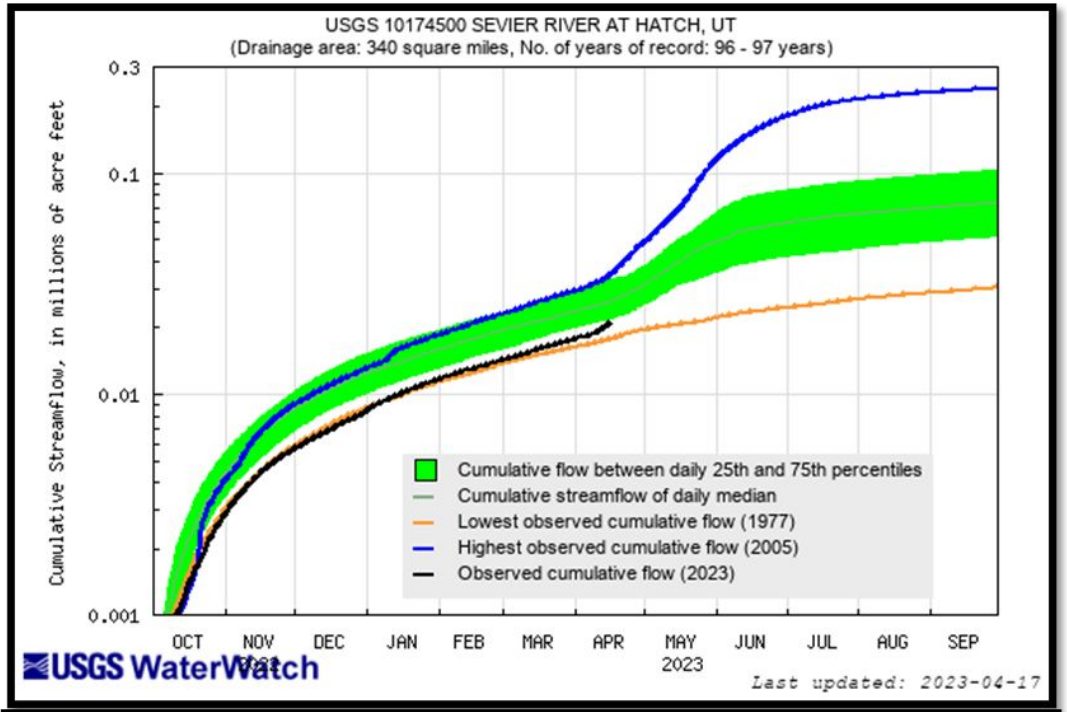


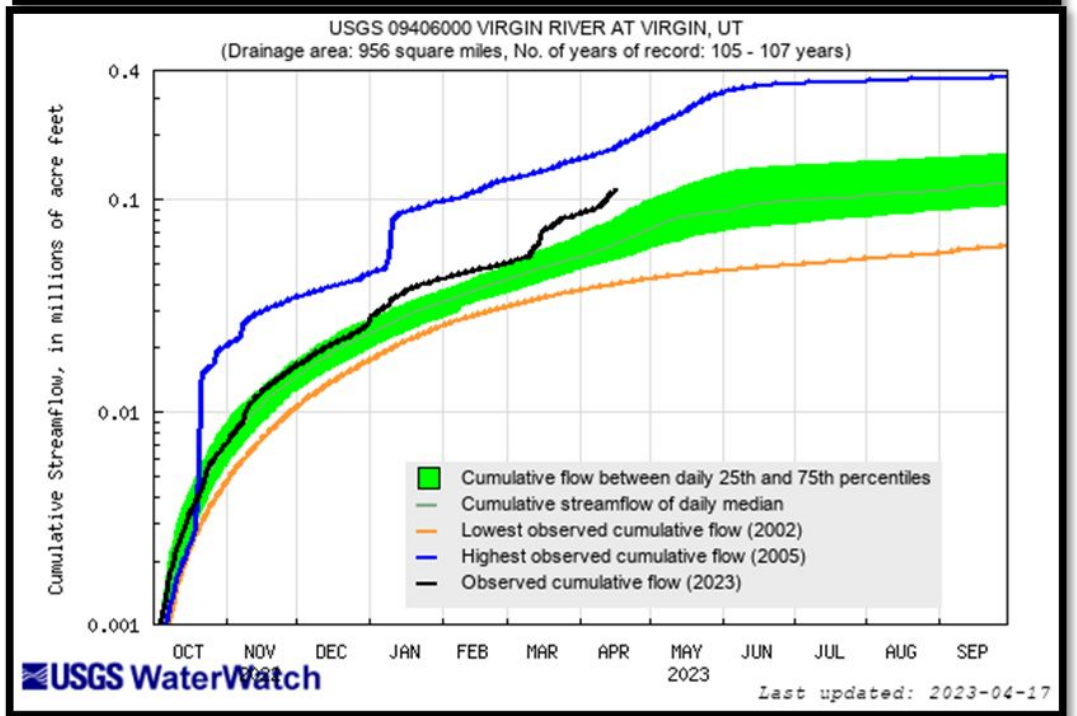




Cumulative streamflow for Selected Gages







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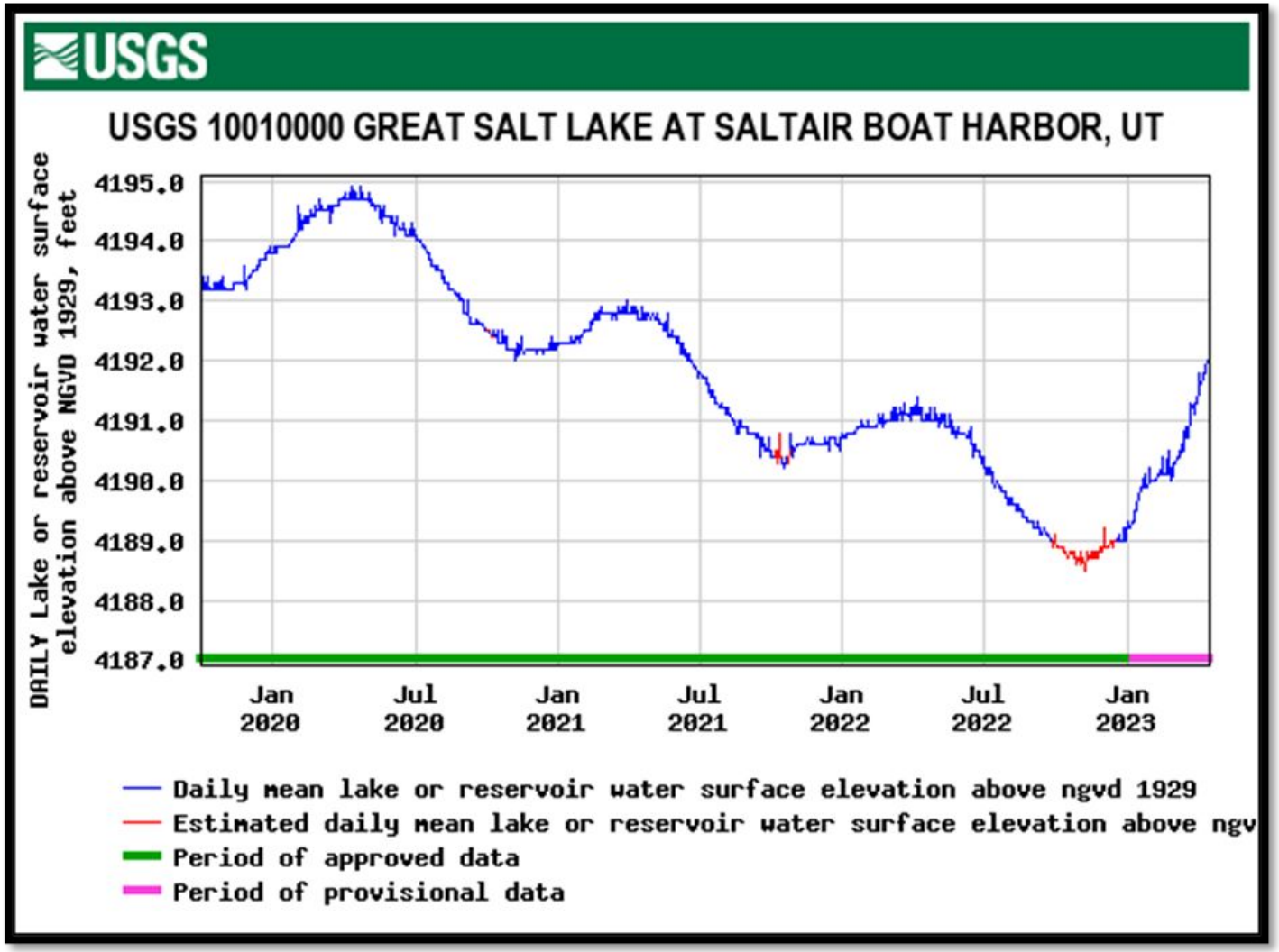
Great Salt Lake Water Surface Elevation – South Arm



- Daily value 4/16/2023 = 4,192.0’
- Daily value 3/27/2023 = 4,191.2’
- Up 3.5’ since November
- Berm at causeway breach raised to 4,192’ 2/9/2023

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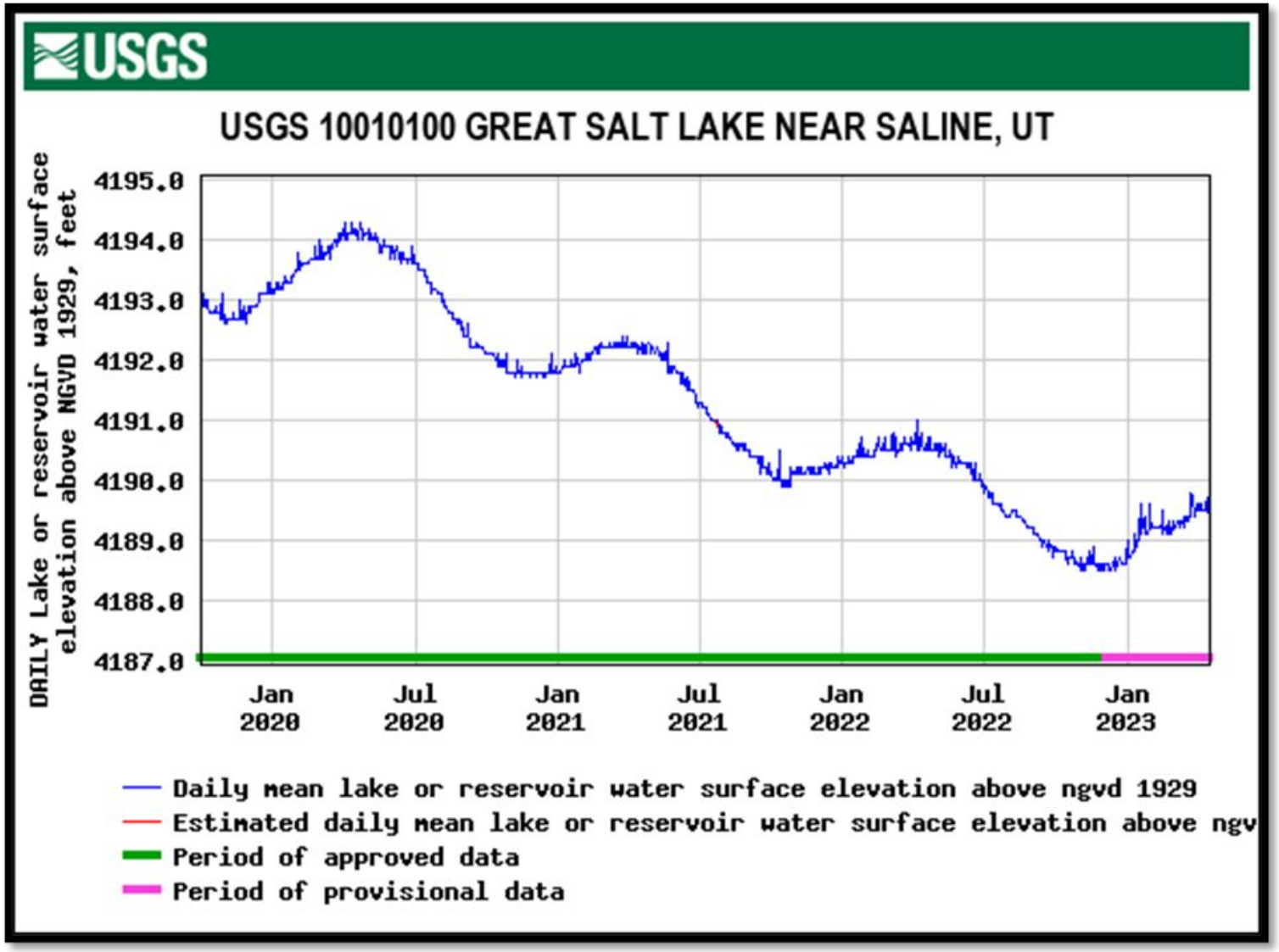
Great Salt Lake Water Surface Elevation – North Arm



- Daily value 4/16/2023 = 4,189.4’
- Daily value 3/27/2023 = 4,189.5’
- Up 0.9’ since November
- Berm at causeway breach raised to 4,192’ 2/9/2023

Agency - USGS Utah WSC
Presenter -

USGS science for a changing world

U.S. Drought Monitor

Utah

April 11, 2023

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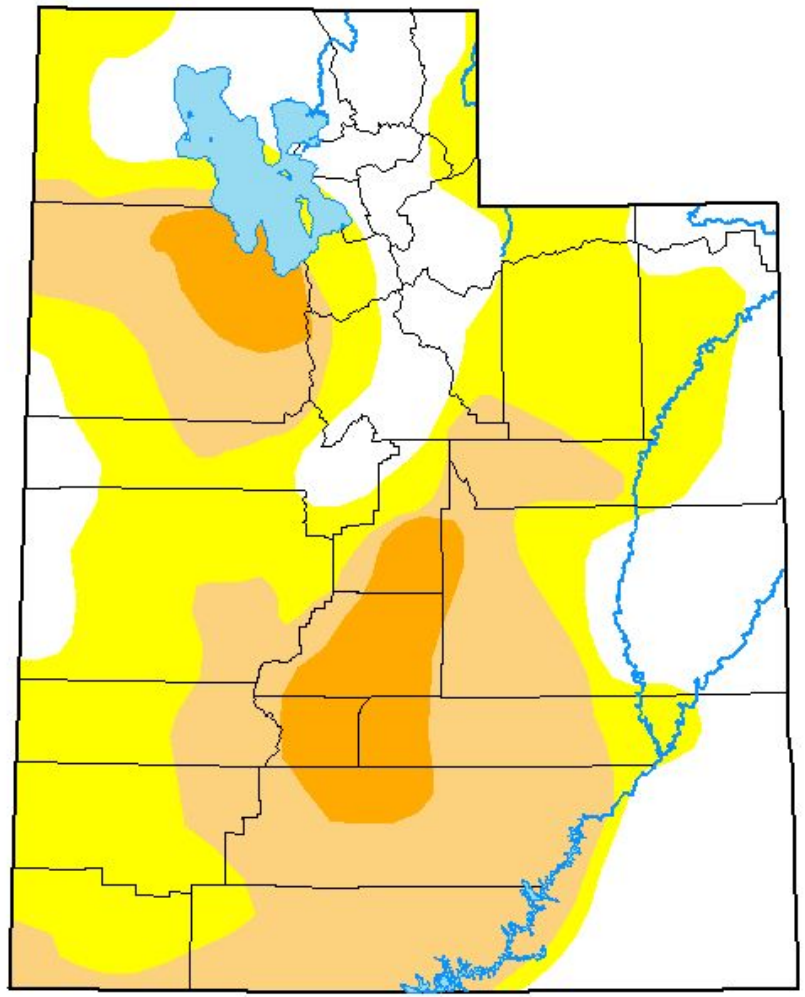

Intensity:

- 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

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