Utah Water Assessment & Conditions Monitoring
(Drought Webinar)

The meeting will begin shortly

UTAH CLIMATE CENTER

NRCS Natural Resources Conservation Service

NOAA

USGS science for a changing world

BUREAU OF RECLAMATION

Thank you to our contributors

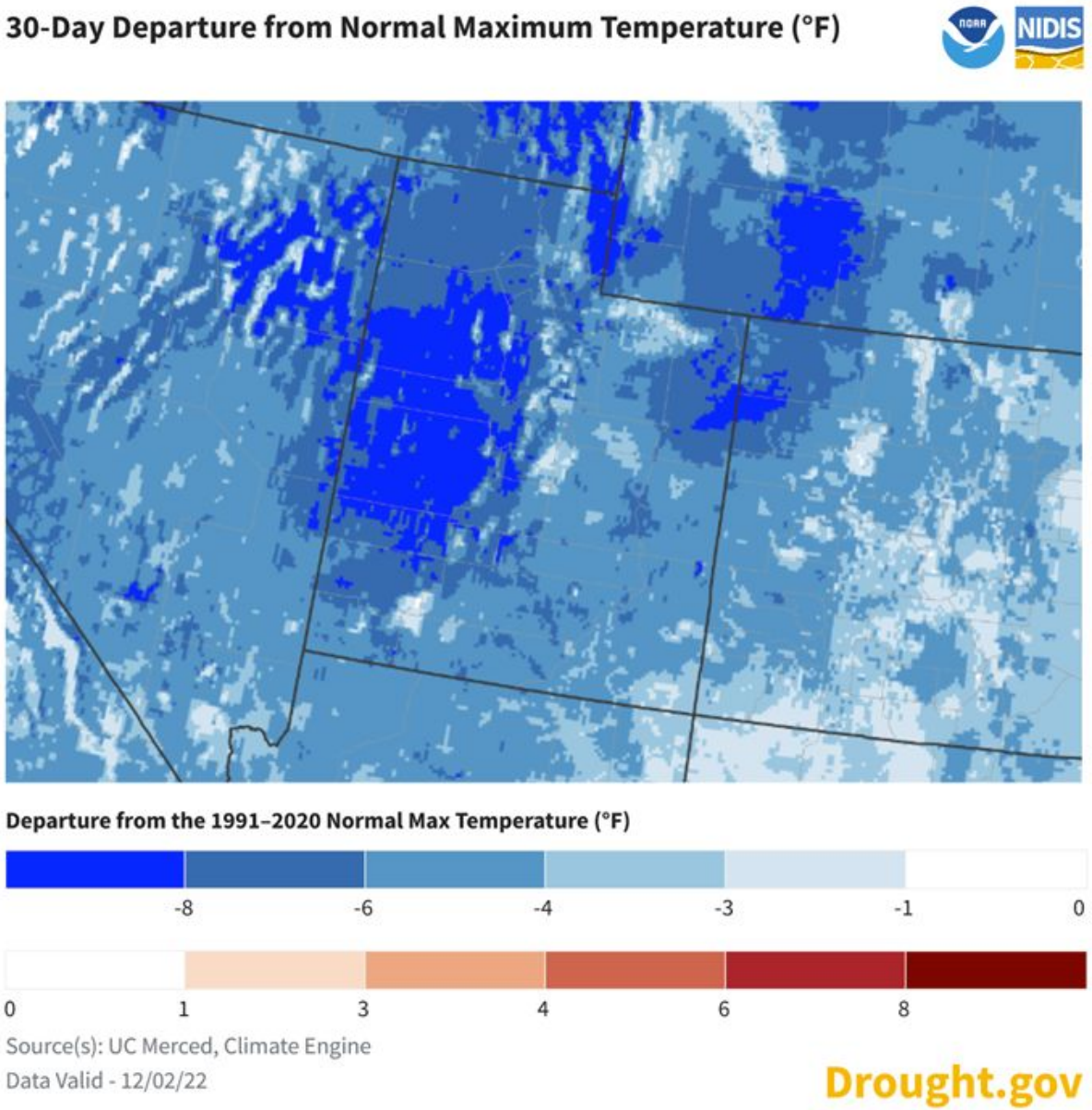
UDAF

UTAH DNR 75th ANNIVERSARY WATER RESOURCES

Utah Water Assessment & Conditions Monitoring Webinar

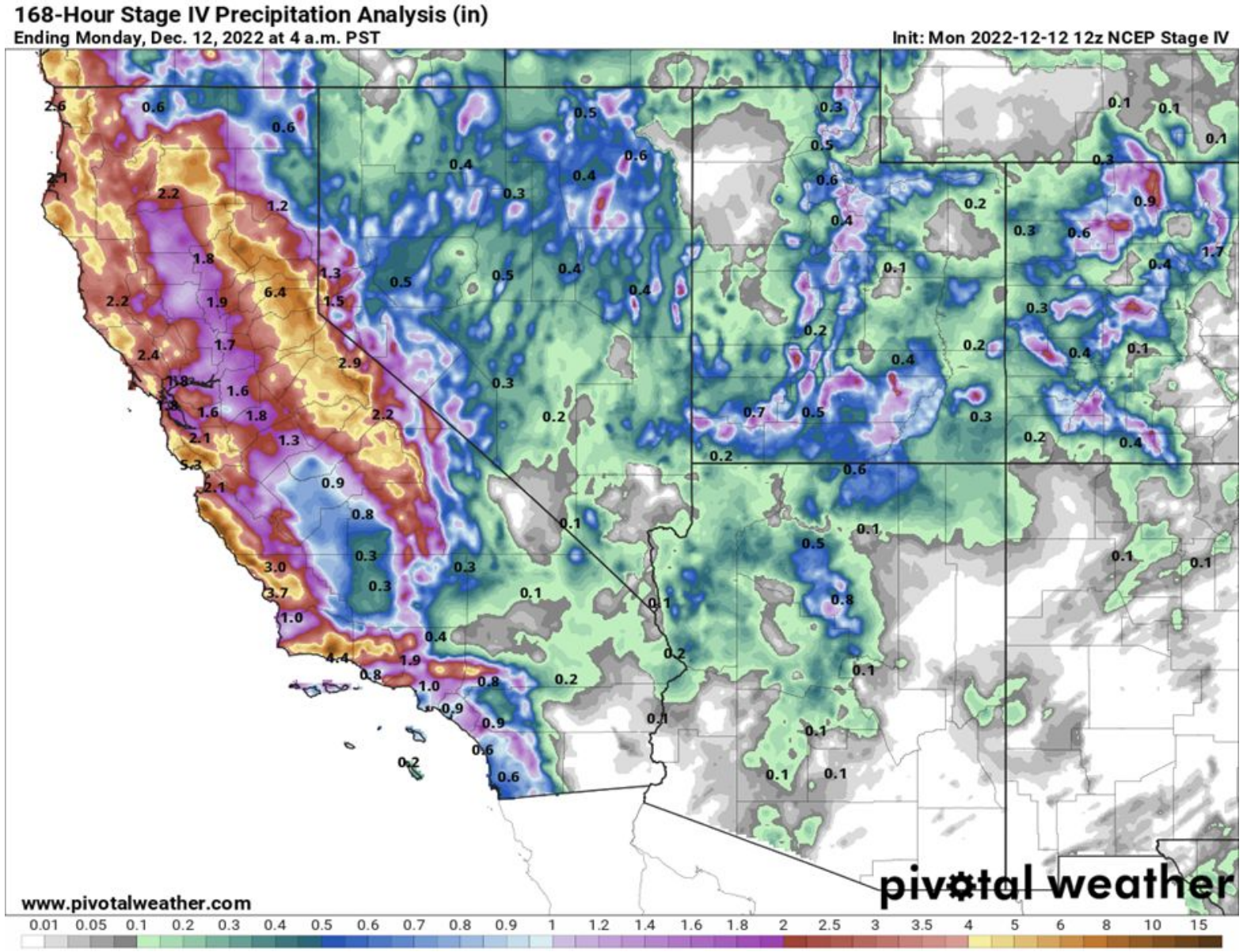
December 13, 2022

Max Temperature (30-day departure from Normal)



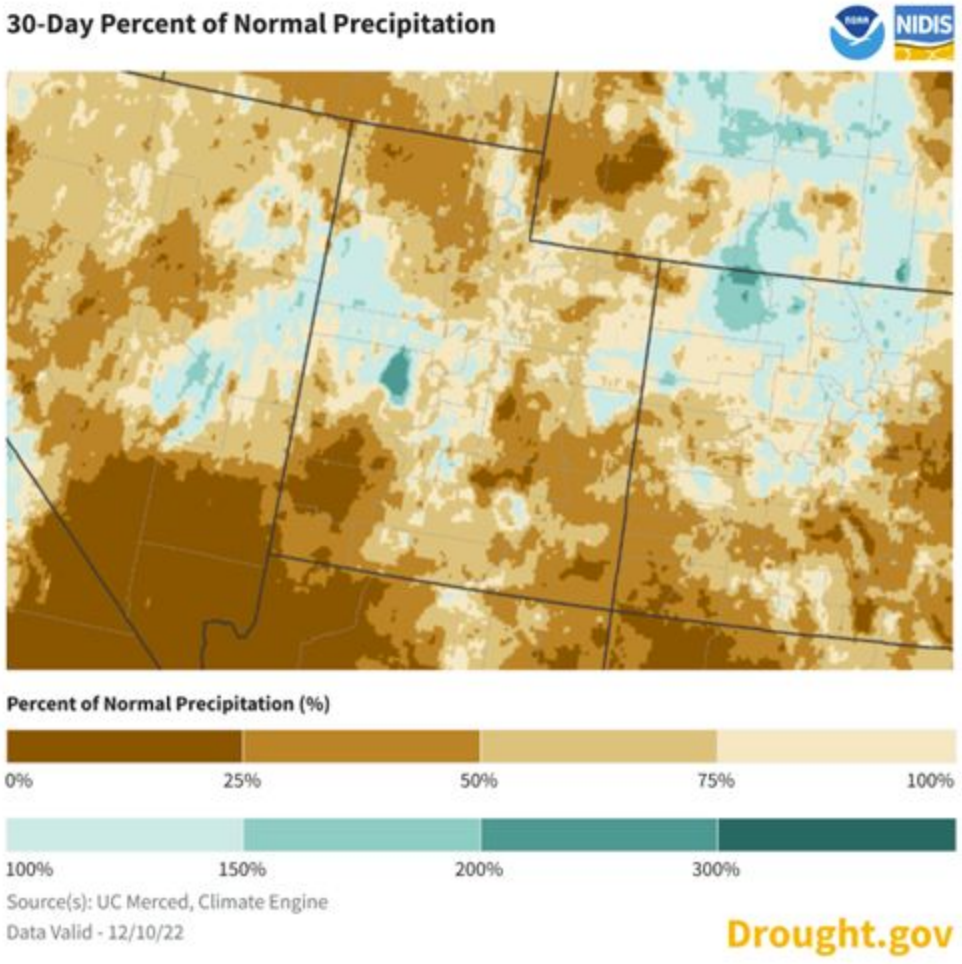
Agency - Utah Climate Center
Presenter - Jon Meyer

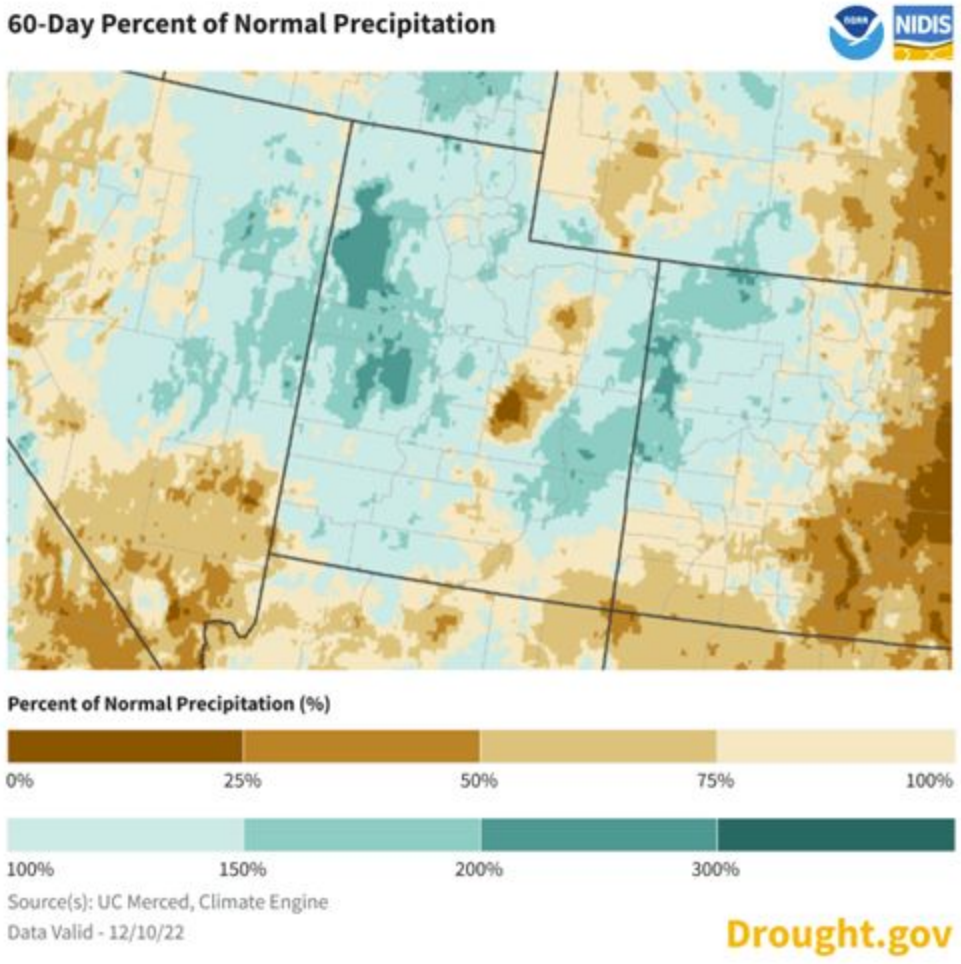
Precipitation (7-day totals)



Agency - Utah Climate Center
Presenter - Jon Meyer

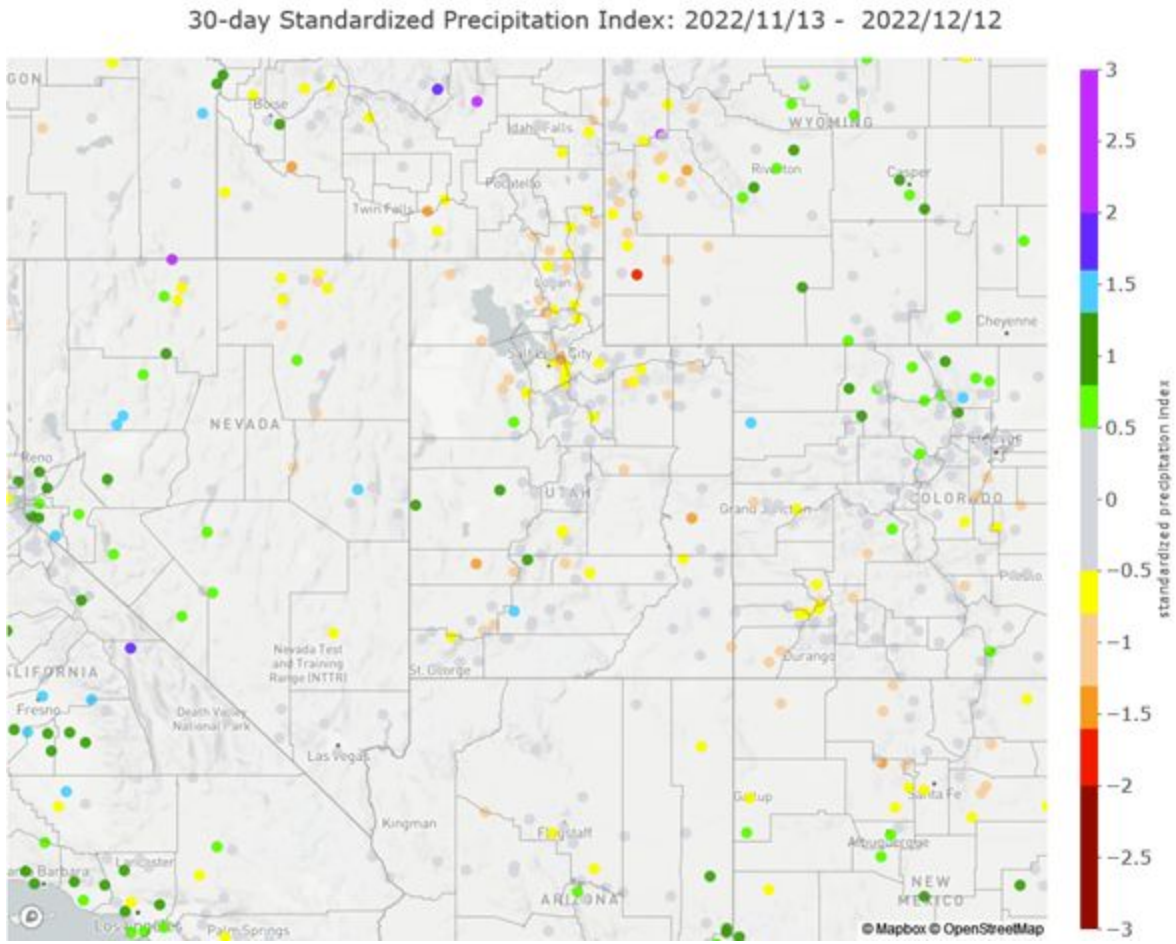
Precipitation (30- and 60-day Percent of Normal)

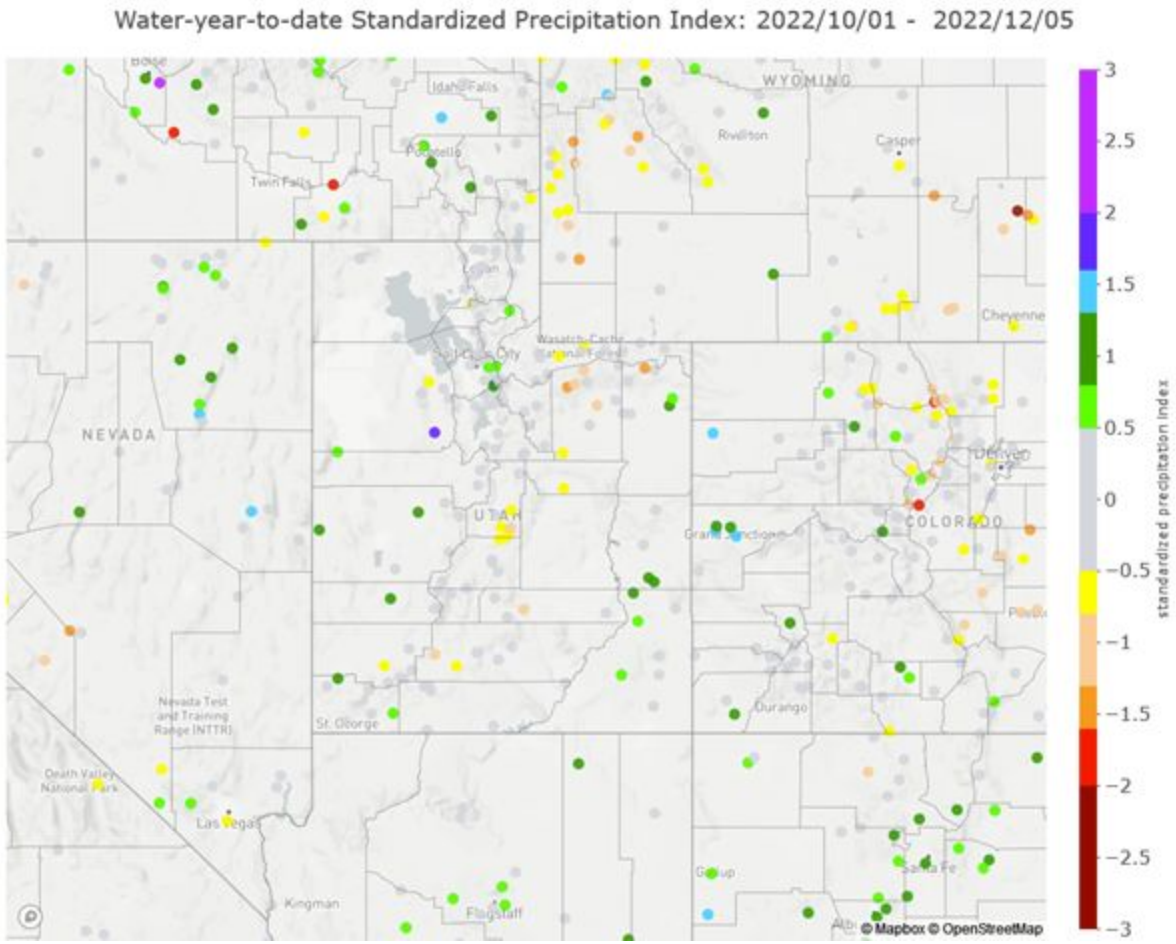




Agency - Utah Climate Center
Presenter - Jon Meyer

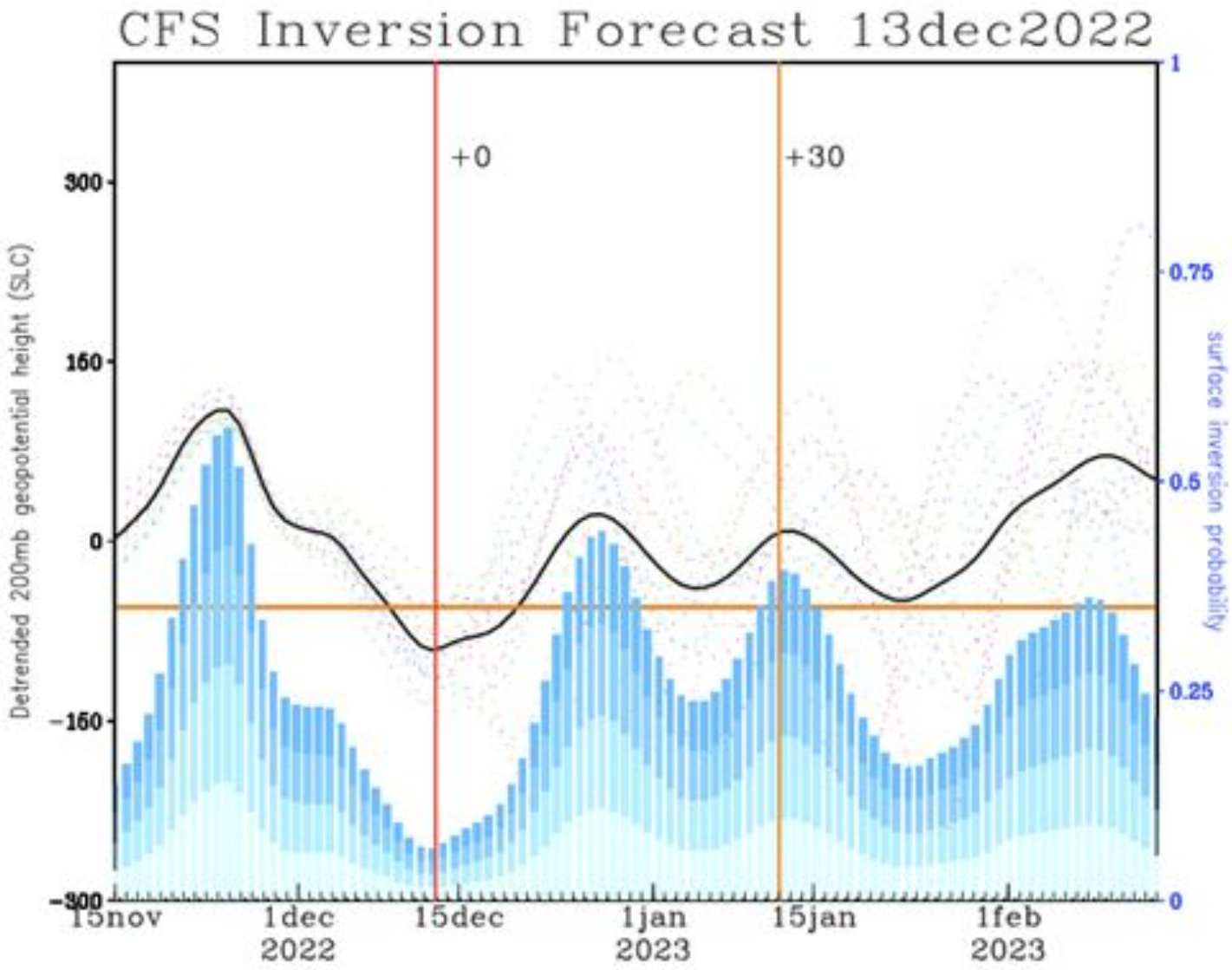
Standardized Precipitation Index (30-day and Water-Year-To-Date)





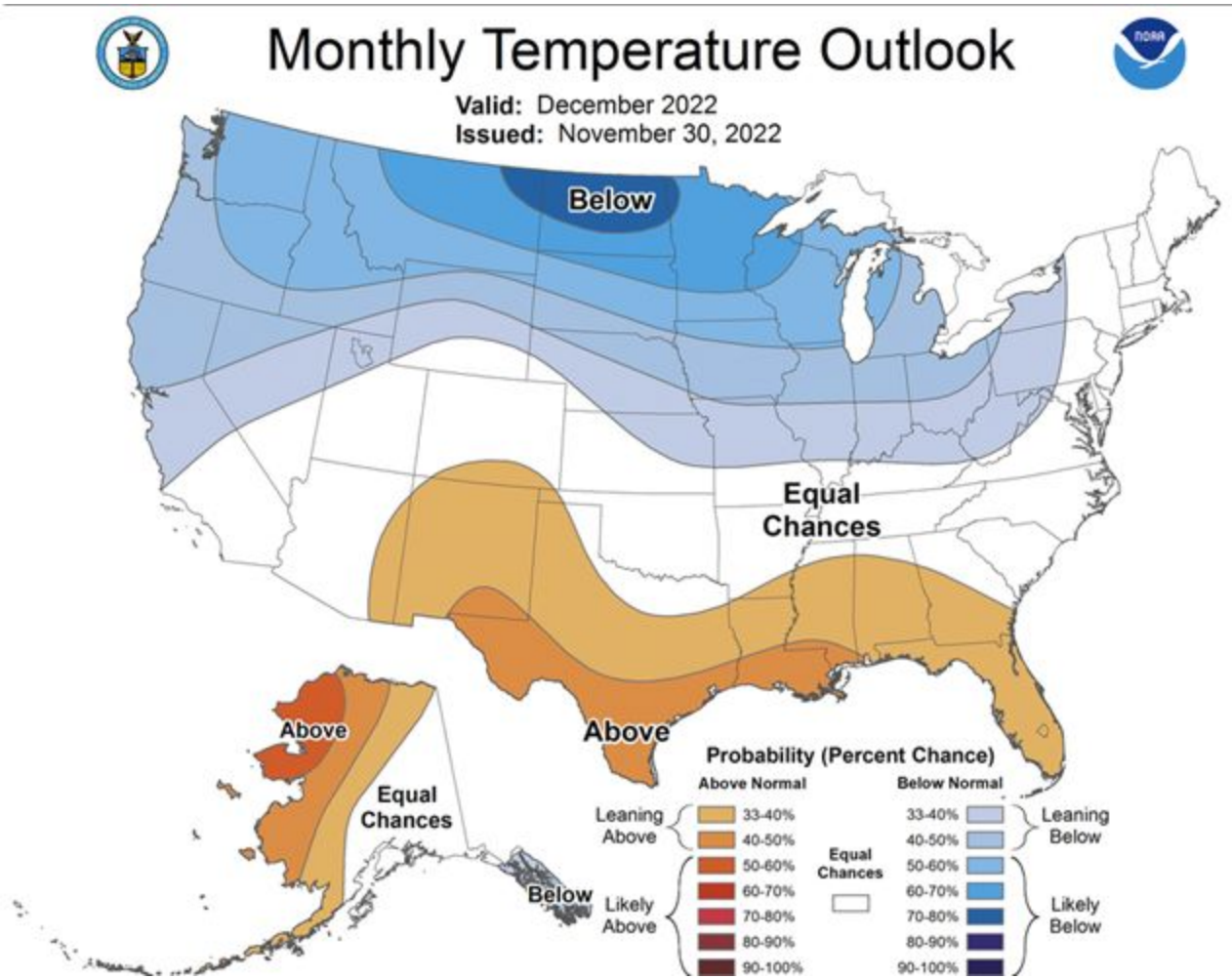
Agency - Utah Climate Center
Presenter - Jon Meyer

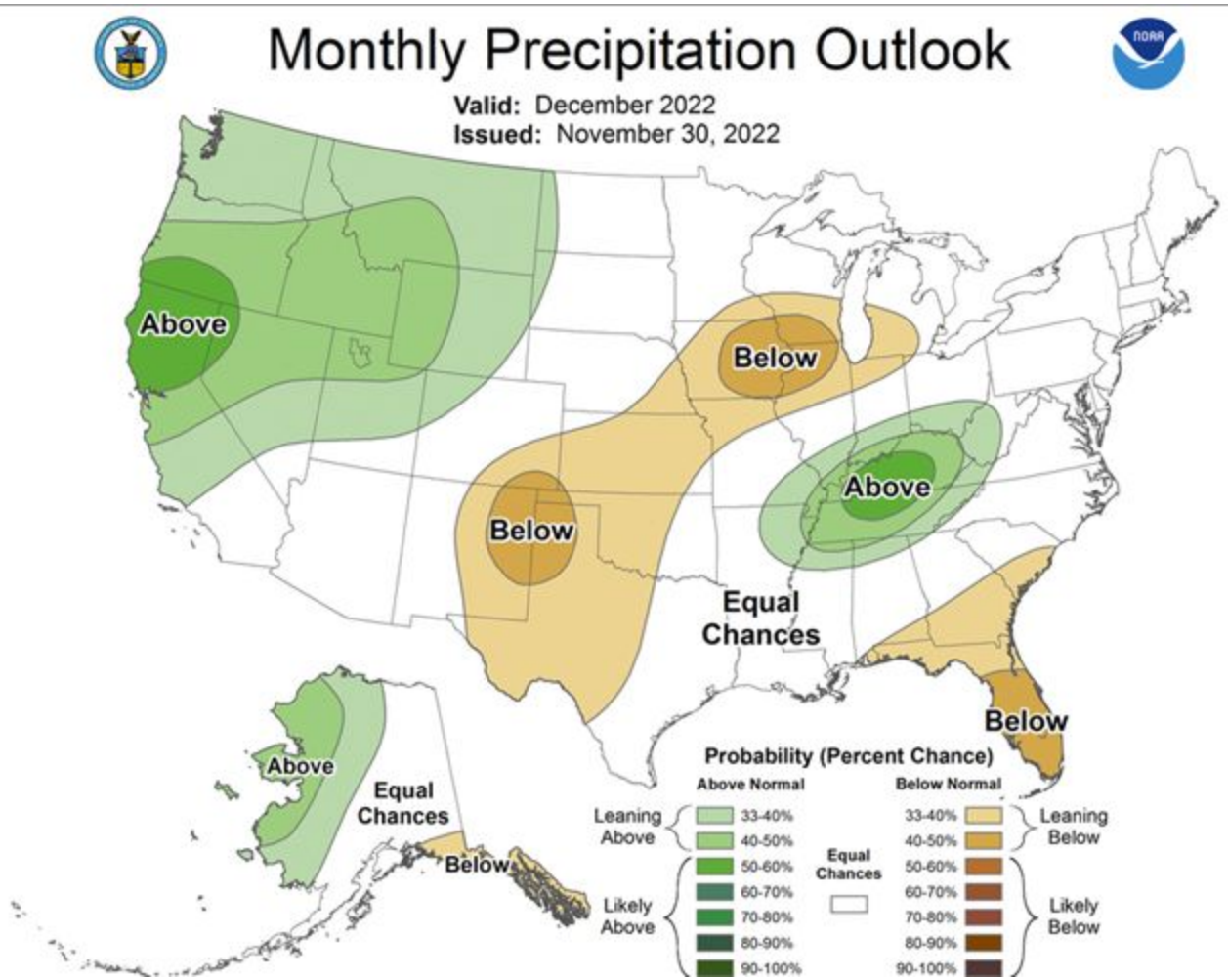
Long-range Weather Pattern Forecast



Agency - Utah Climate Center
Presenter - Jon Meyer

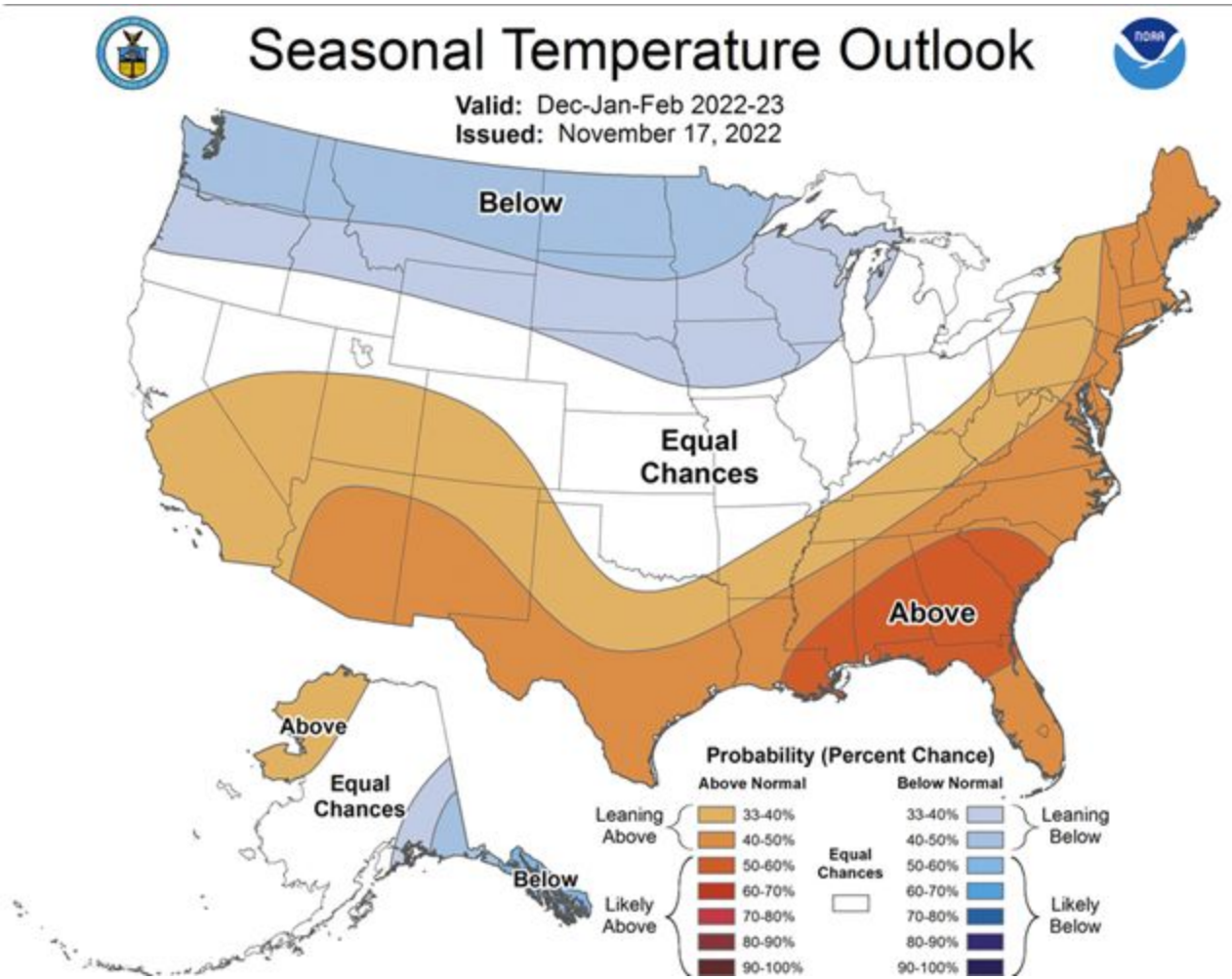
Climate Prediction Center December Outlook

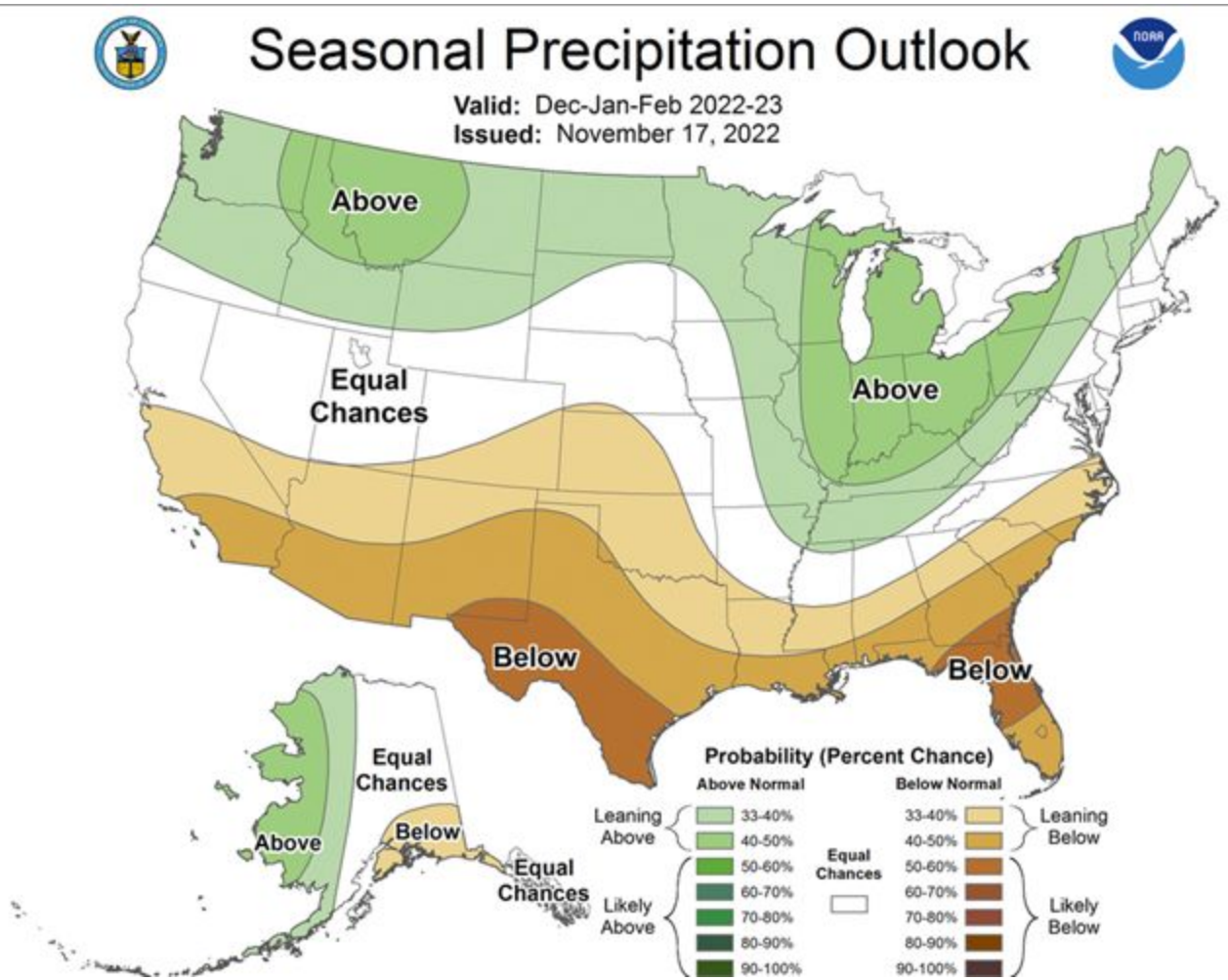




Agency - Utah Climate Center
Presenter - Jon Meyer

Climate Prediction Center (Dec-Feb Outlook)

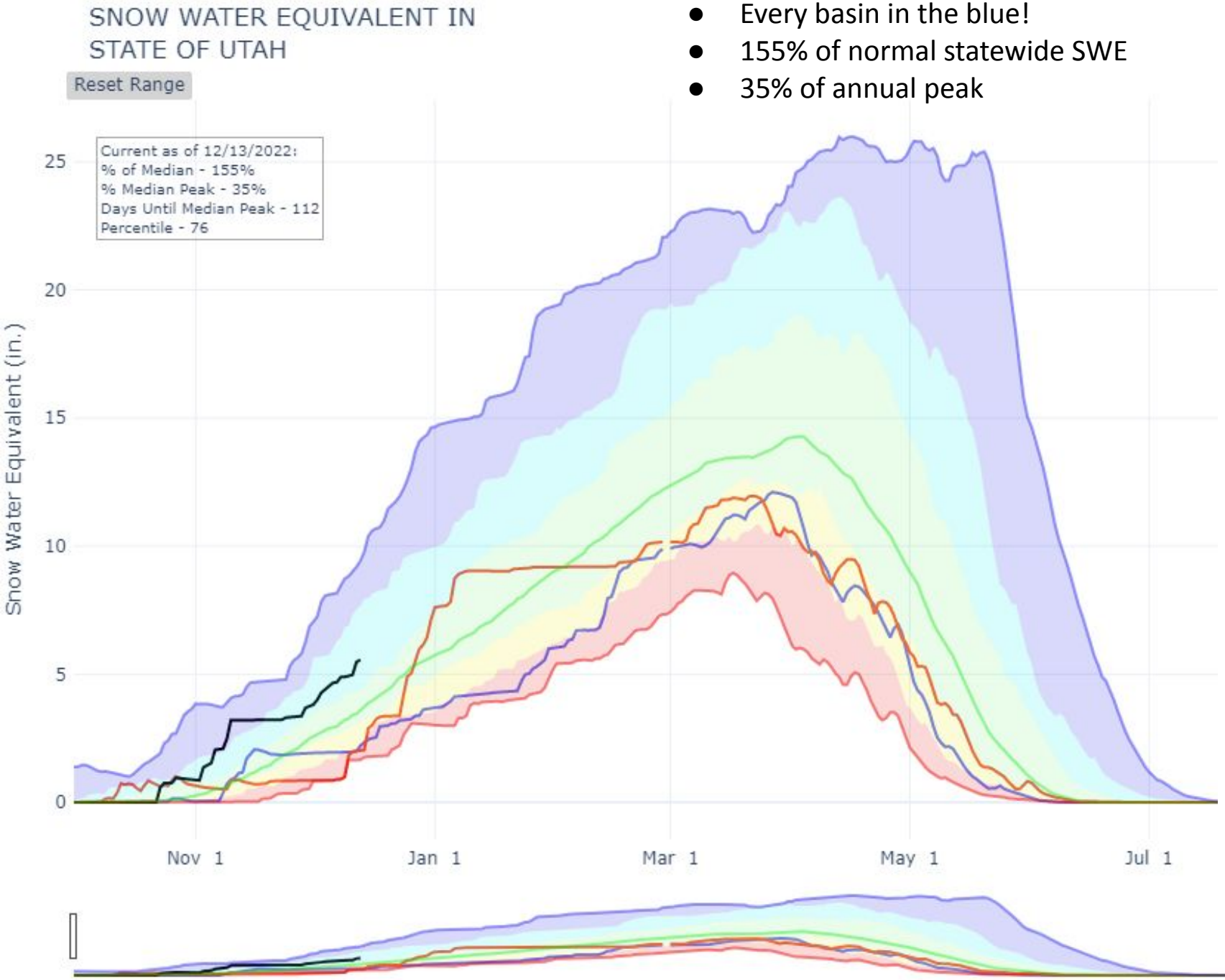


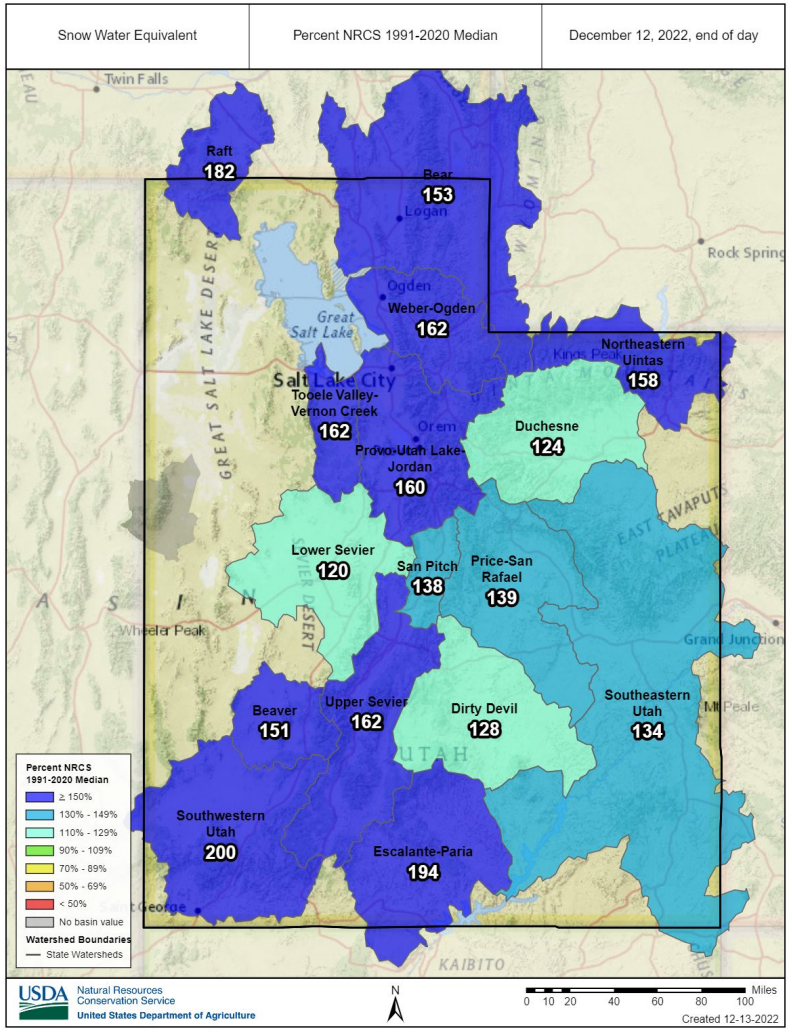


Agency - Utah Climate Center
Presenter - Jon Meyer

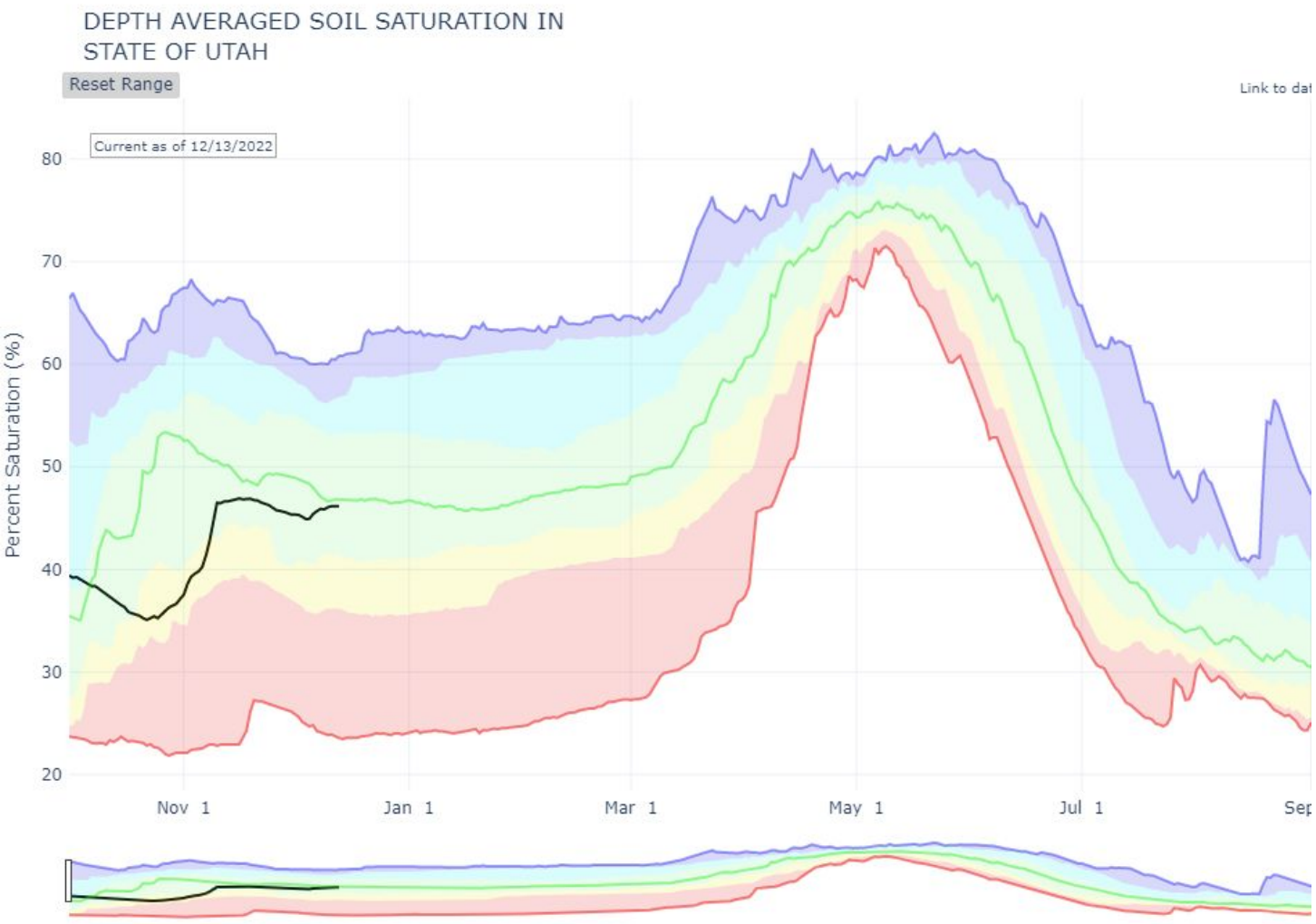
Agency - NRCS Snow Survey
Presenter - Jordan Clayton

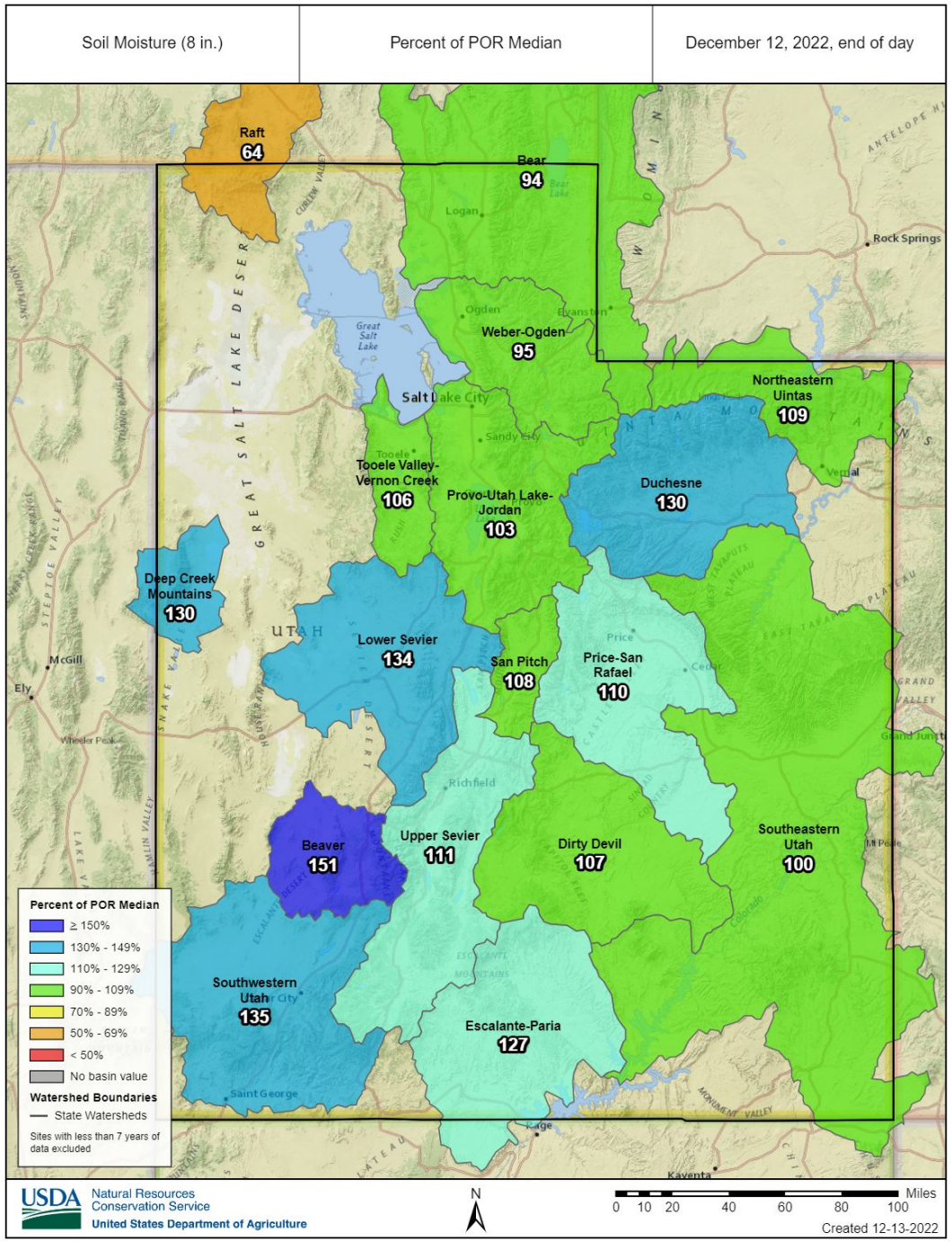
- Every basin in the blue!
- 155% of normal statewide SWE
- 35% of annual peak





Soil Moisture

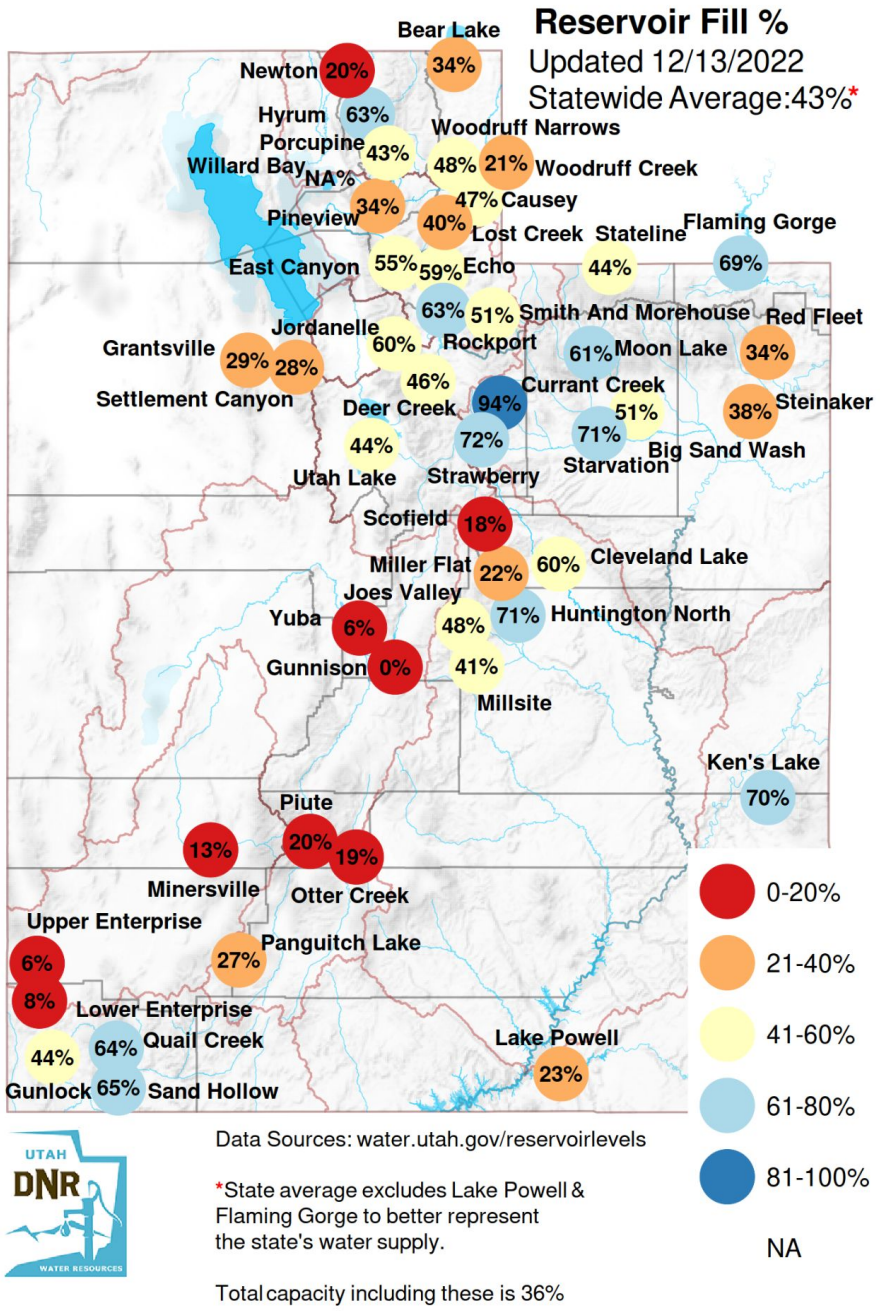




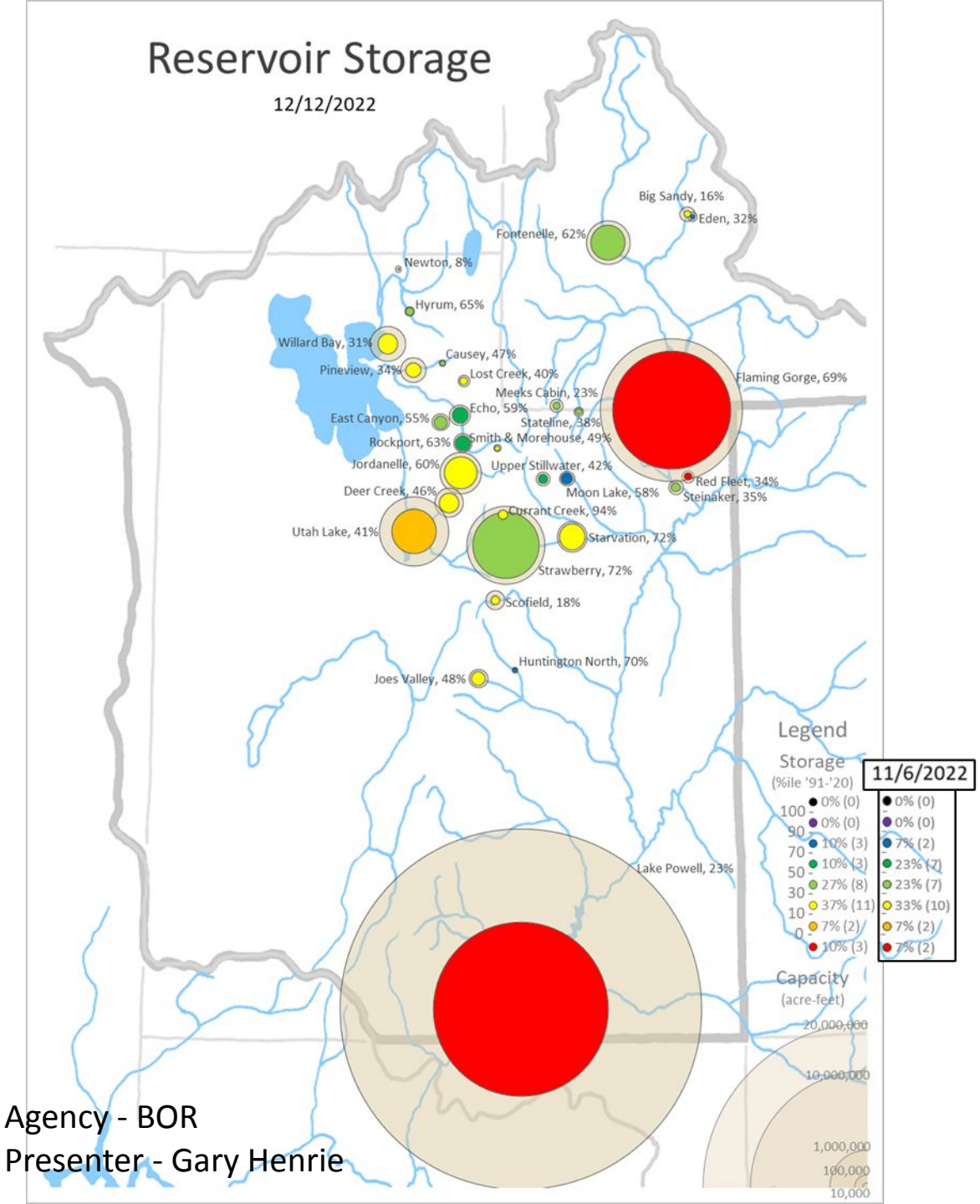
Agency - NRCS Snow Survey
Presenter - Jordan Clayton

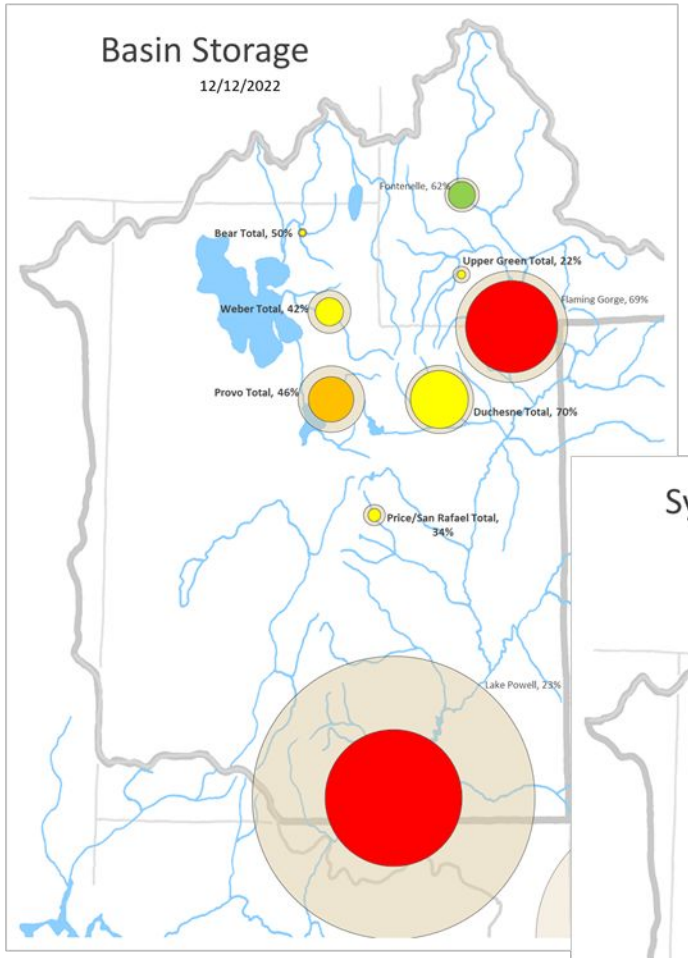
Current statewide average 43.3%
Last year statewide average 45.0%
Median statewide 55.7%

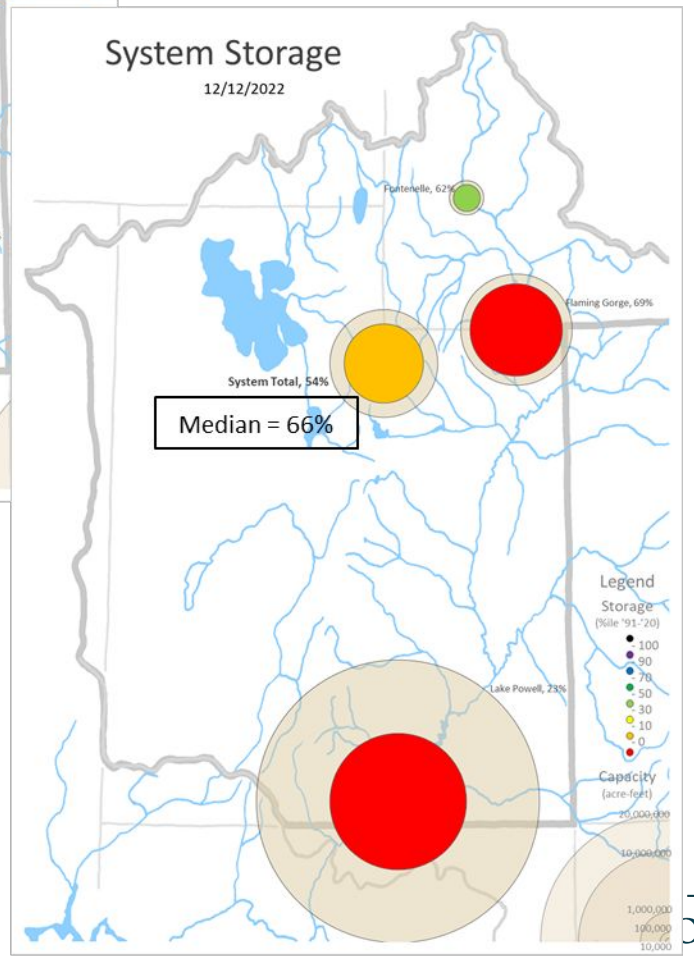
Jordanelle: current 60%, previous 51%, median 74%
Steinaker: current 38%, previous 19%, median 43%
Yuba: current 6%, previous 14%, median 40%
Sand Hollow: current 65%, previous 72%, median 72%



Agency - Division of Water Resources
Presenter - Laura Haskell





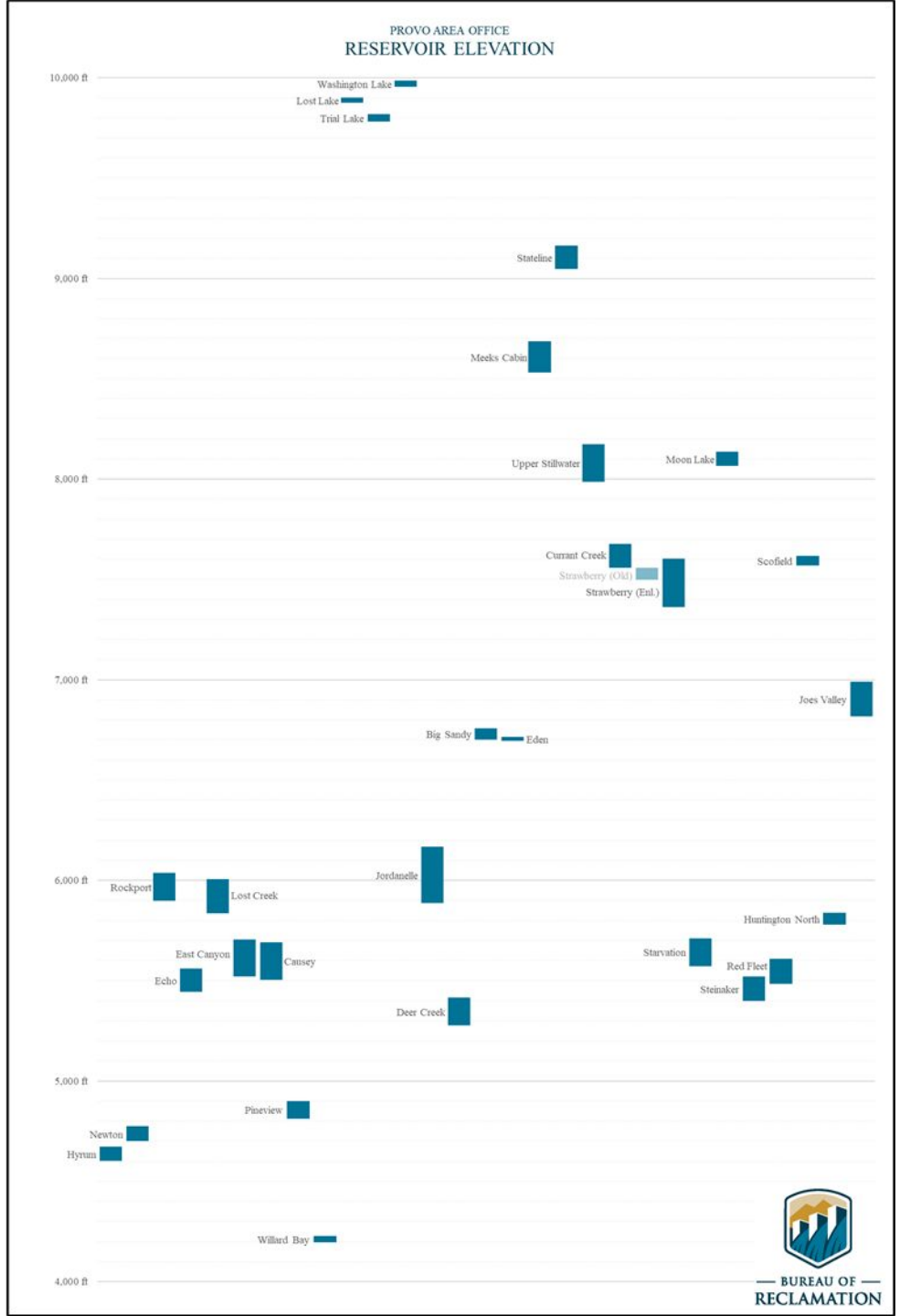


Agency - BOR
Presenter - Gary Henrie

Reservoir Levels

What are the potential impacts of rain on reservoir storage?

- Not much in Oct/Nov
- Good 2021 August monsoon in Uintas
- Rain-on-snow 2017



Agency - BOR
Presenter - Gary Henrie

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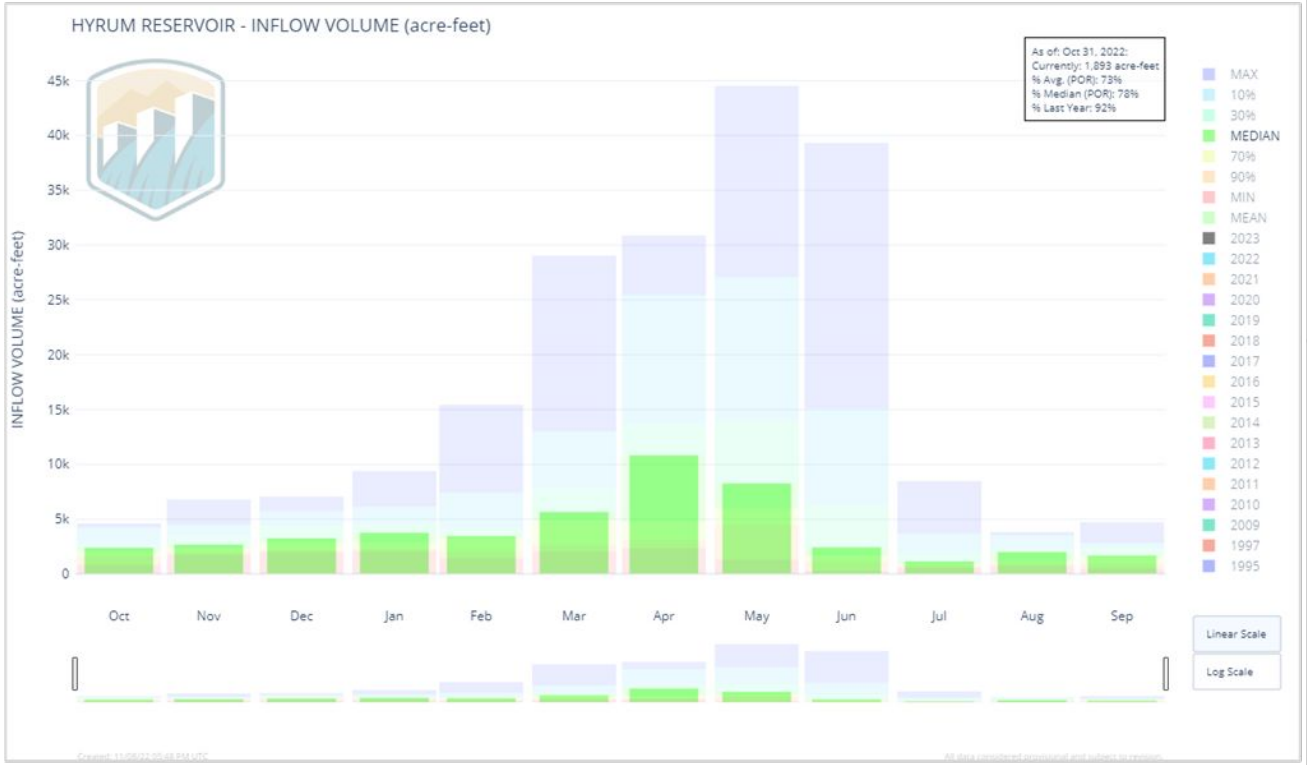
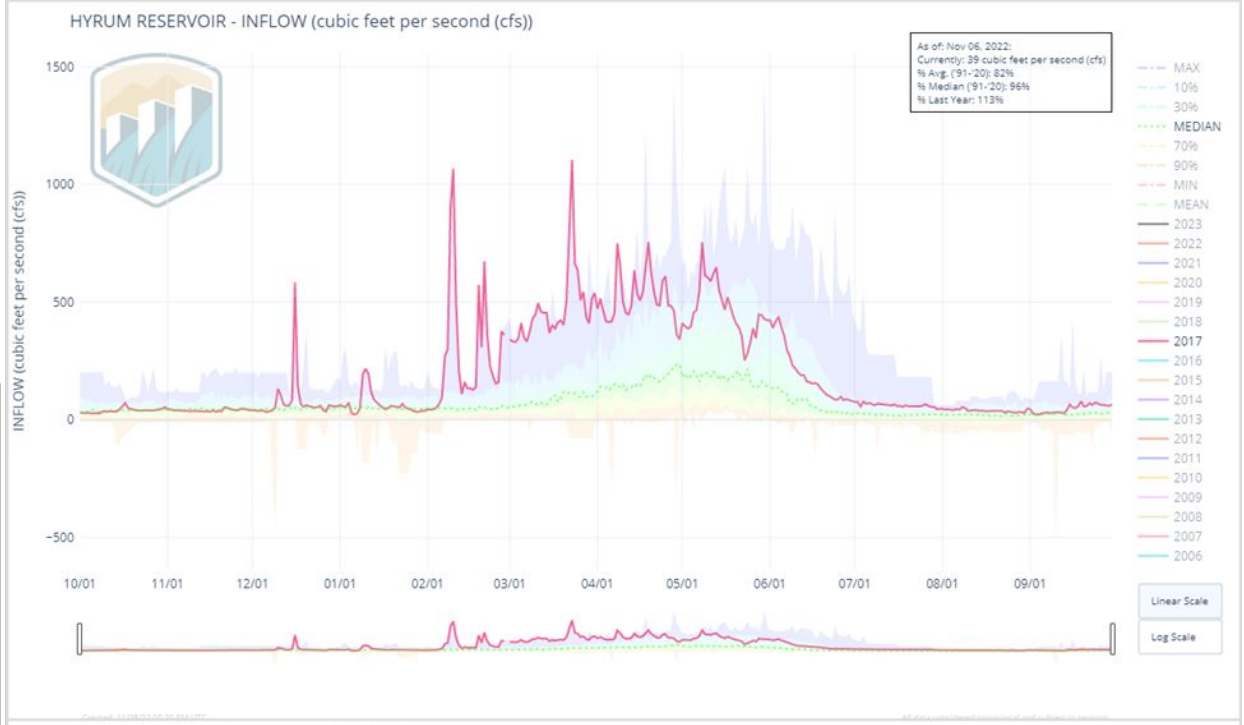
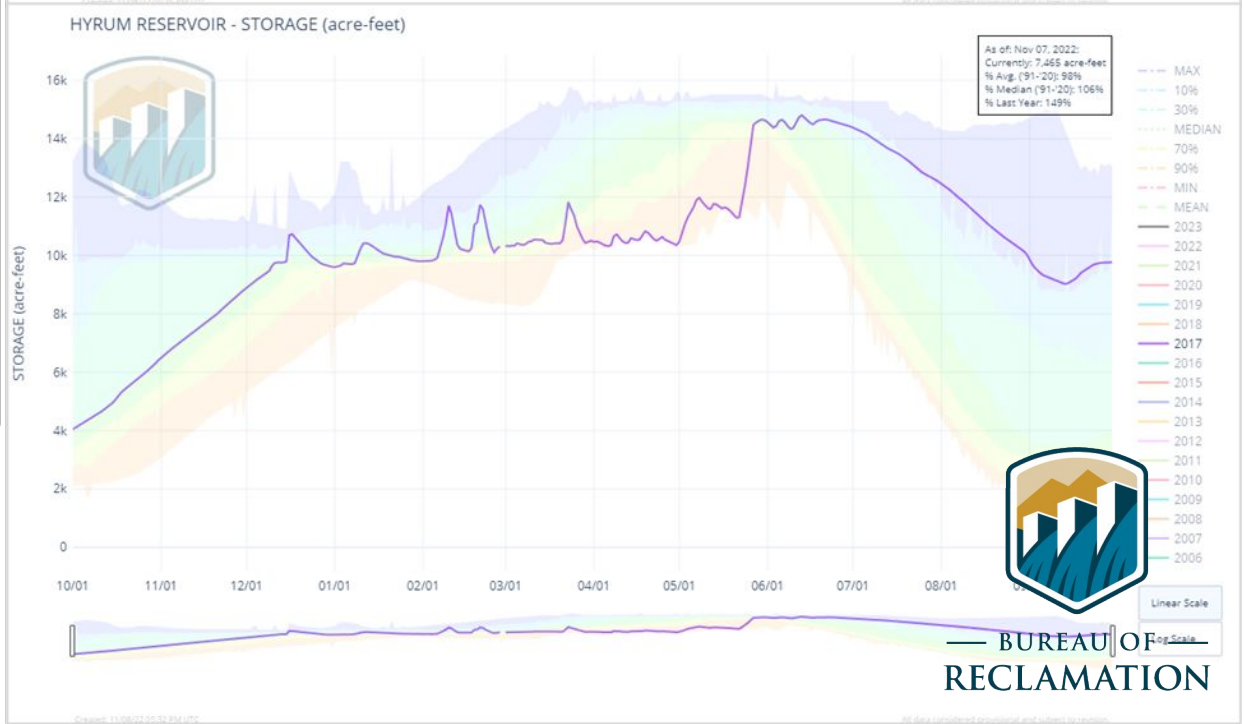
Reservoir Levels

https://www.usbr.gov/uc/water/







Agency - BOR
Presenter - Gary Henrie

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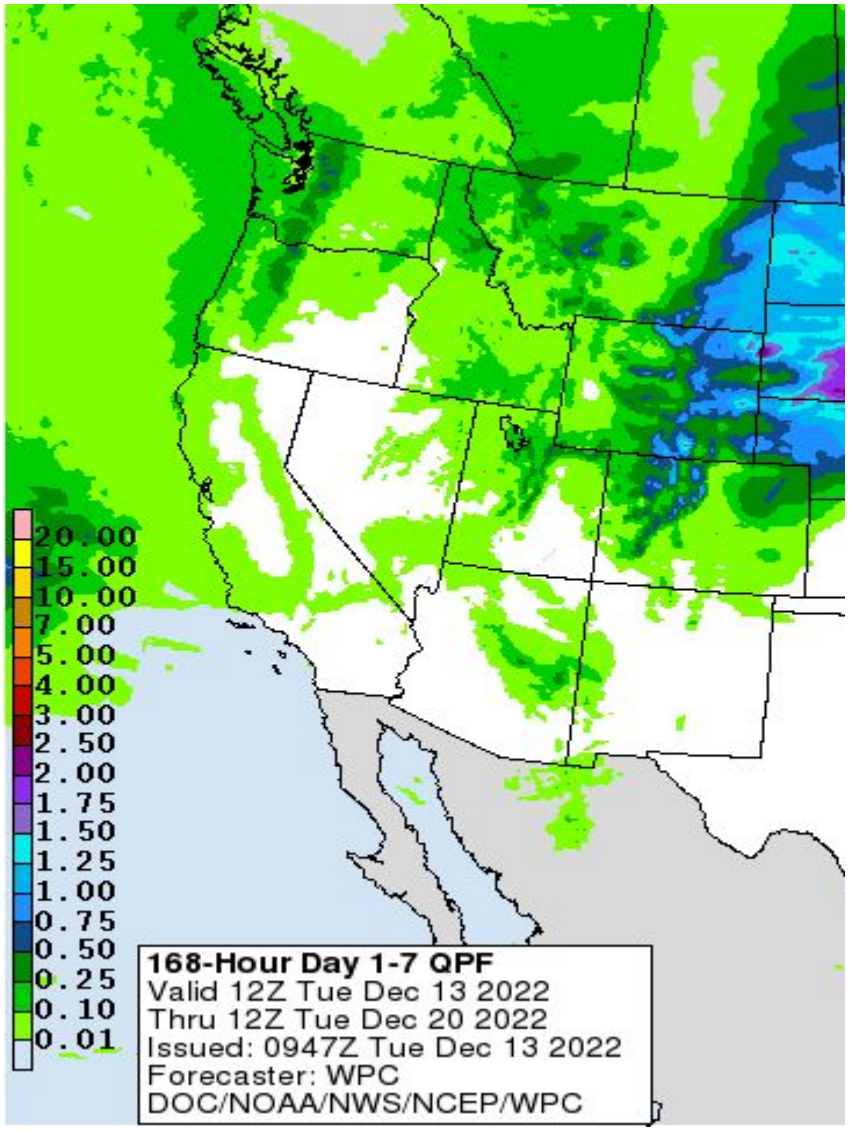
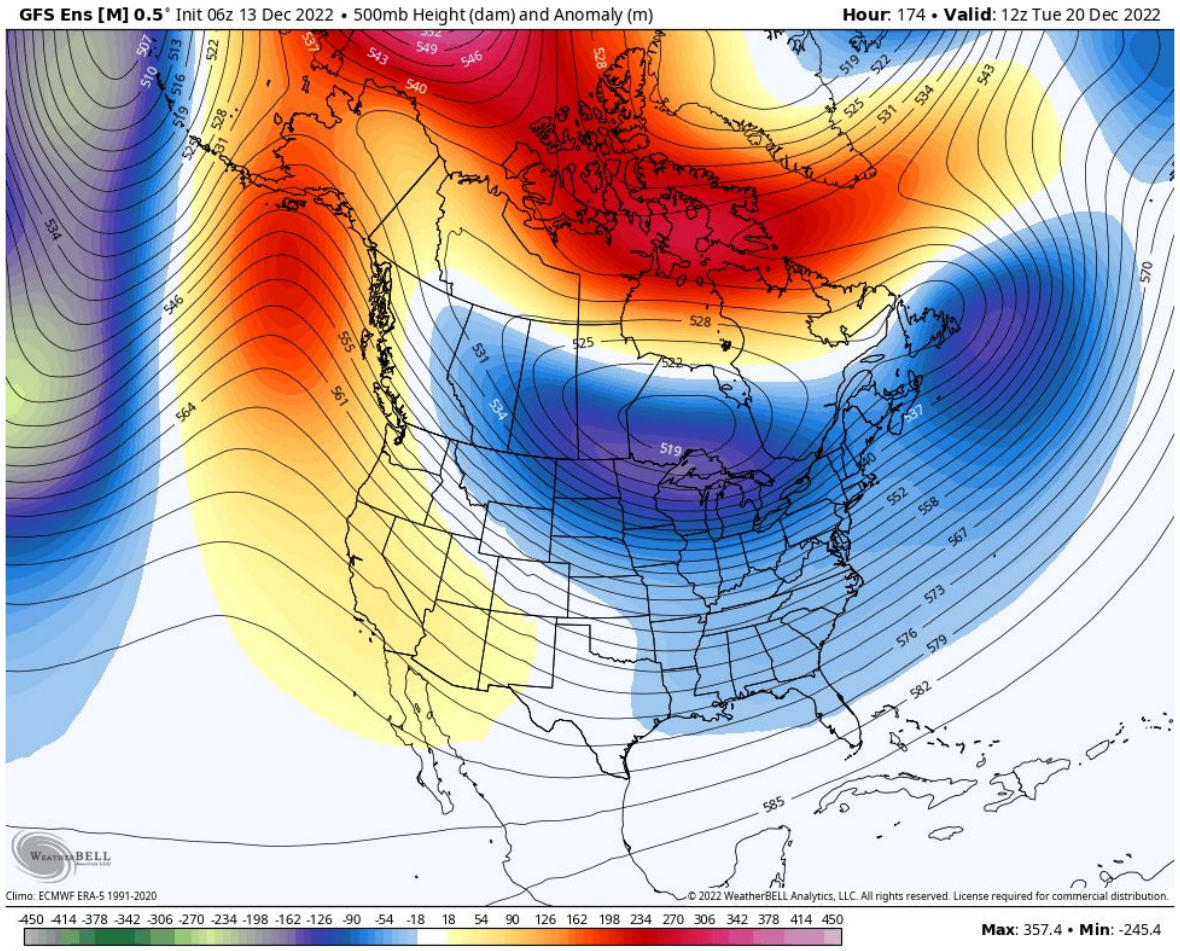
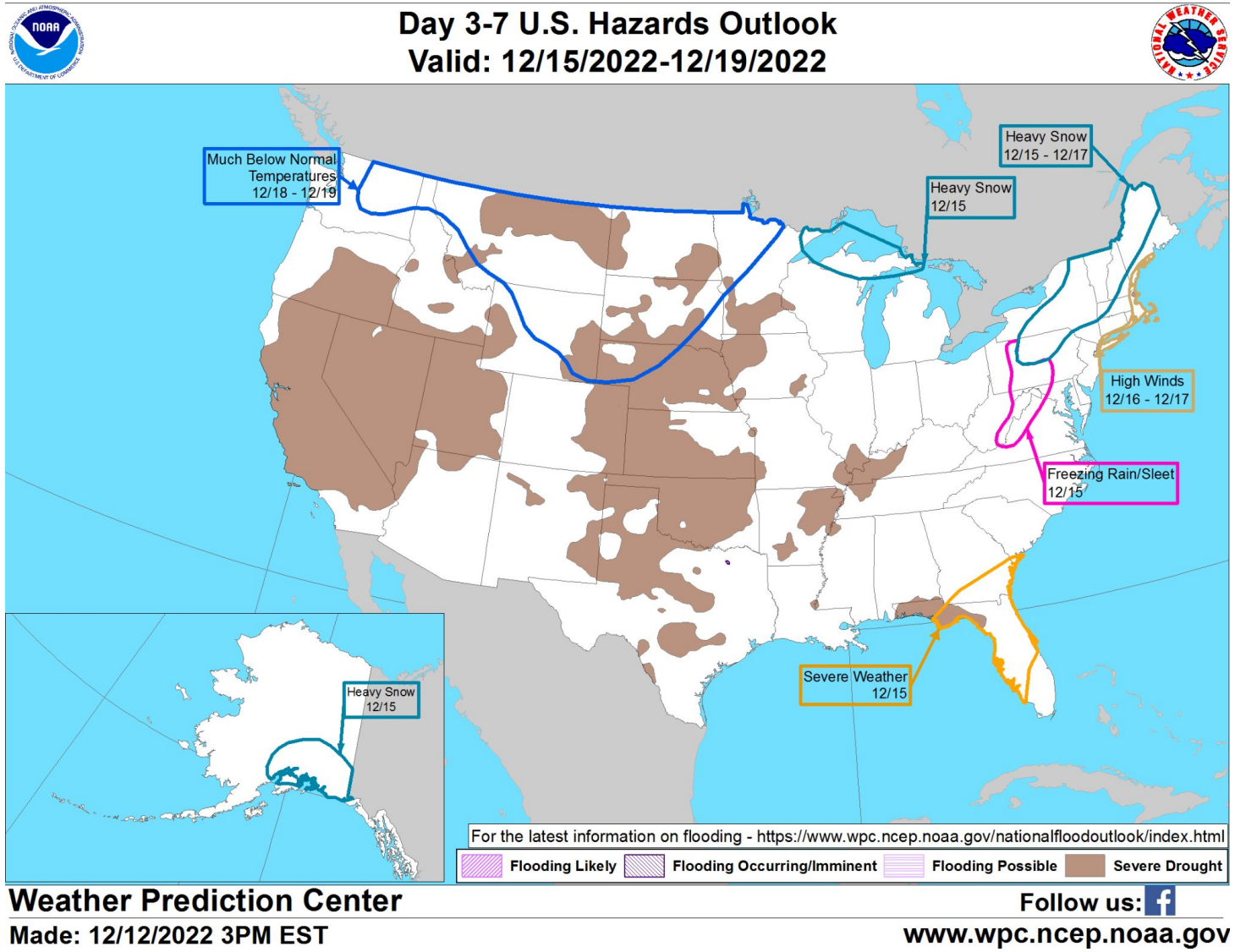
Weather Forecast Office Utah Day 1-7 Outlook





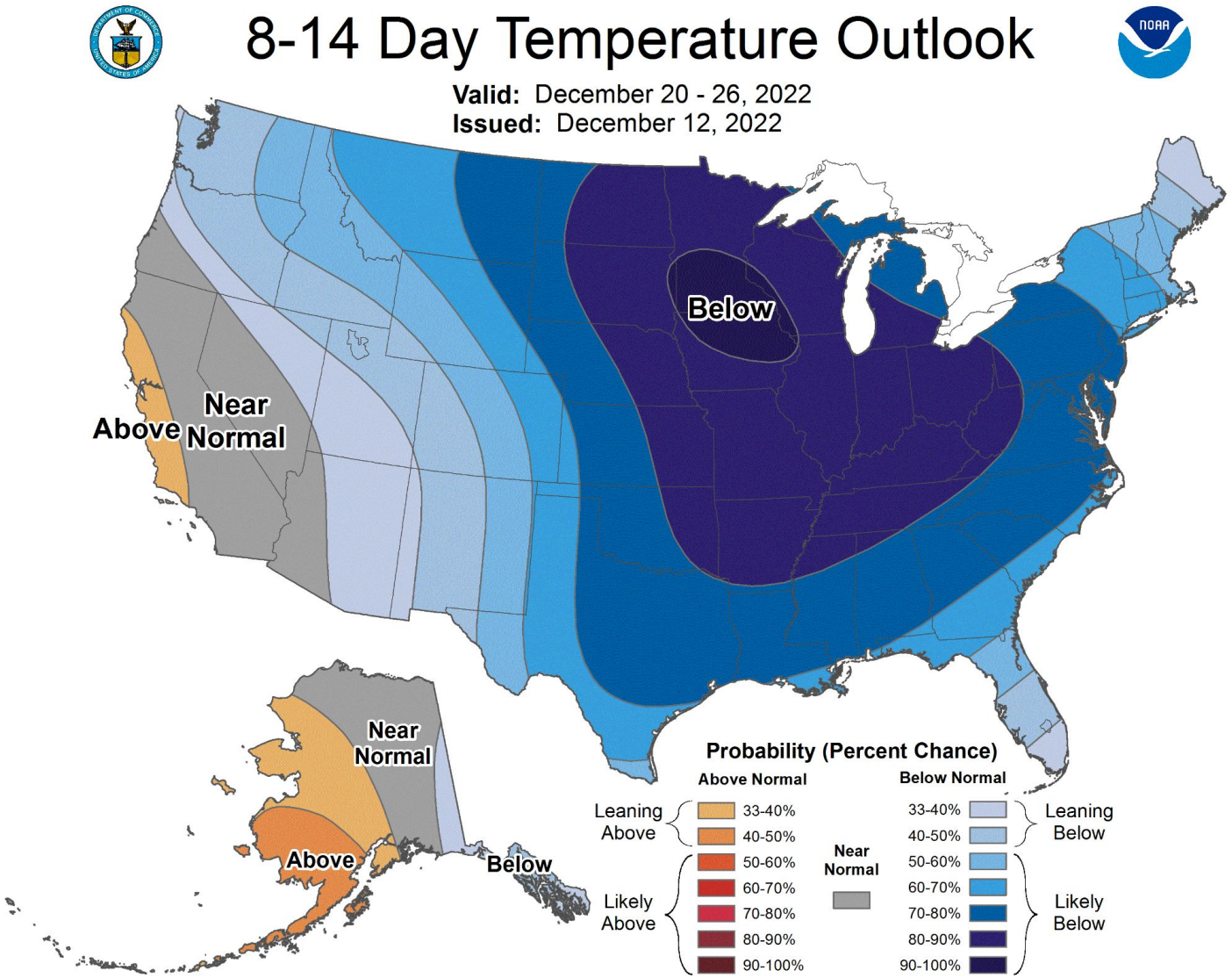
Agency - National Weather Service Weather Forecast Office
Presenter - Glen Merrill

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



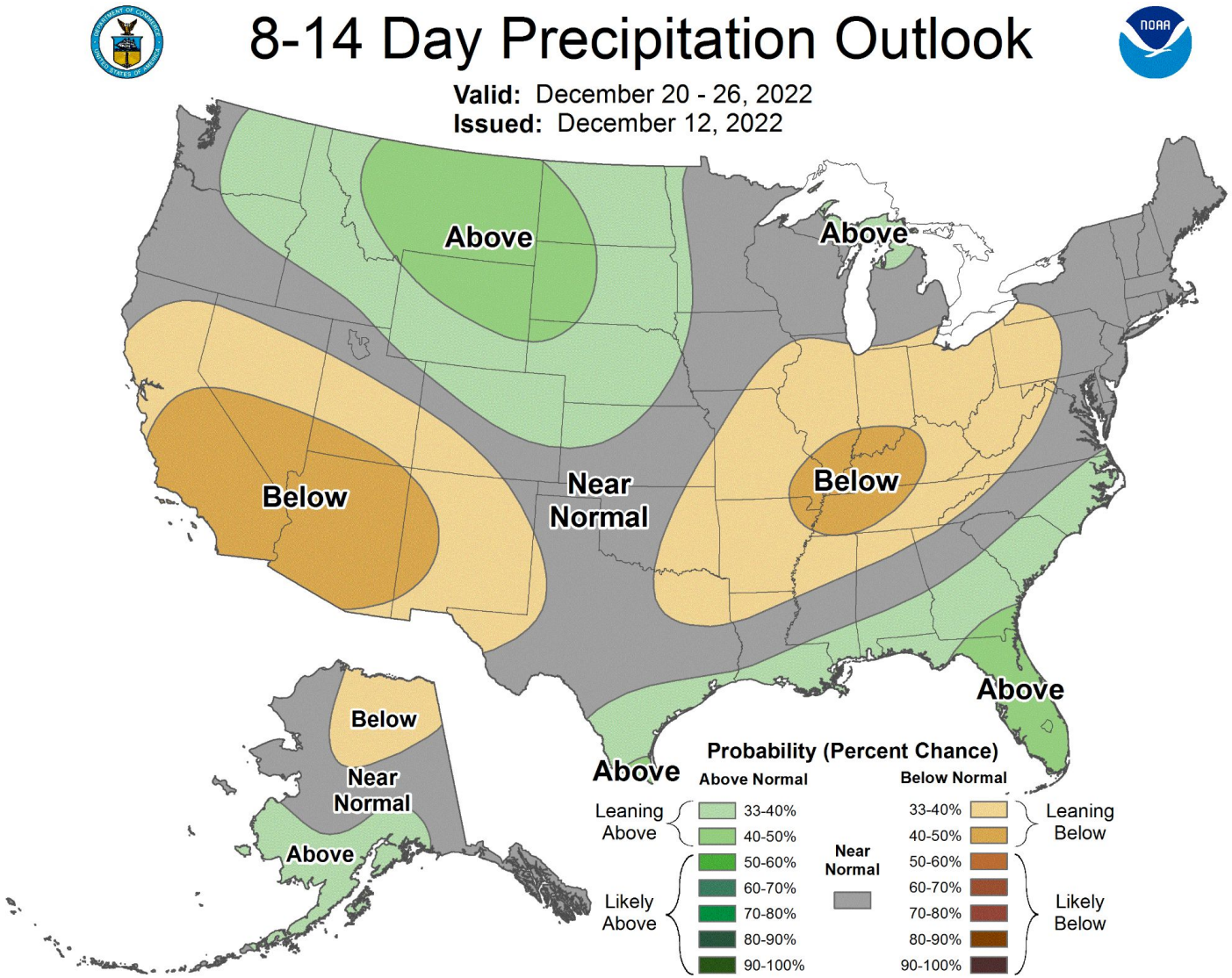
Agency - National Weather Service Weather Forecast Office
Presenter - Glen Merrill

Climate Prediction Center 8 to 14 Day Outlooks - Temperature



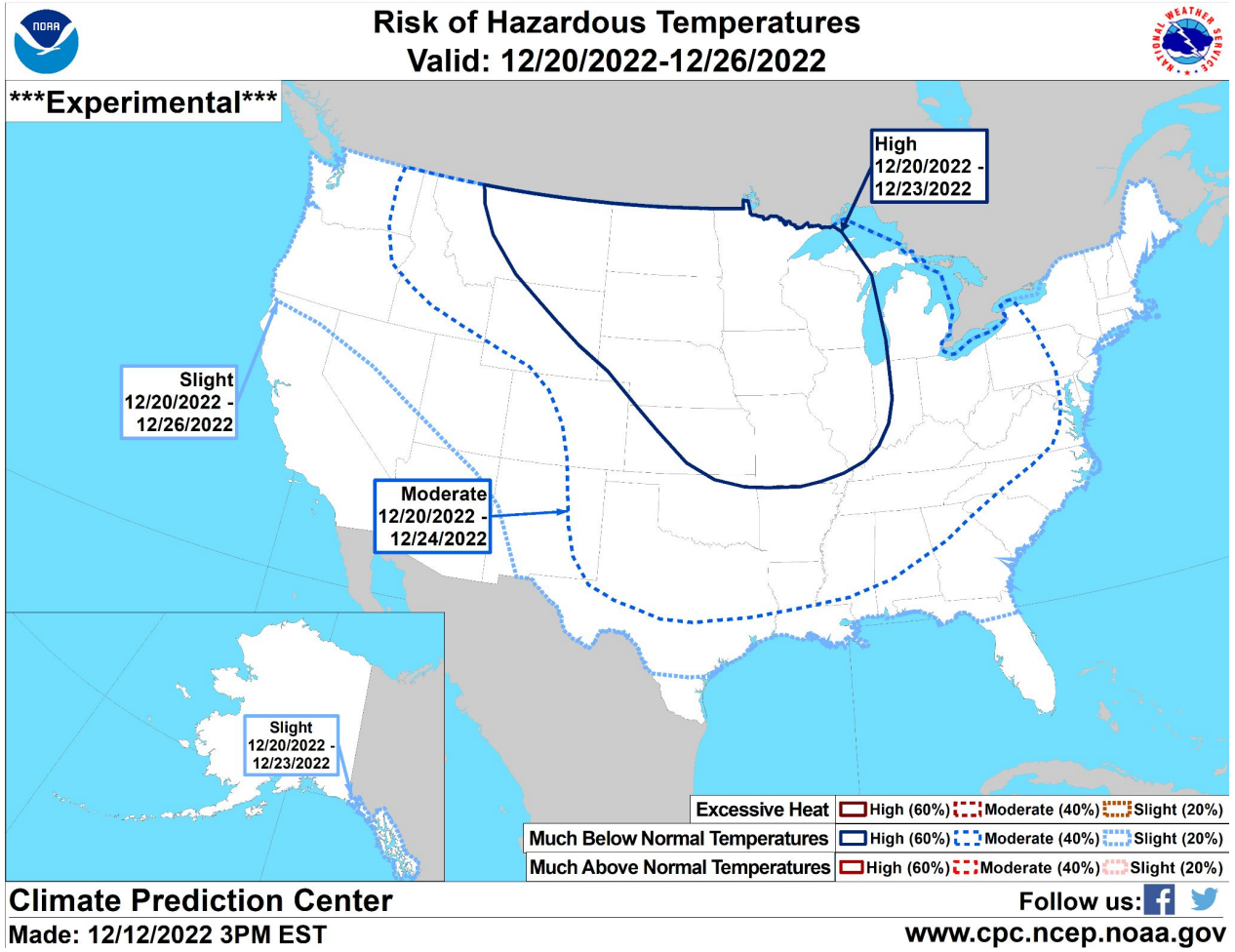
Agency - National Weather Service Weather Forecast Office
Presenter - Glen Merrill

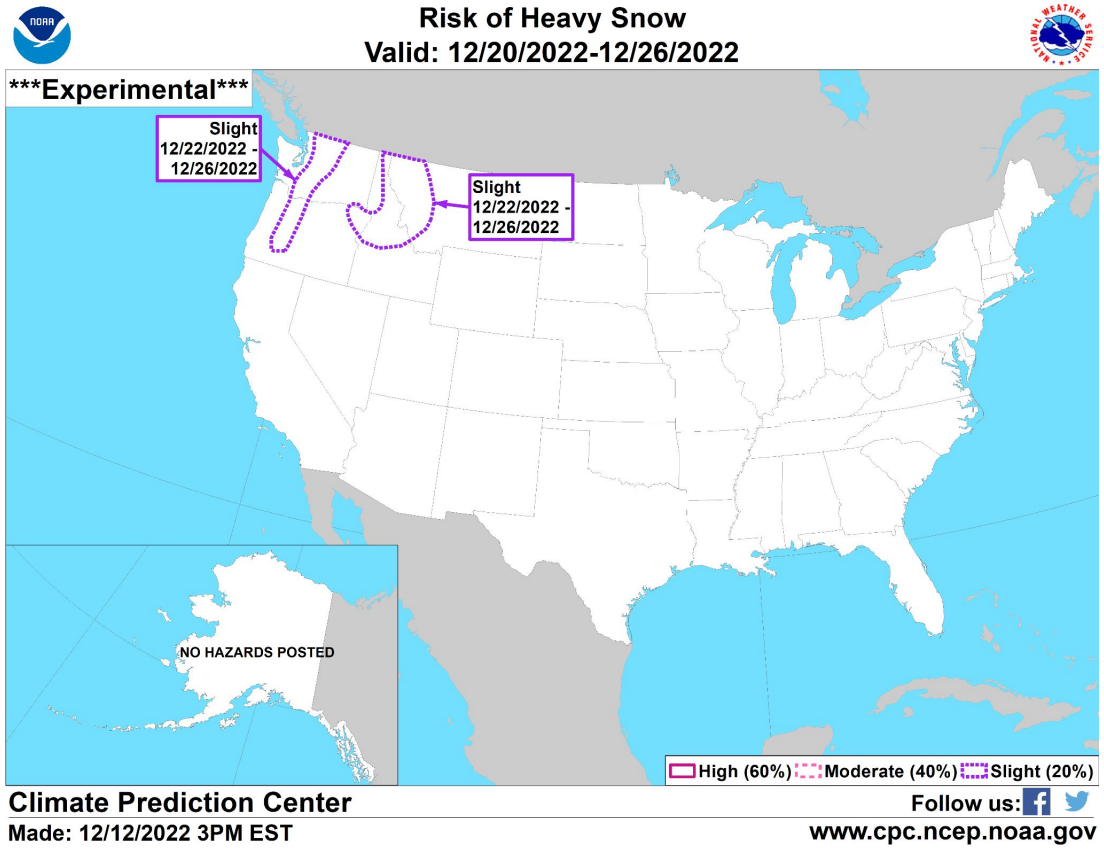
Climate Prediction Center 8 to 14 Day Outlooks - Precipitation



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

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





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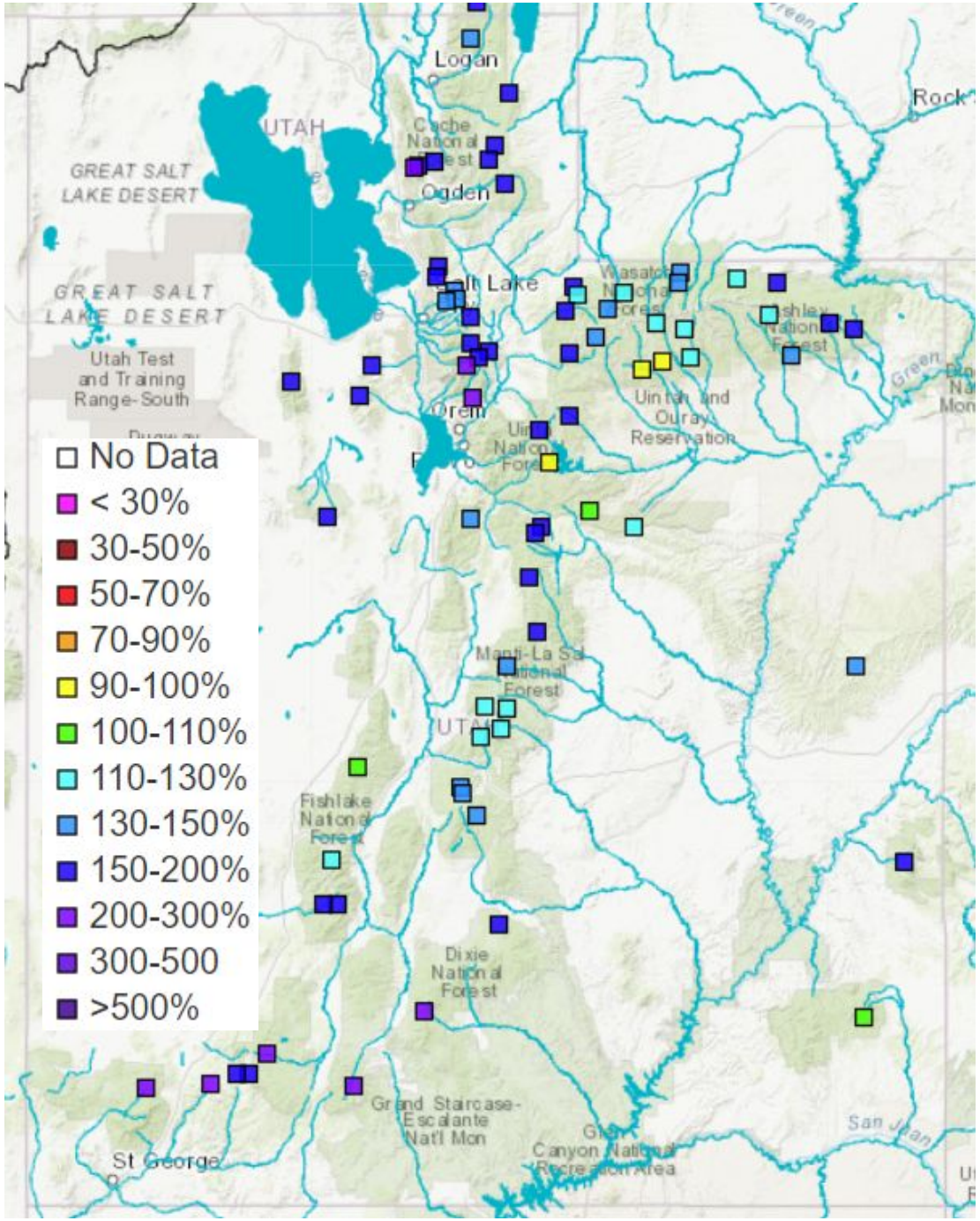
Presenter - Glen Merrill



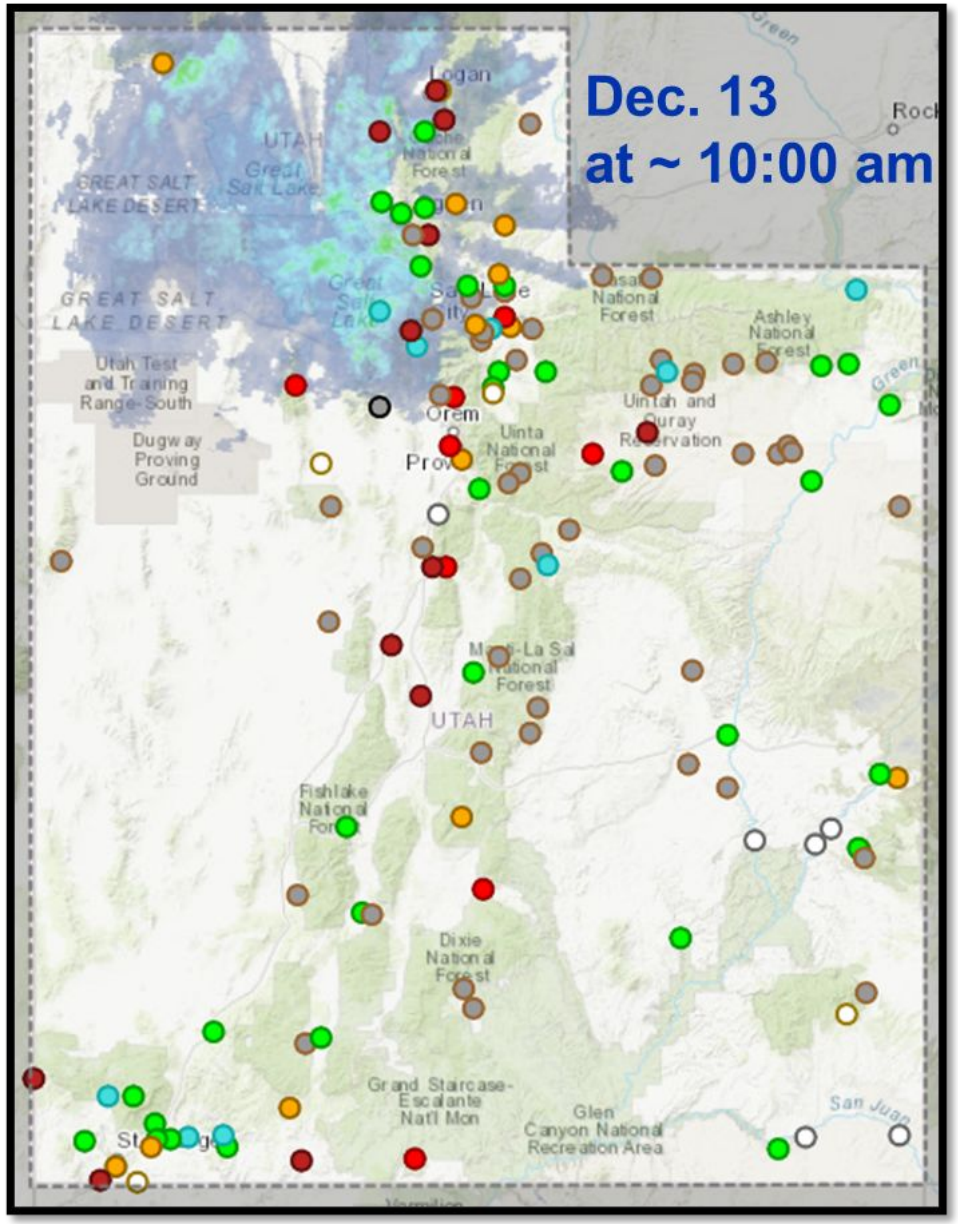
Official water supply forecasts will begin in January. Also we'll start our webinar series, the first one is tomorrow! Register on our website at www.cbrfc.noaa.gov (look at the top in red text) or:

https://register.gotowebinar.com/register/8882060965281911638

Early Outlook for WY 2023 Unregulated inflow into Powell is about 80%.

Current Streamflow Conditions

National Water Dashboard



*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%
Much above normal for this day-of-year	0	0.0%
Above normal for this day-of-year	9	6.6%
Normal for this day-of-year	34	24.8%
Below normal for this day-of-year	15	10.9%
Much below normal for this day-of-year	12	8.8%
All-time low for this day-of-year	8	5.8%
Not ranked - insufficient record	11	8.0%
Not ranked - no measurement	42	30.7%
Not ranked - stream not flowing	5	3.6%
Not ranked - no recent measurement	1	0.7%

Provisional data, subject to revision.

Agency - USGS Utah WSC
Presenter - Ryan Rowland

USGS science for a changing world

Discharge Data During Ice Conditions

Photos by U.S. Geological Survey

Daily discharge estimates based on several factors including

- Discharge measurements during ice conditions
- Weather data
- Periods of non-ice affected gage height data
- Nearby gages (if any) with similar basin characteristics that are not ice affected

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Presenter - Ryan Rowland

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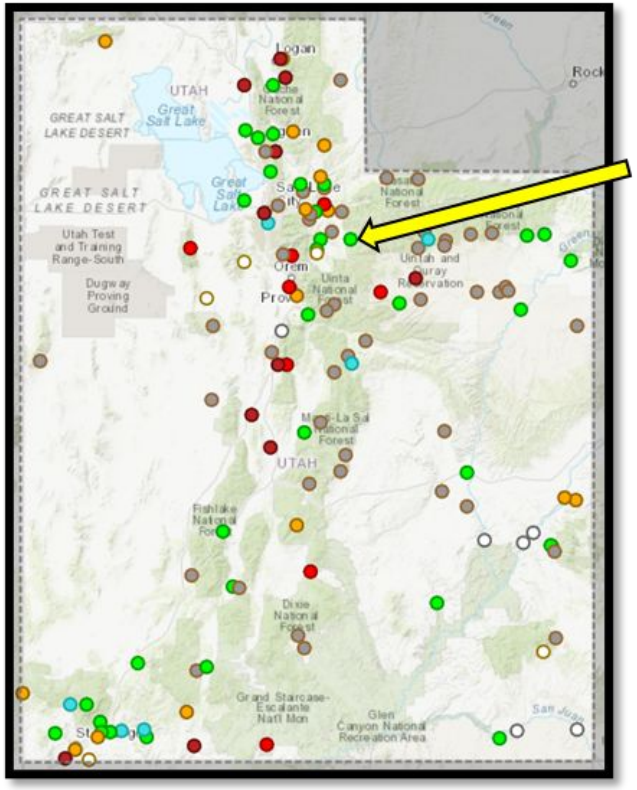
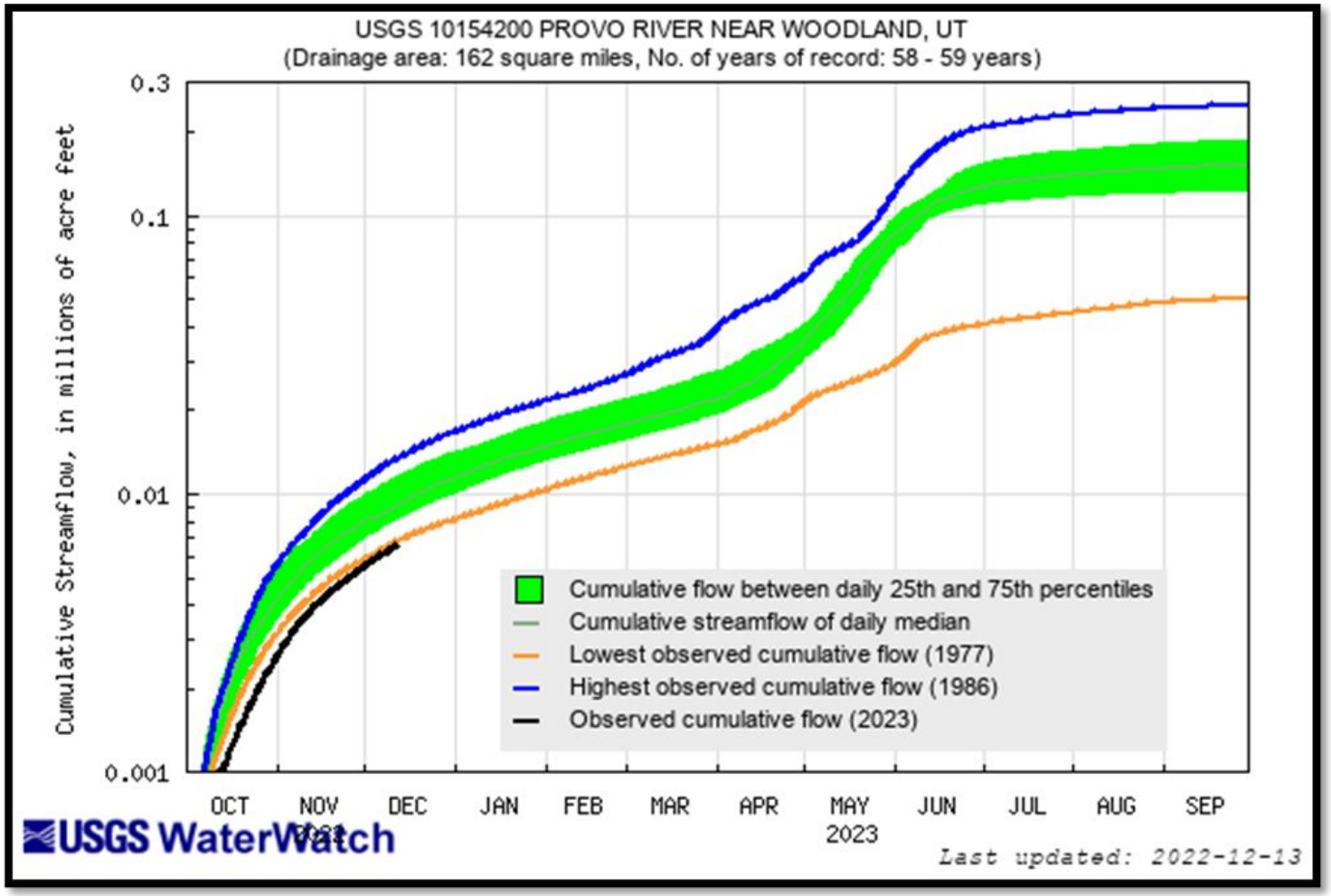
Cumulative Streamflow at Selected Gages





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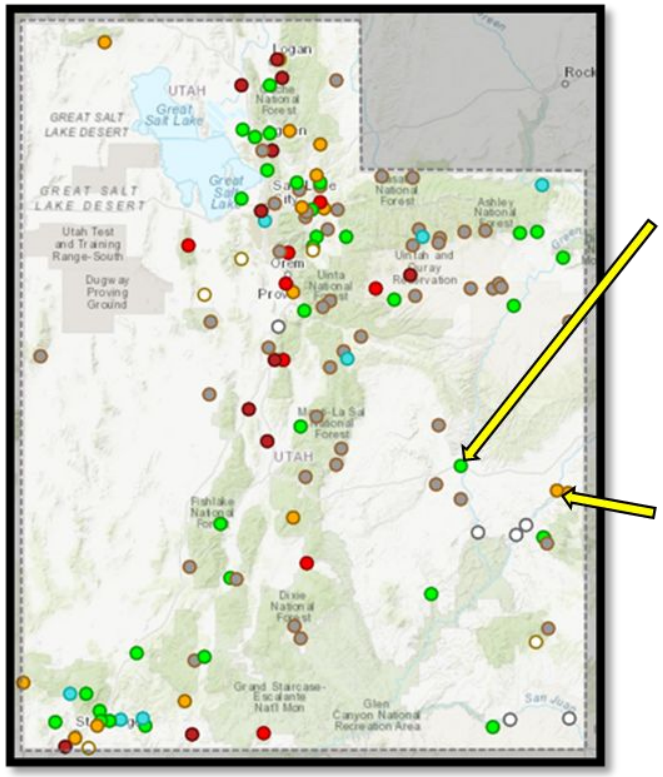
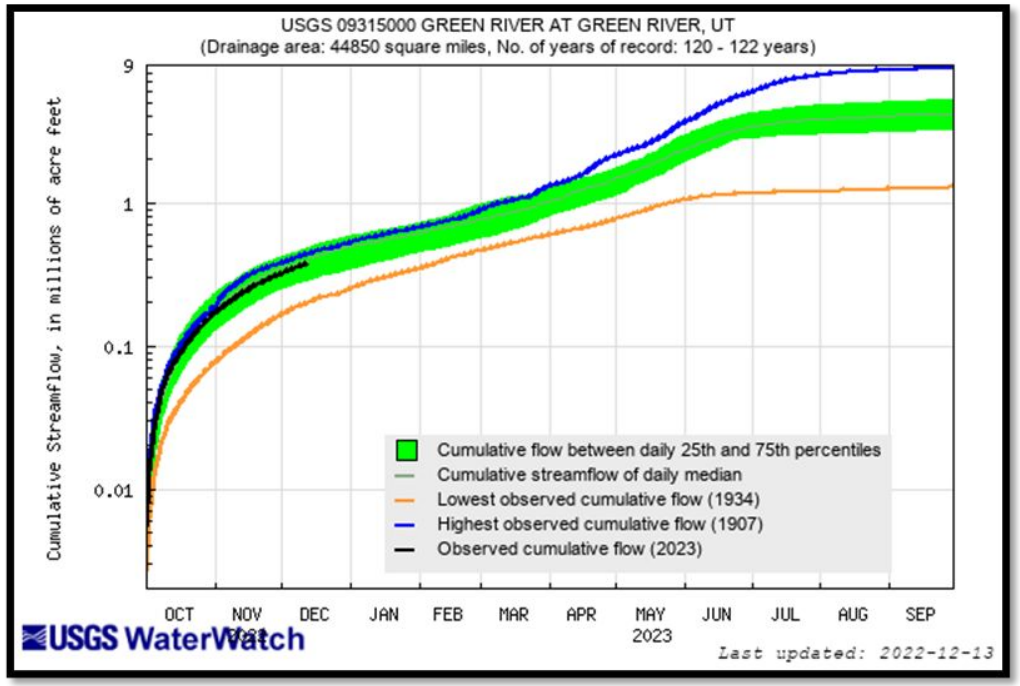
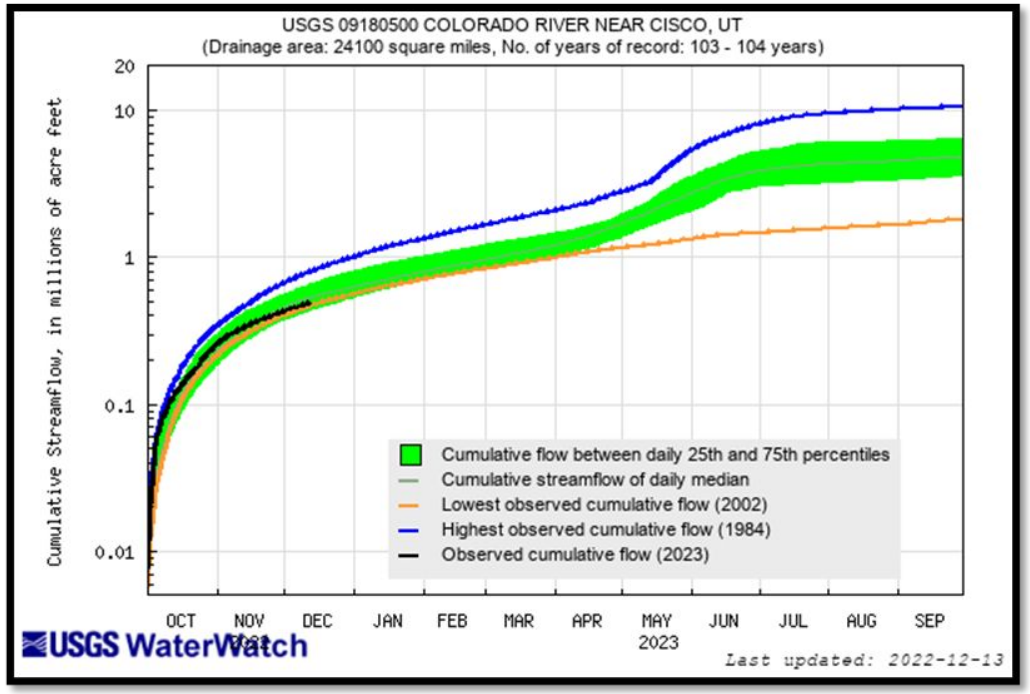
Cumulative Streamflow at Selected Gages







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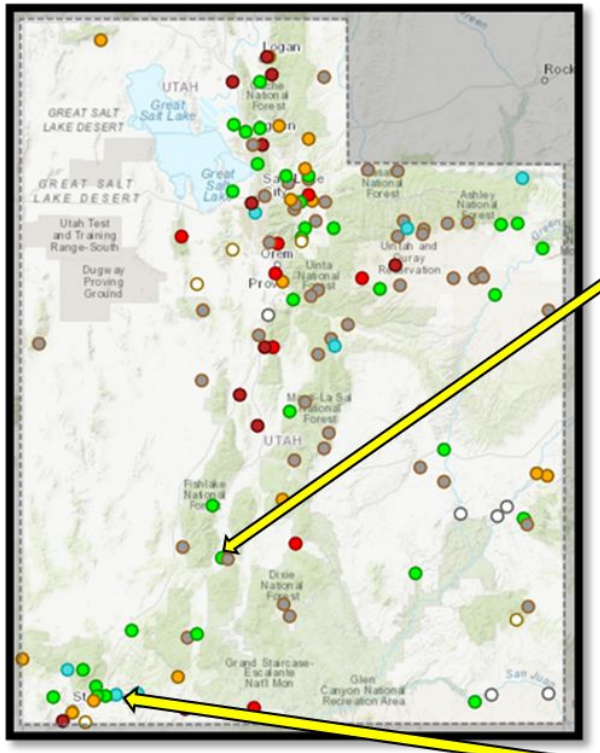
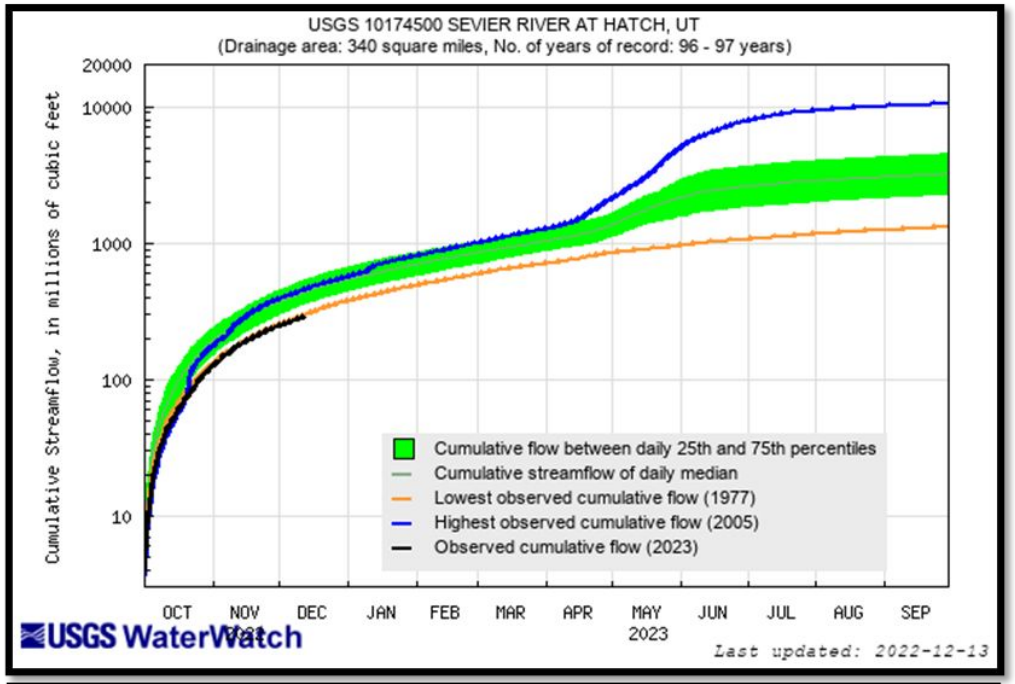
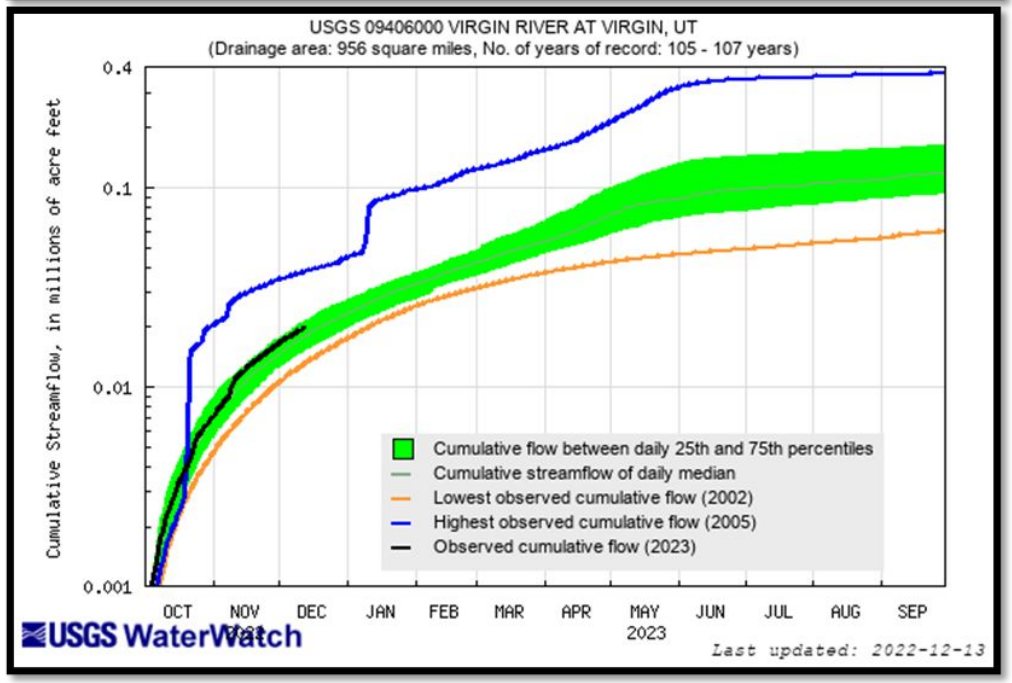
USGS science for a changing world

Cumulative Streamflow at Selected Gages





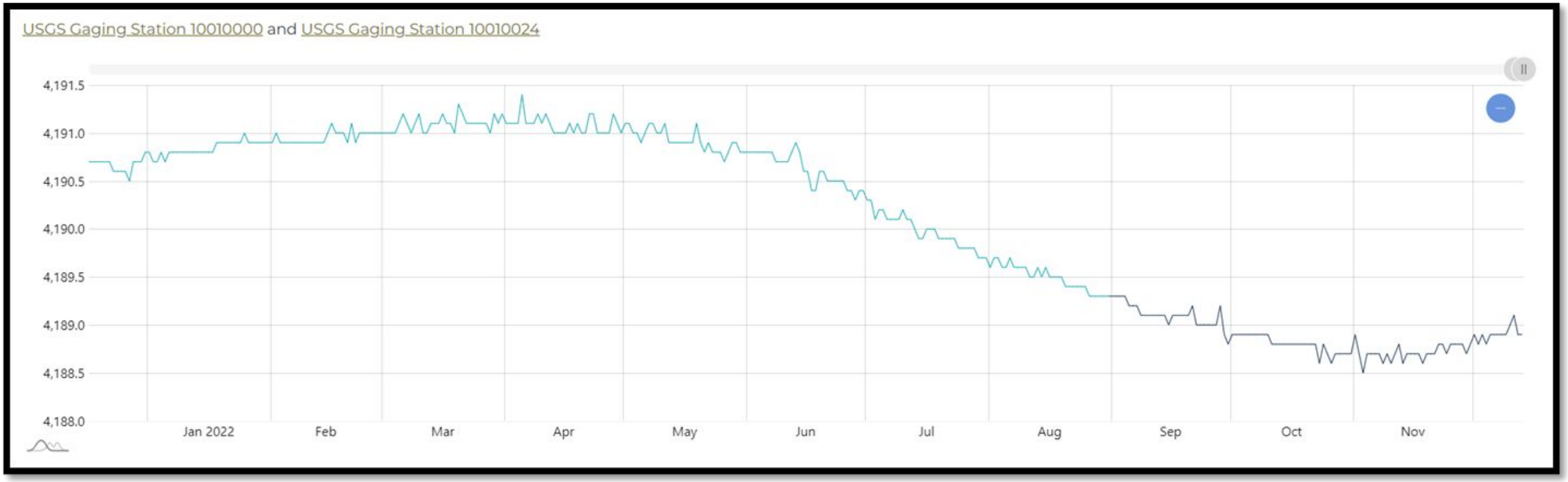


Provisional data, subject to revision.

Agency - USGS Utah WSC; Presenter - Ryan Rowland

USGS science for a changing world

Great Salt Lake Water Surface Elevation (South Arm)

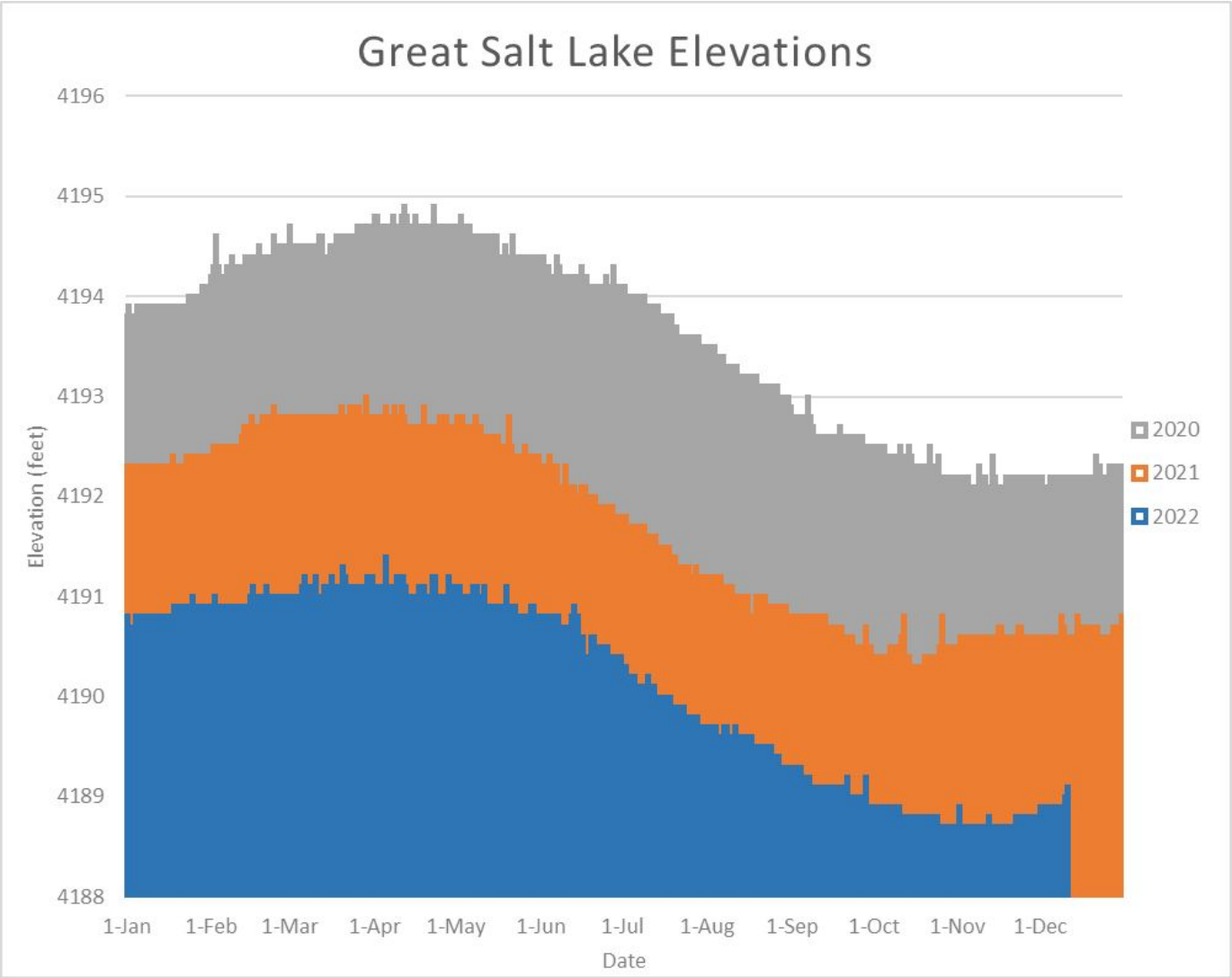


- Mean daily value 12/12/2022 = 4,188.8’
- Mean daily value 11/3/2022 = 4,188.5’ (potential new historic low for south arm)

Provisional data, subject to revision.

Agency - USGS Utah WSC; Presenter - Ryan Rowland

Great Salt Lake Water Surface Elevation (South Arm)

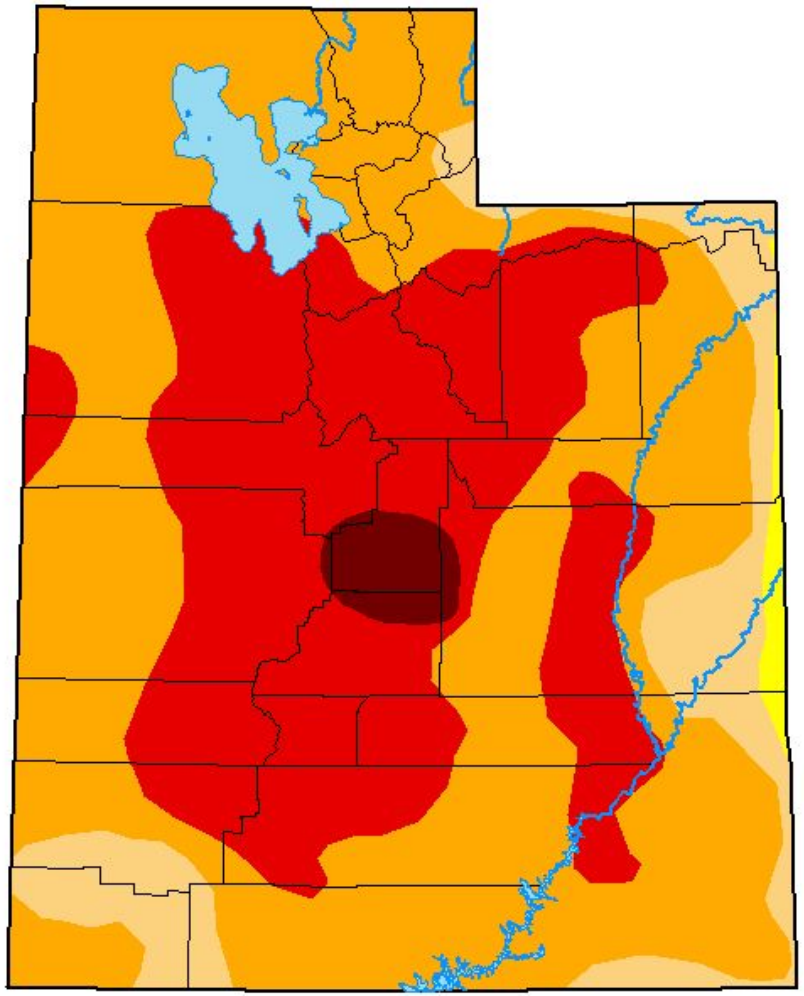


Plot provided by Laura Haskell, Utah Division of Water Resources

Agency Data - USGS Utah WSC;
Presenter - Ryan Rowland

U.S. Drought Monitor

Utah



December 6, 2022

(Released Thursday, Dec. 8, 2022)

Valid 7 a.m. EST

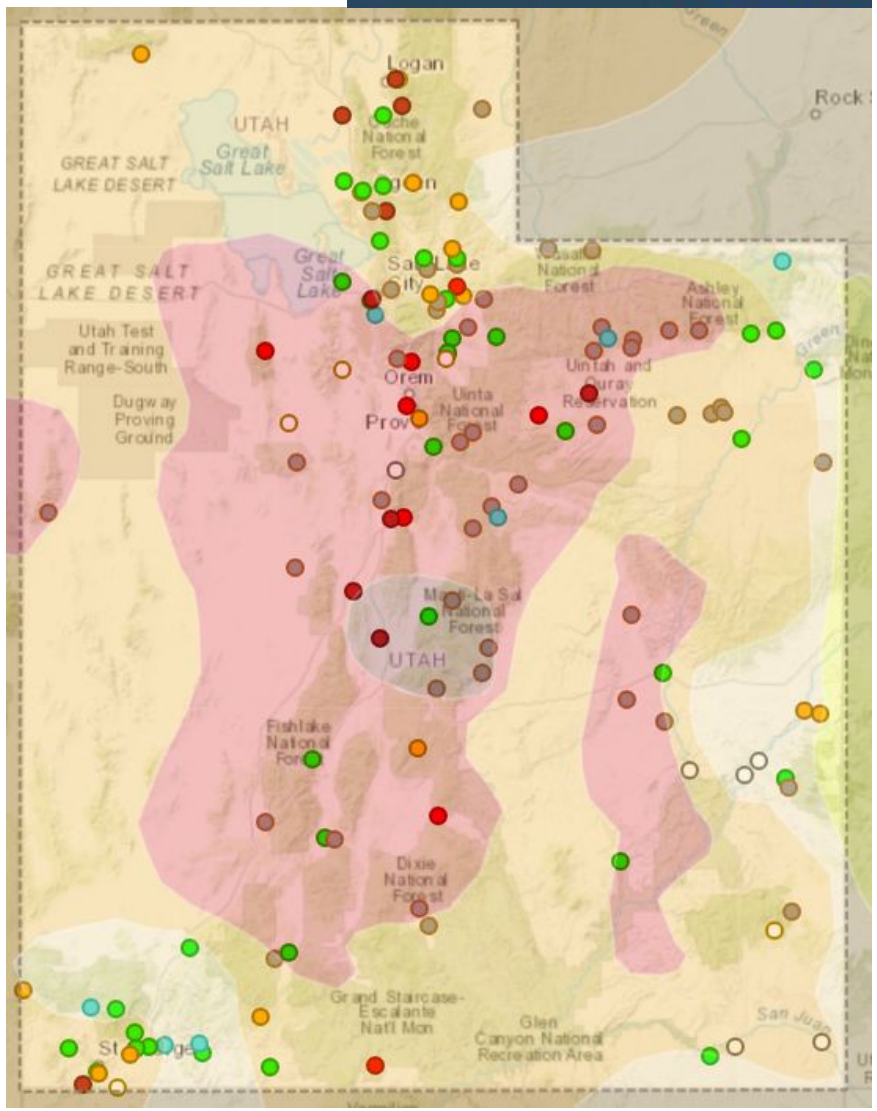
Intensity:

- 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:

David Simeral
Western Regional Climate Center

droughtmonitor.unl.edu

Federal Data Sources Include USGS NIDIS