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

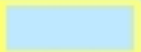
**Jeremy Dalling**

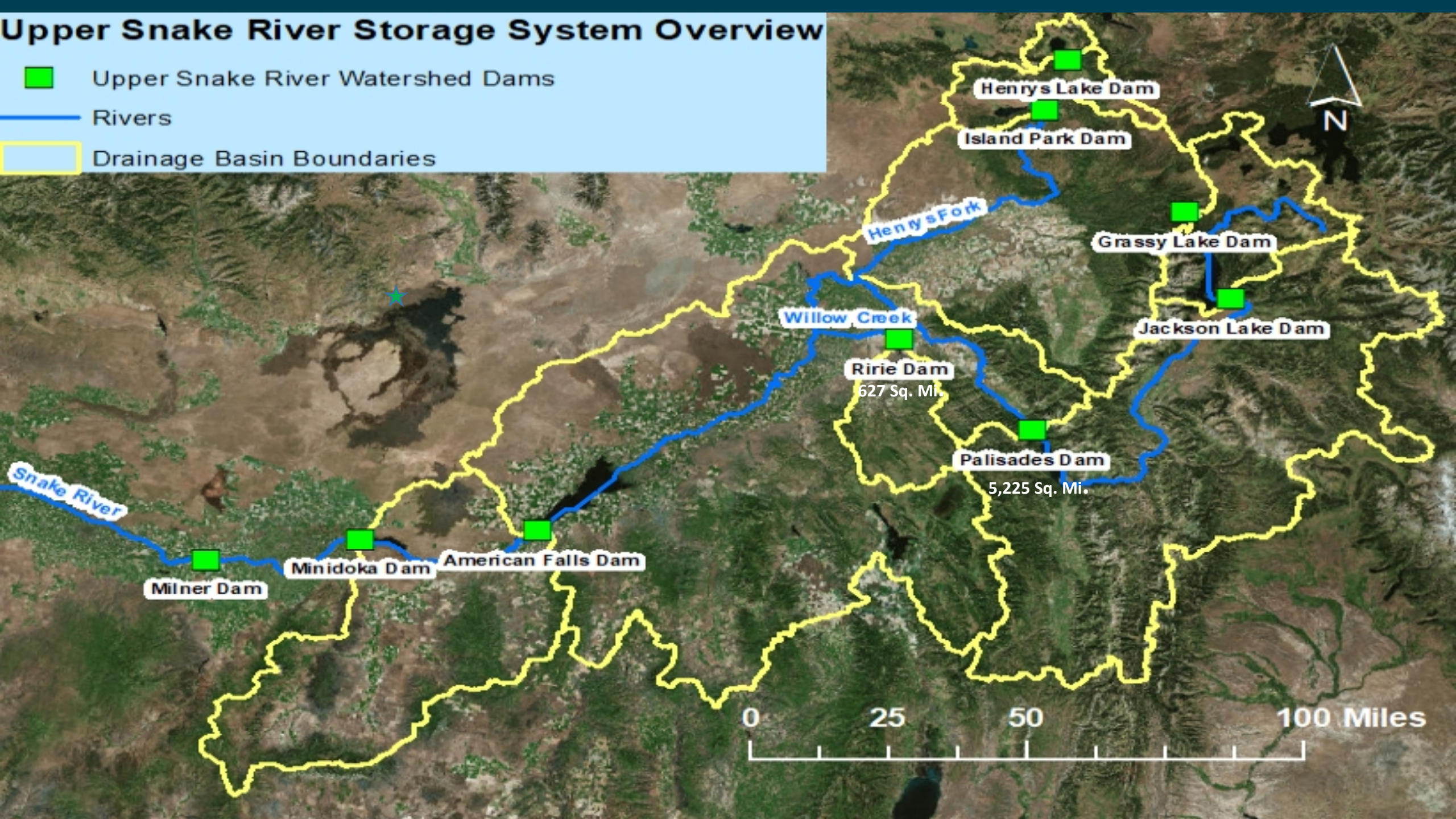
**Upper Snake Field Office Reservoir Operations Lead  
Federal Reservoirs above King Hill**

**January 19, 2022**

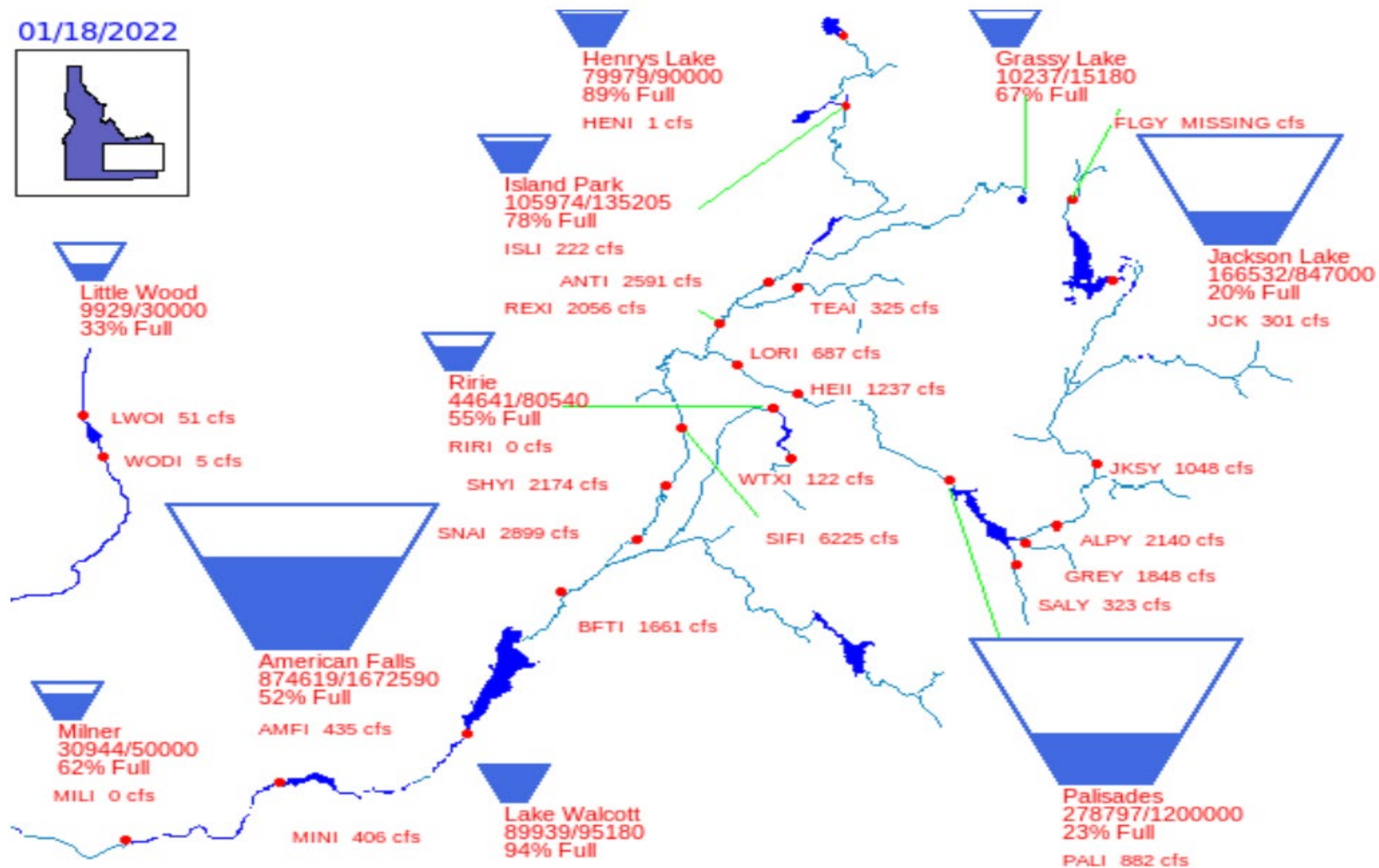


# Upper Snake River Storage System Overview

-  Upper Snake River Watershed Dams
-  Rivers
-  Drainage Basin Boundaries



01/18/2022

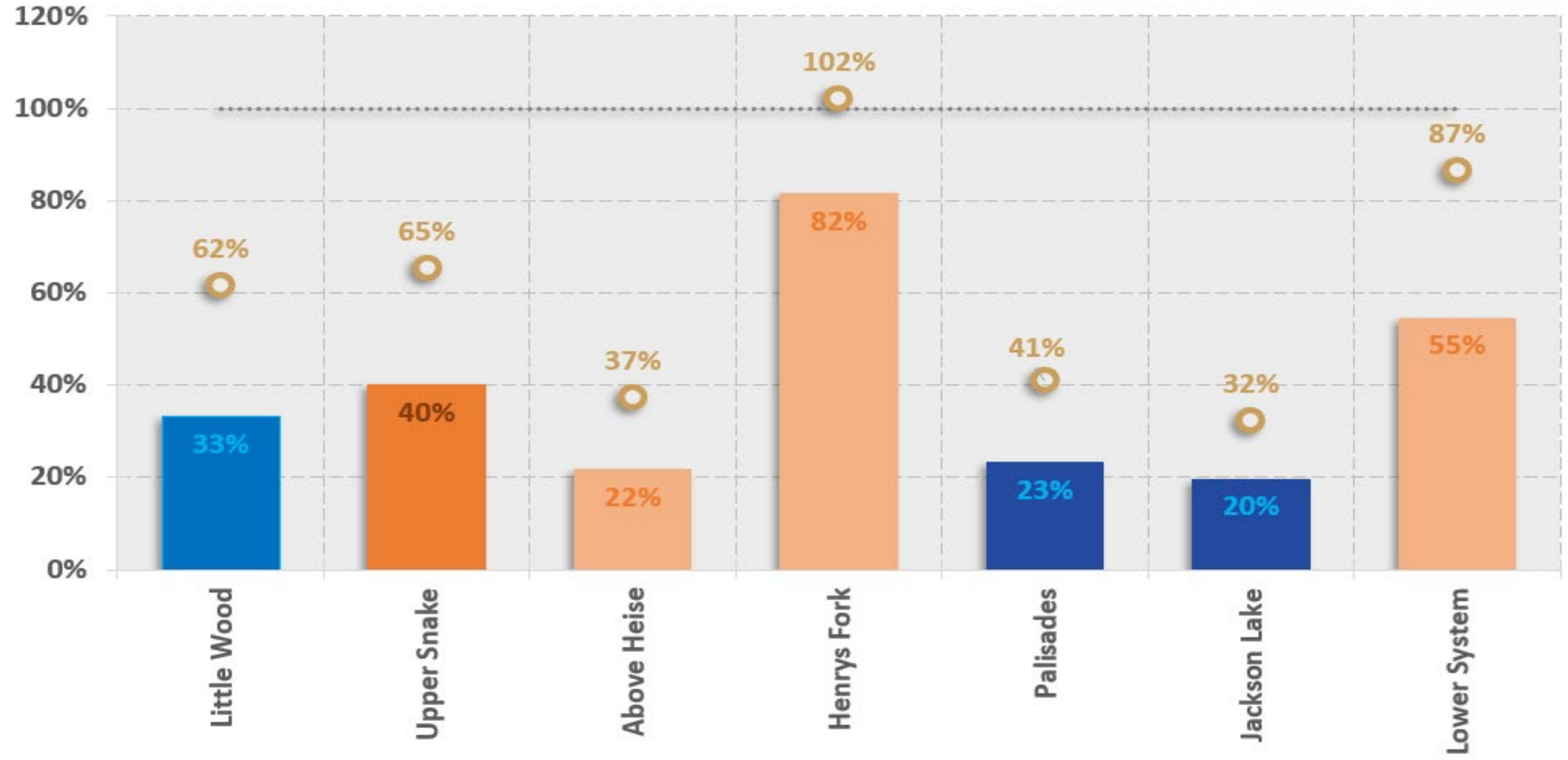


# Snake above King Hill Storage (Jan 18)



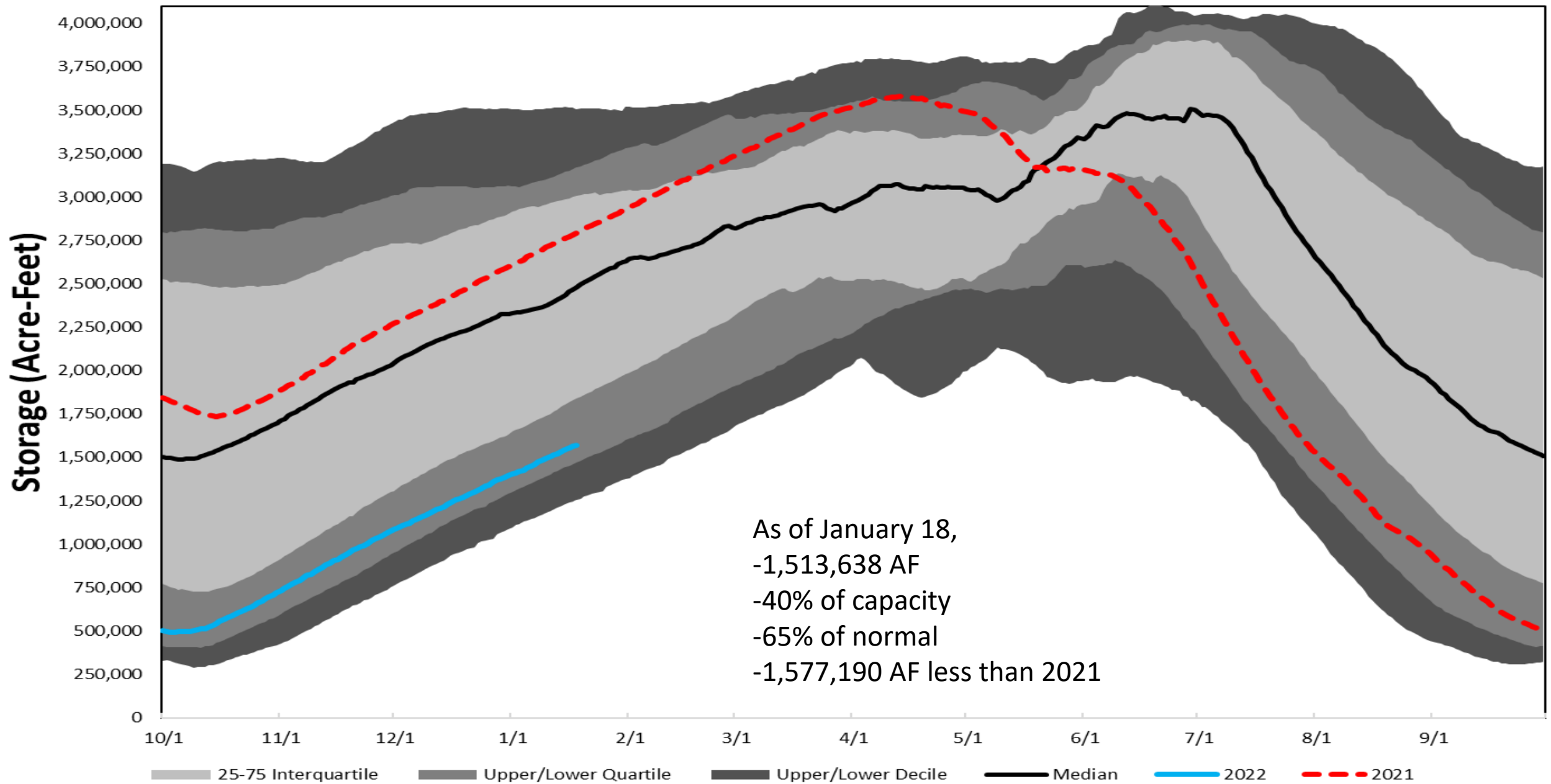
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■ Percent Full (Active Storage)    ● Percent of Base Period Normal (91-20)

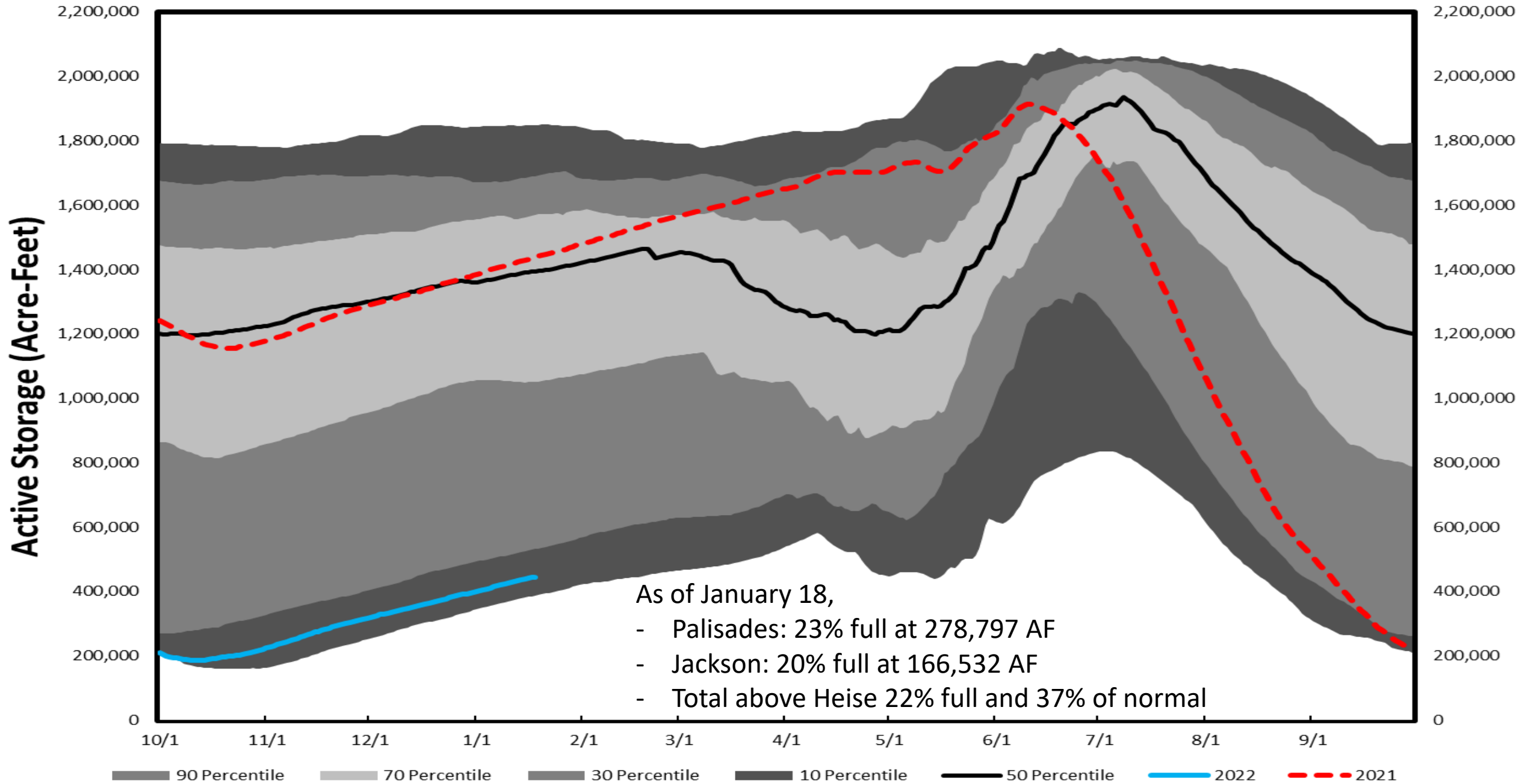


# Upper Snake Reservoir System Total Storage (Acre-Feet)

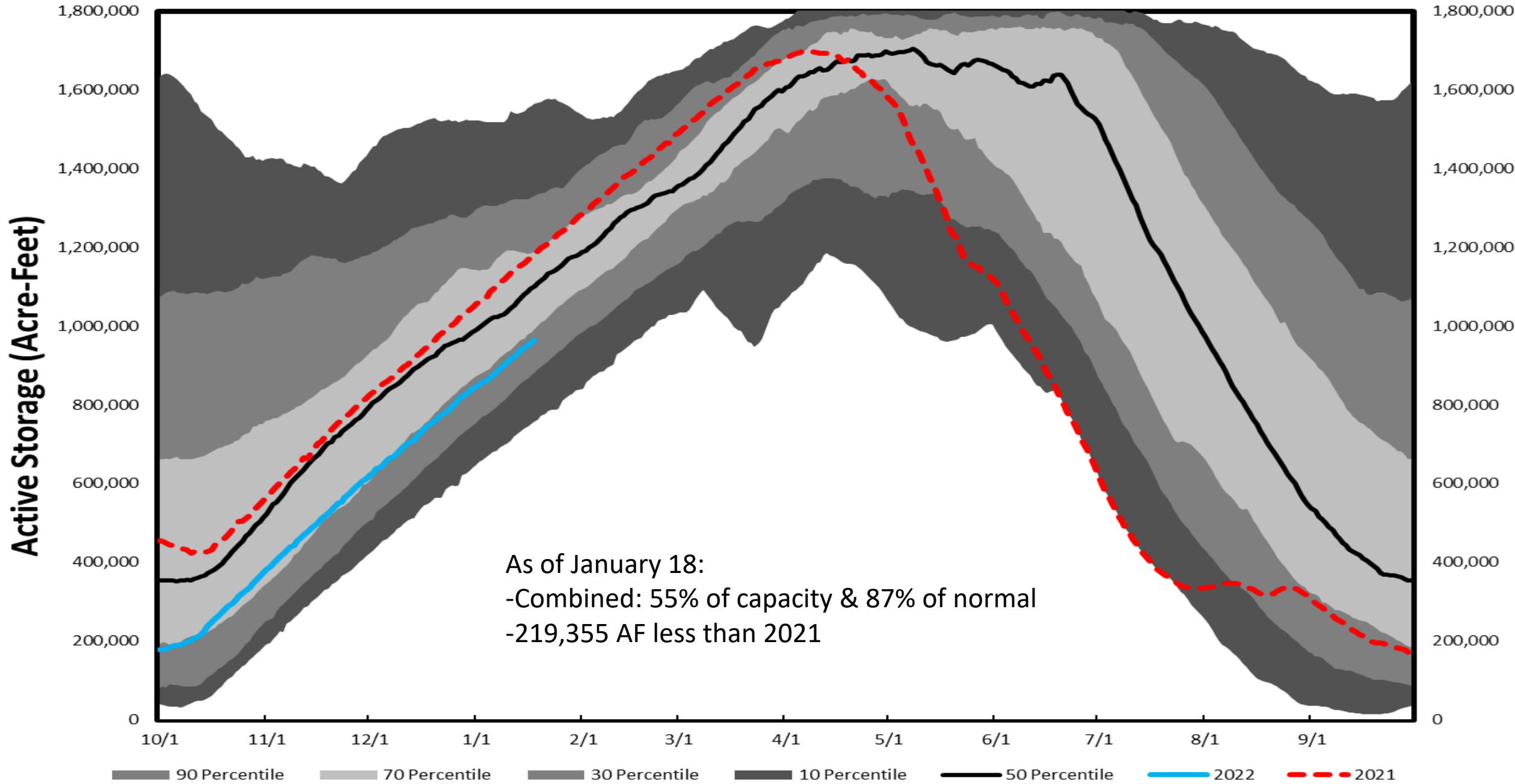
Analysis Period 1977-2021



# Jackson and Palisades Storage (1958-2021)



# American Falls and Lake Walcott Storage (1958-2021)





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# Runoff Outlook





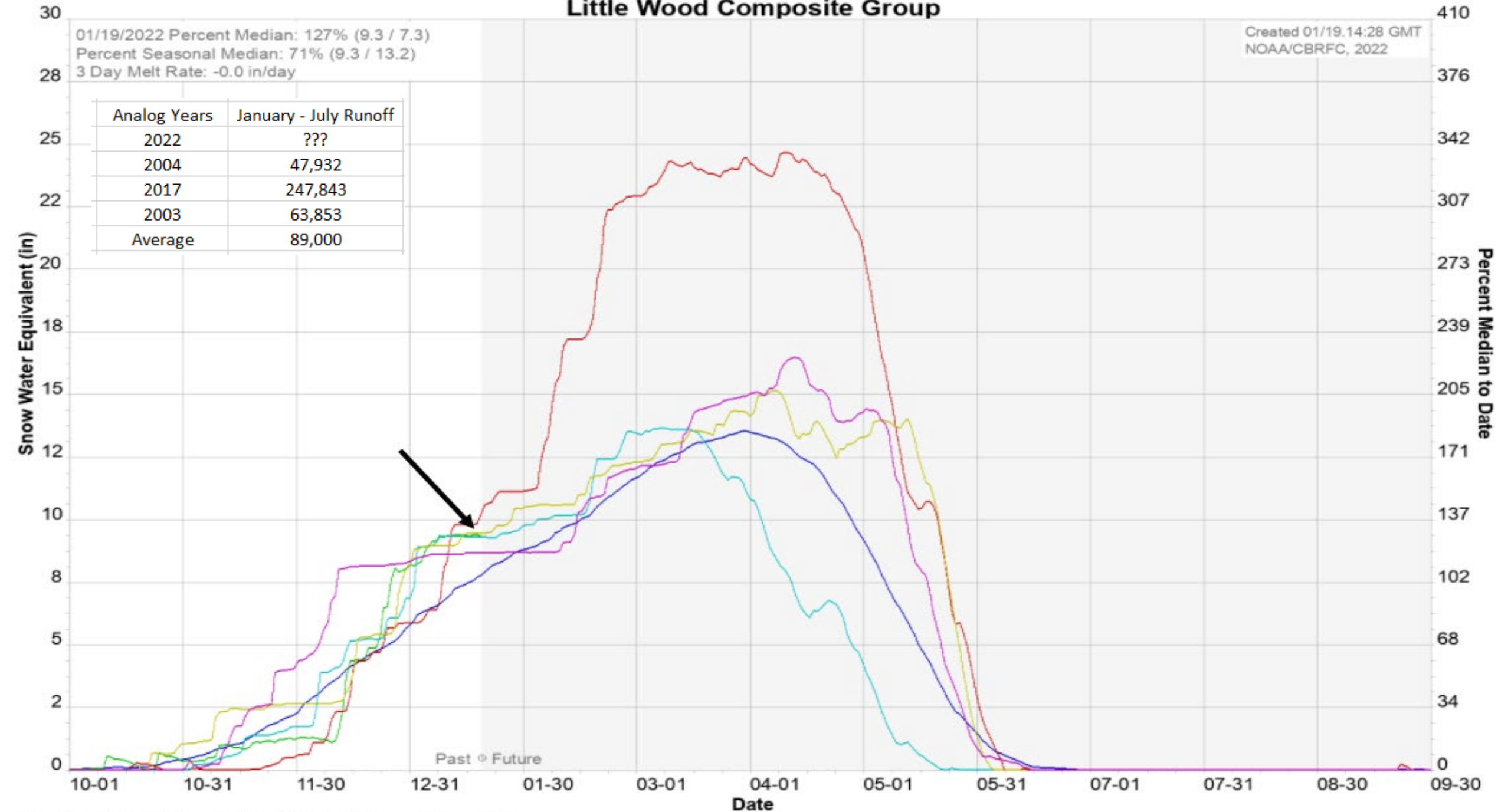
USFO Snow Survey – Jan 2022

# Little Wood Composite Group

01/19/2022 Percent Median: 127% (9.3 / 7.3)  
 Percent Seasonal Median: 71% (9.3 / 13.2)  
 3 Day Melt Rate: -0.0 in/day

Created 01/19.14:28 GMT  
 NOAA/CBRFC, 2022

Analog Years	January - July Runoff
2022	???
2004	47,932
2017	247,843
2003	63,853
Average	89,000



Past ◉ Future

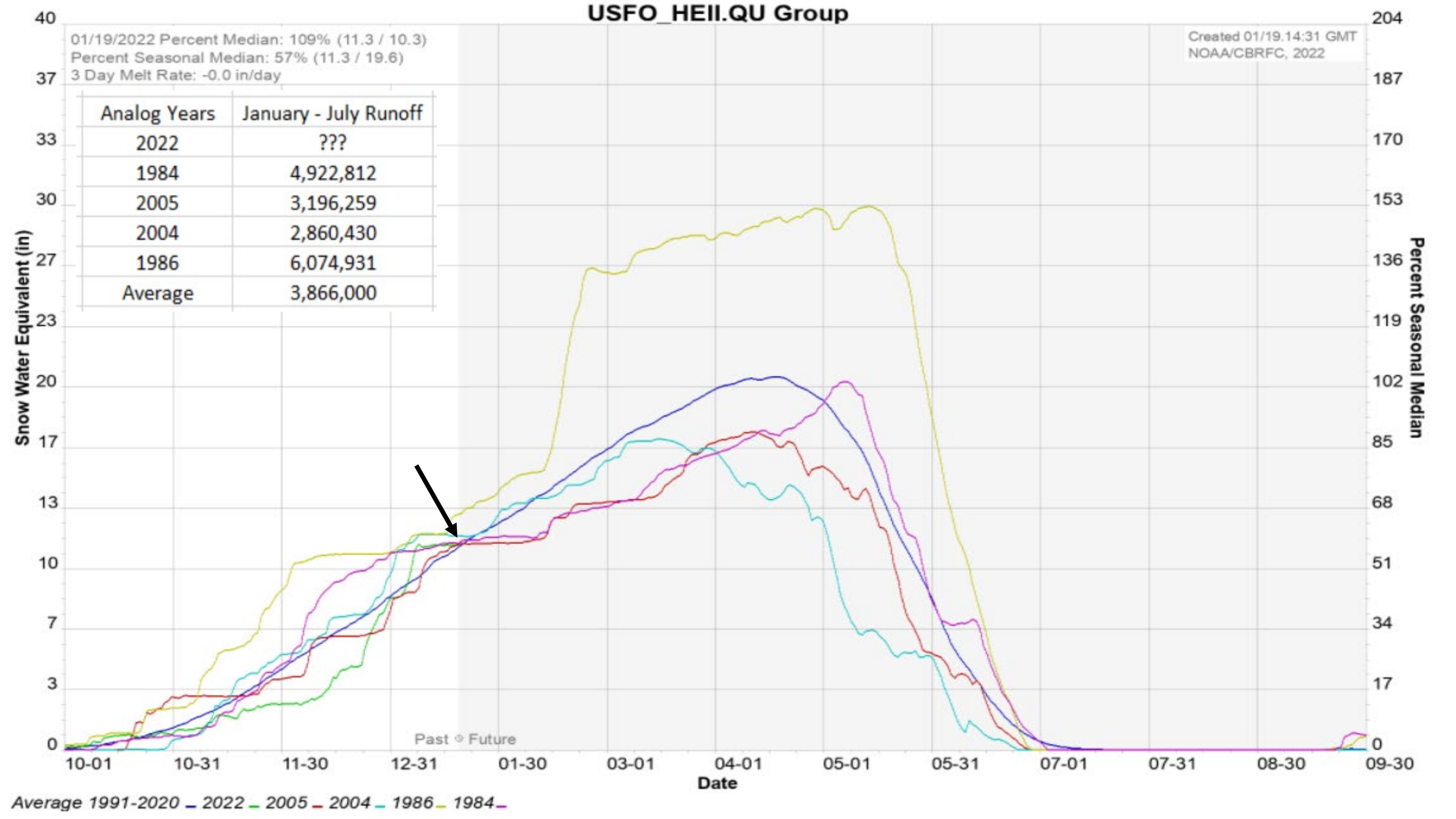
Average 1991-2020 — 2022 — 2017 — 2004 — 2003 — 1984 —

# USFO\_HEII.QU Group

01/19/2022 Percent Median: 109% (11.3 / 10.3)  
 Percent Seasonal Median: 57% (11.3 / 19.6)  
 3 Day Melt Rate: -0.0 in/day

Created 01/19.14:31 GMT  
 NOAA/CBRFC, 2022

Analog Years	January - July Runoff
2022	???
1984	4,922,812
2005	3,196,259
2004	2,860,430
1986	6,074,931
Average	3,866,000



Average 1991-2020 — 2022 — 2005 — 2004 — 1986 — 1984 —

# SNOW WATER EQUIVALENT IN UPPER SNAKE

Reset Range

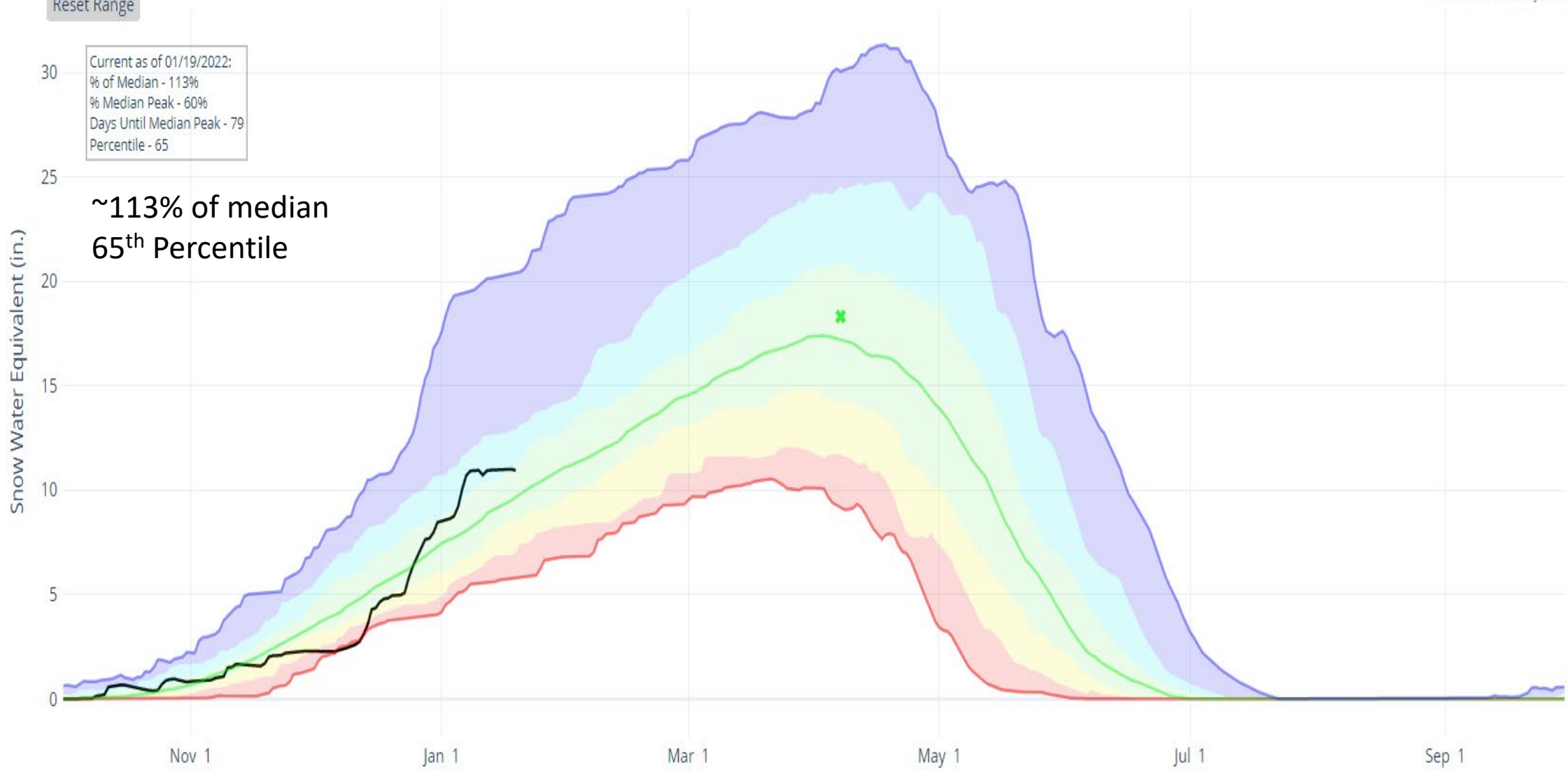
[Link to data: CSV / JSON](#)

[Station List](#)

Current as of 01/19/2022:  
% of Median - 113%  
% Median Peak - 60%  
Days Until Median Peak - 79  
Percentile - 65

~113% of median  
65<sup>th</sup> Percentile

- ✖ Median Peak SWE
- Max
- - - Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2022 (56 sites)
- 2021 (56 sites)
- 2020 (56 sites)
- 2019 (56 sites)
- 2018 (55 sites)
- 2017 (56 sites)
- 2016 (56 sites)
- 2015 (55 sites)
- 2014 (55 sites)
- 2013 (56 sites)
- 2012 (56 sites)
- 2011 (56 sites)
- 2010 (55 sites)
- 2009 (55 sites)
- 2008 (55 sites)
- 2007 (55 sites)
- 2006 (54 sites)
- 2005 (54 sites)







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# Forecasts and Outlooks

**CURRENT MONTHLY FORECAST SUMMARY**  
**JAN 1, 2022**

FORECAST POINT	FORECAST PERIOD	1991-2020 AVERAGE (KAF)	NORMAL SUBSEQUENT CONDITIONS	
			FORECAST (KAF)	PERCENT NORMAL
*** HEISE	JAN-JUL	3866	3500	91%
** JACKSON LAKE	JAN-JUL	869	822	95%
** ISLAND PARK	JAN-JUL	285	237	83%
** TETON	JAN-JUL	424	356	84%
*** RIRIE	JAN-JUN	66	62	94%
*** LITTLE WOOD	JAN-JUL	89	122	137%

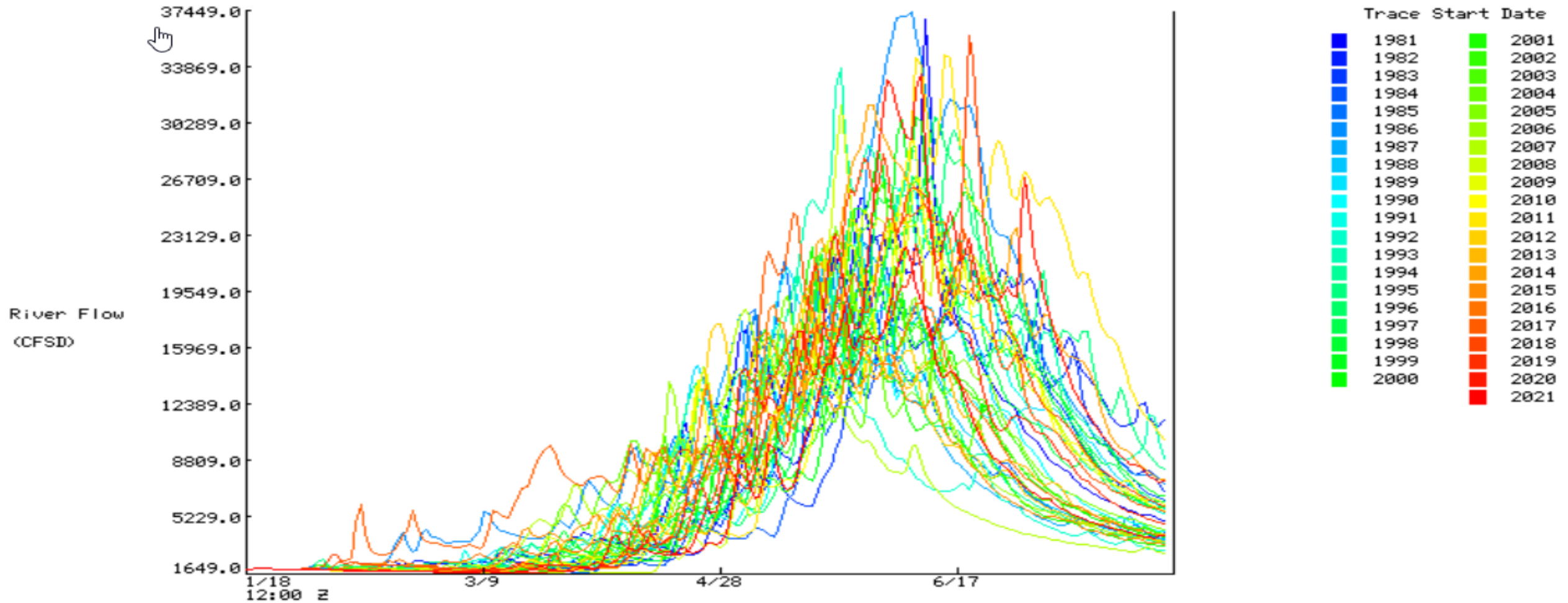
\* PCA Forecast

\*\* Average of some or all of the following: PCA, MLR, RFC

\*\*\* Coordinated with USACE

\*\*\*\* RFC or NRCS

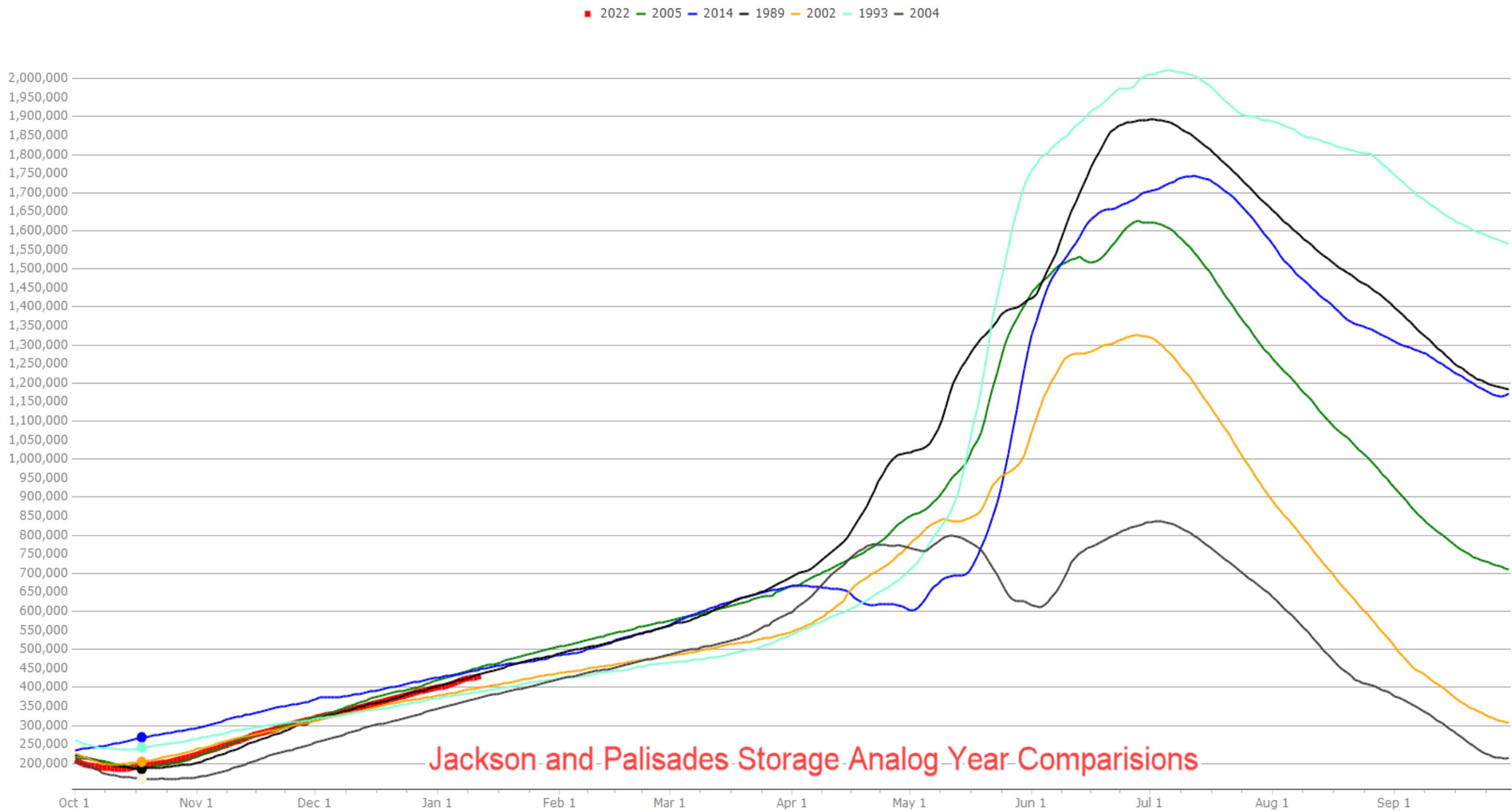
ESP Trace Ensemble of R nr Irwin (NATURAL)  
 Latitude: 43.4 Longitude: -111.2  
 Forecast for the period 1/18/2022 12h - 7/31/2022 12h  
 This is a conditional simulation based on the current conditions as of 1/18/2022



### Ensemble Plot

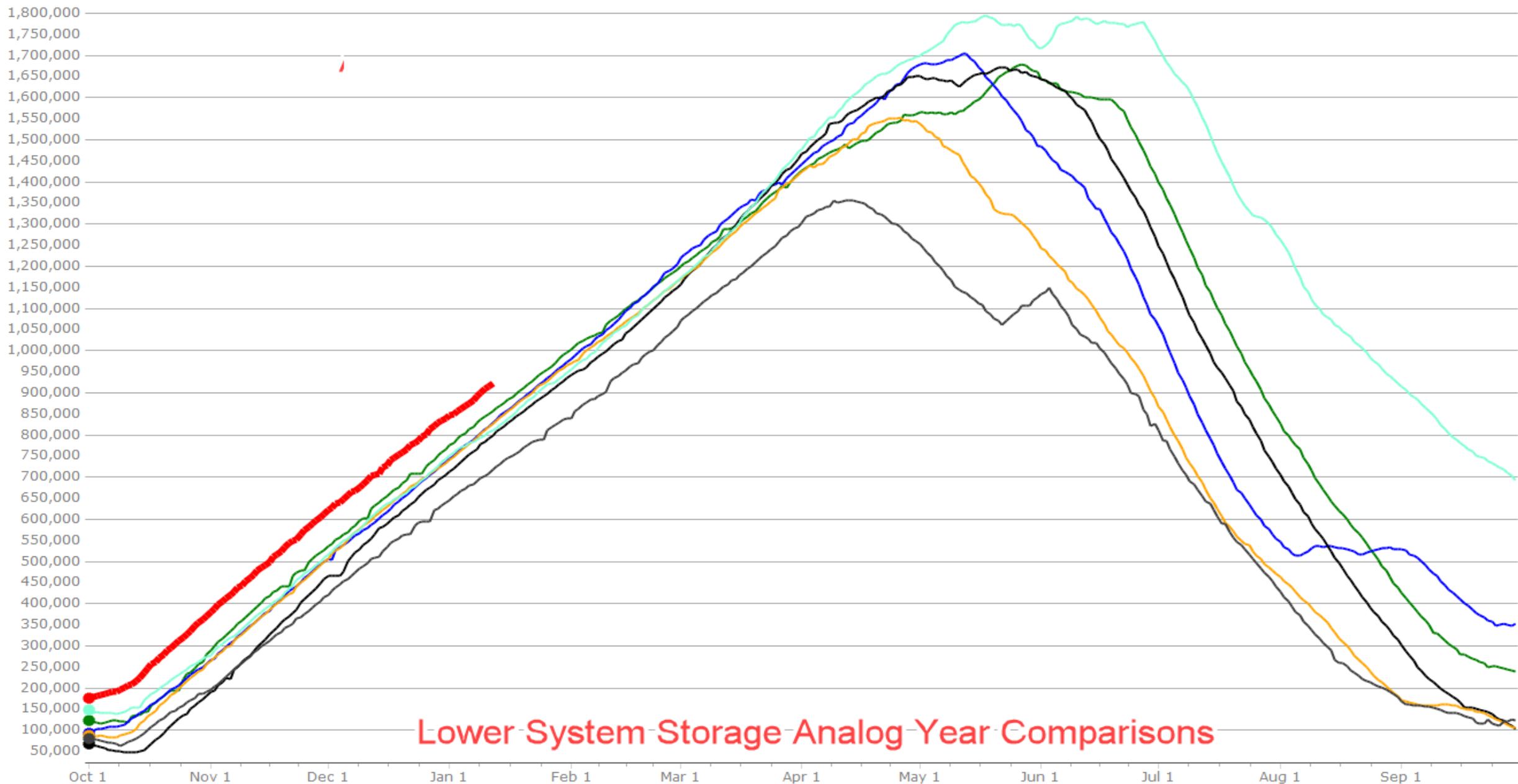
This plot is often referred to as the 'spaghetti' plot. It displays all of the traces together on the same plot. This plot does not contain explicit probabilistic information but does show the variability of the forecast data. The Y-axis is the selected hydrologic parameter and the X-axis is date of the analysis selected at forecast time. The trace color code represents the year. Traces will show the streamflow time series for each calibration year over the selected analysis period. Data will be aggregated for the interval selected. For example, if you select Mean and Day, you will get the ESP mean daily flows each day of the analysis period.





Jackson and Palisades Storage Analog Year Comparisons

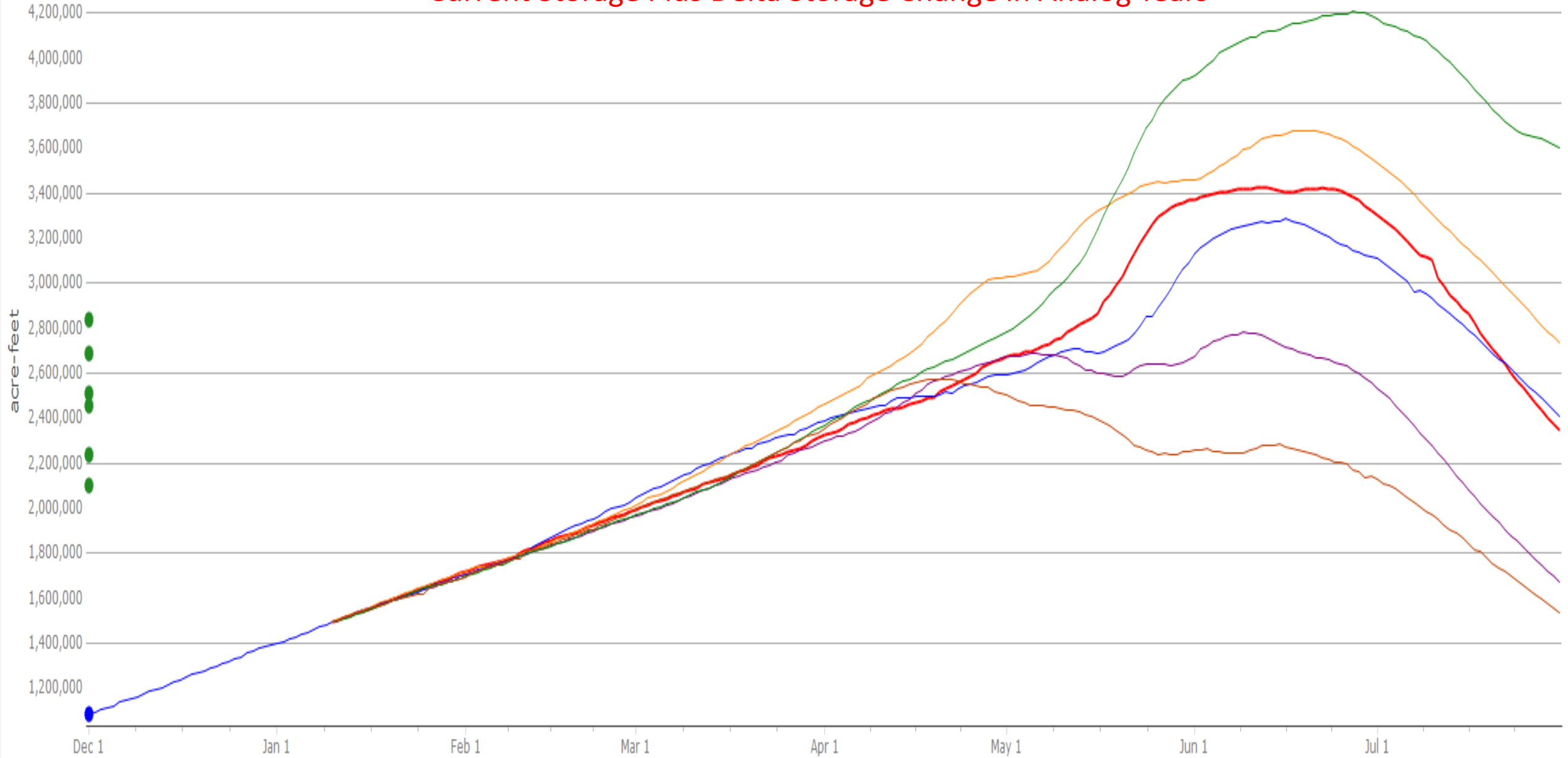
2022 2005 2014 1989 2002 1993 2004



Lower System Storage Analog Year Comparisons

— snasys af 2022 — 2005 deltas — 2014 deltas — 1989 deltas — 2002 deltas — 1993 deltas — 2004 deltas

## Current Storage Plus Delta Storage Change in Analog Years



# Overview

- Storage is below average in the Upper Snake
- Snowpack is near to above average
- Releases likely steady through February
- Little Wood - FRM may be needed before April



# For More Information

## Snake River Area Office

- Lanie Paquin - Area Manager  
208-383-2246  
[mpaquin@usbr.gov](mailto:mpaquin@usbr.gov)

## Upper Snake Field Office

- Mike Hilliard – Field Office Manager  
208-678-0461 (x34)  
[mhilliard@usbr.gov](mailto:mhilliard@usbr.gov)
- Brian Stevens – Water Operations Group Manager (x24)  
[bstevens@usbr.gov](mailto:bstevens@usbr.gov)
- Jeremy Dalling - Reservoir Operations Lead (x25)  
[jdalling@usbr.gov](mailto:jdalling@usbr.gov)
- Darrin Fredrickson - Staff Assistant (x17)  
[dfredrickson@usbr.gov](mailto:dfredrickson@usbr.gov)

## Snake River Operations Web Sites

- Upper Snake water information site -  
<http://www.usbr.gov/pn/hydromet/upperSnake/index.html>
- USBR HydroMet - <http://www.usbr.gov/pn/hydromet/>
- Northwest River Forecast Center - <http://www.nwrfc.noaa.gov/rfc/>
- NRCS SNOTEL Data - <http://www.id.nrcs.usda.gov/snow/>

