



— BUREAU OF —
RECLAMATION

January 2020
Water Supply and Operations Update
Bureau of Reclamation
Upper Snake Field Office

Presentation Outline

River and Reservoir Conditions

- Streamflow/Inflow**
- Reservoir Storage**
- Releases**

Water Supply Forecast

- January 2020 Runoff Volume Forecasts**

Projected Reservoir Operations

- Operational Objectives and Outlooks**

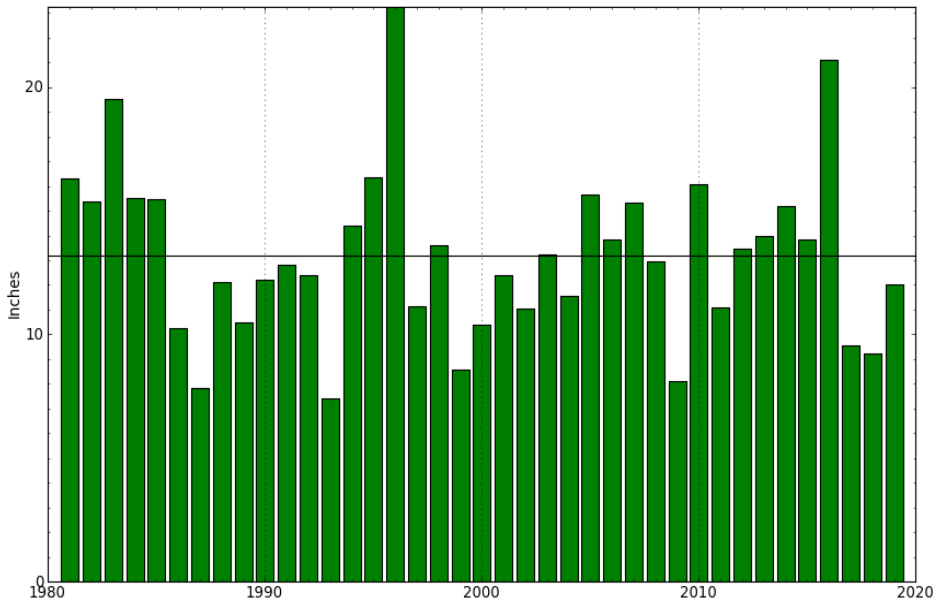
Summary and Questions



Streamflow - Provisional Water Year to Date Volumes (Calculated)

Location	Oct 1 – Jan 19 Acre Feet (AF)	Current Year Percent of Normal	Previous Year Percent of Normal
Jackson Unregulated	101,197 AF	89%	94%
Palisades Gains	532,351 AF	98%	98%
Heise Unregulated	757,811 AF	98%	100%
Island Park Unregulated	109,442 AF	106%	103%
Ririe Dam Unregulated	10,044 AF	104%	58%
Milner TNF (Oct 1 – Dec 31)	1,235,020 AF	104%	88%
Little Wood Unregulated	14,222 AF	113%	75%

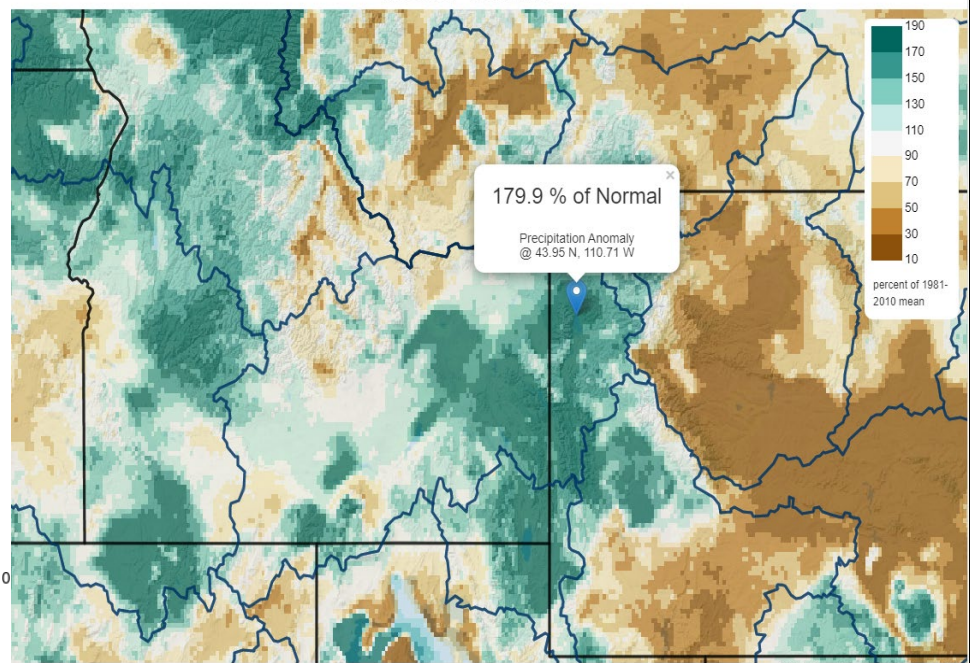
Precipitation, 4-Months Ending in December
WY - SNAKE DRAINAGE Climate Division



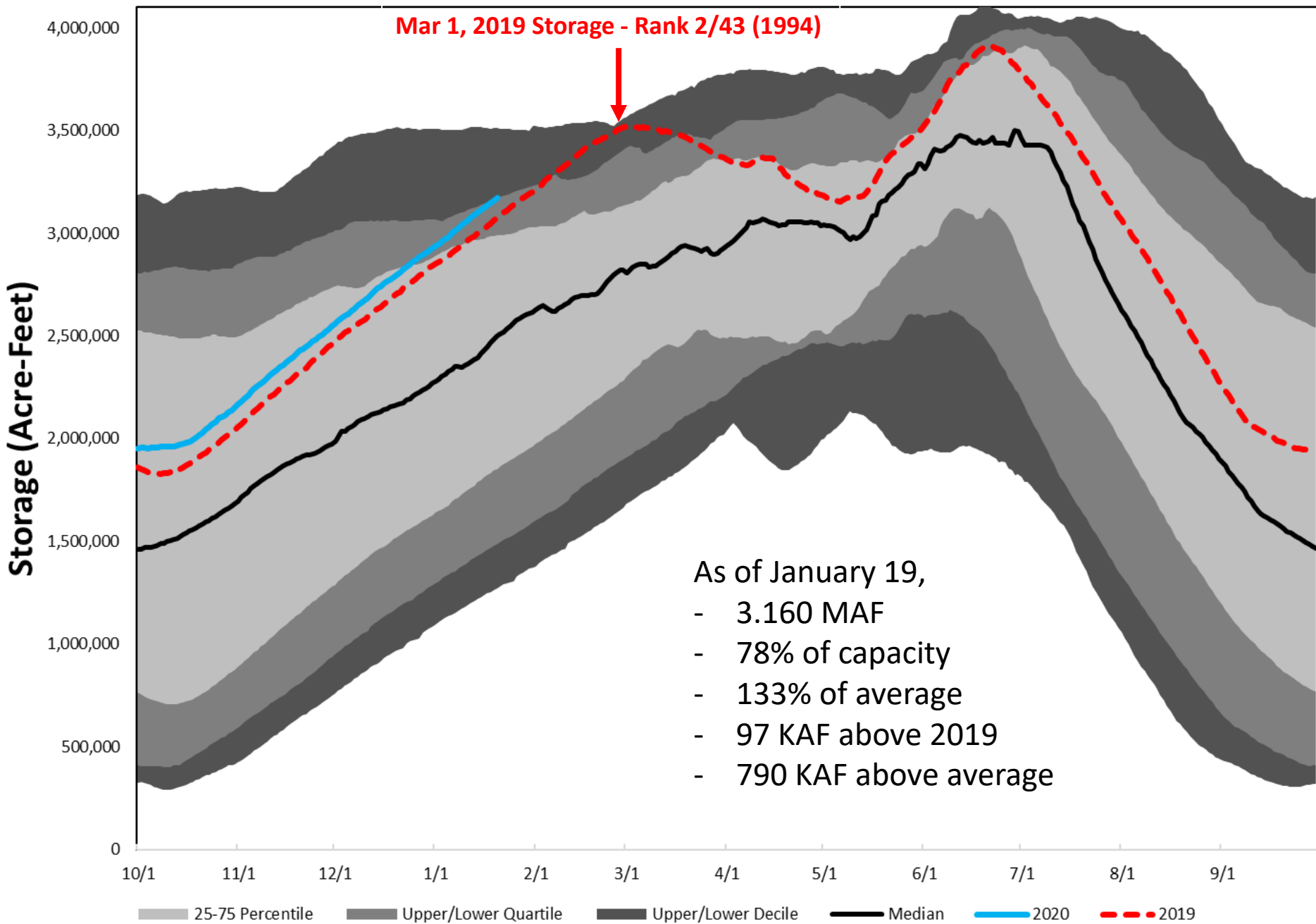
— Normal Period: 1981-2010

Data Source: WRCC/UI, Created: 1-09-2020

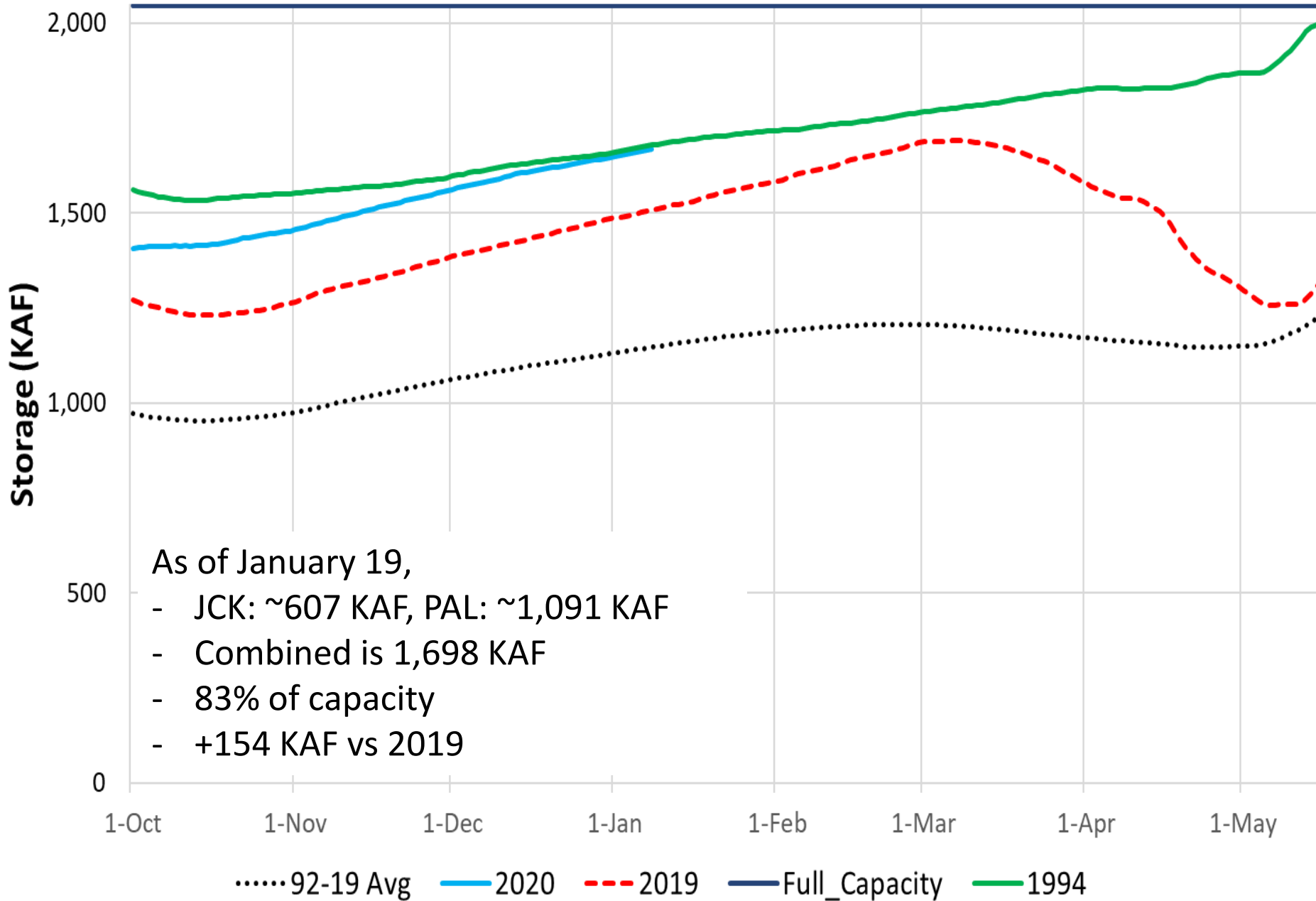
Total Precipitation Anomaly, Since Jan 1st
2020/01/01 - 2020/01/13



Upper Snake Reservoir System Total Storage (Acre-Feet)

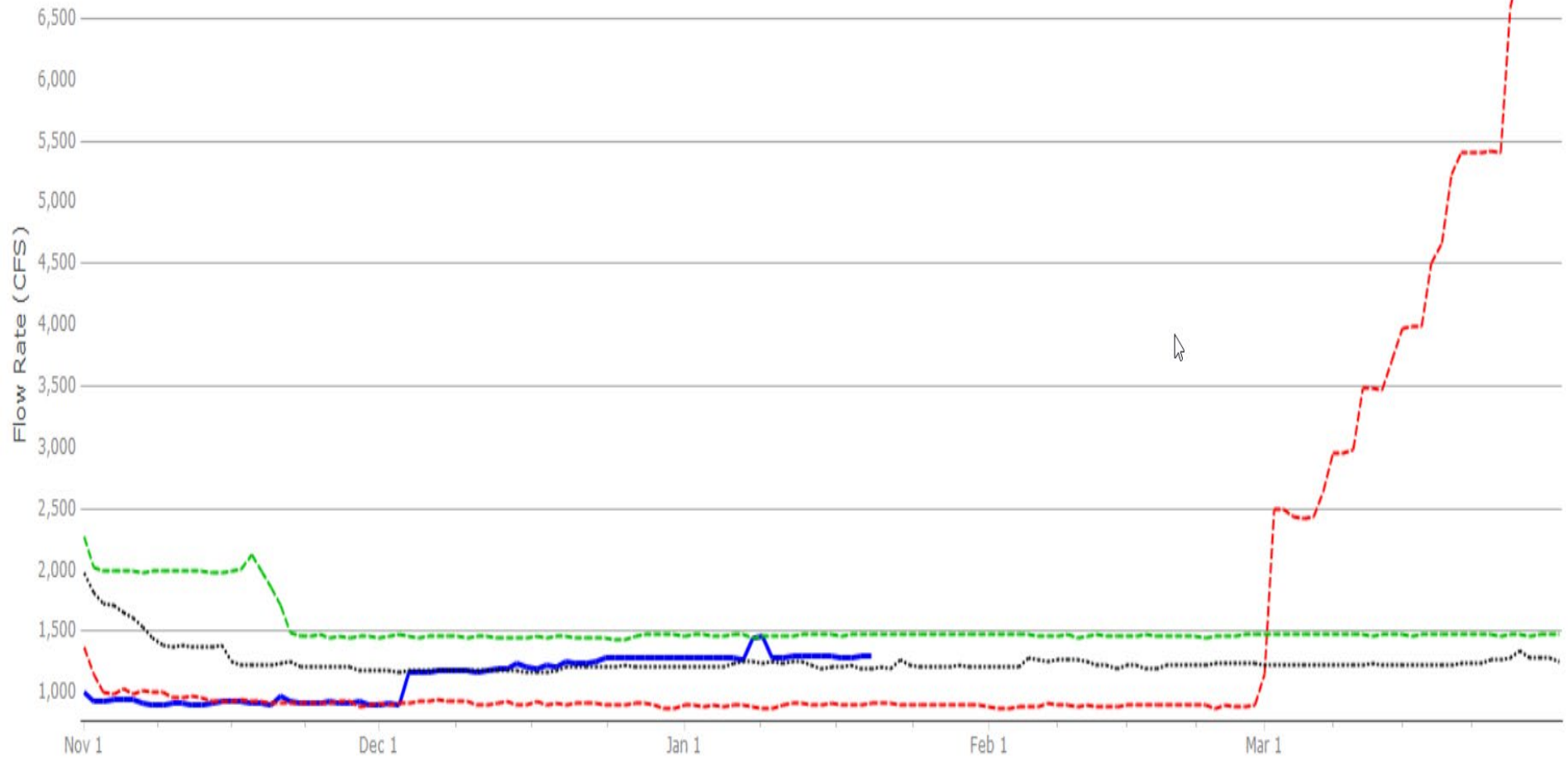


Jackson Lake + Palisades Storage (1,000 Acre-Feet)

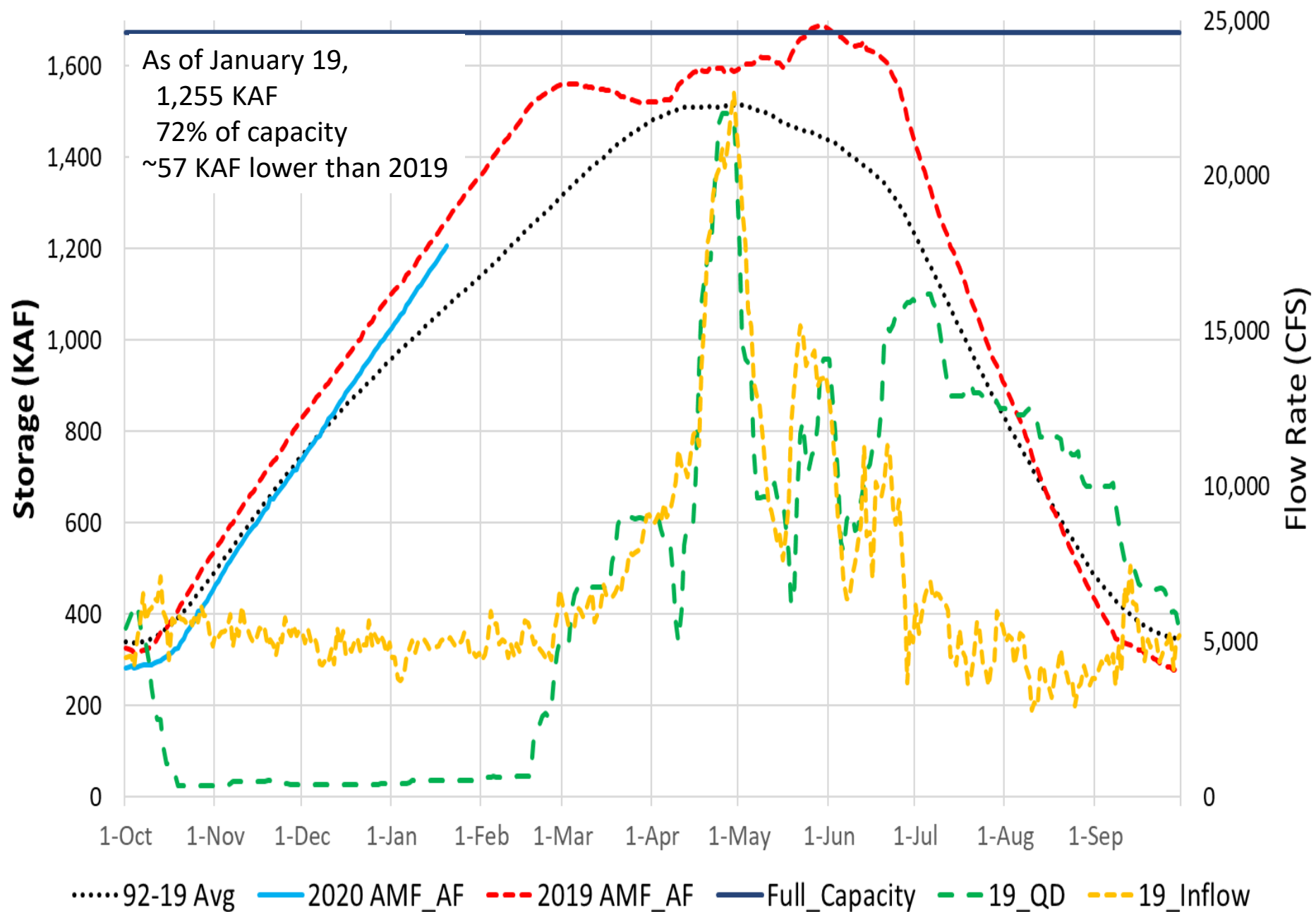


Palisades Releases

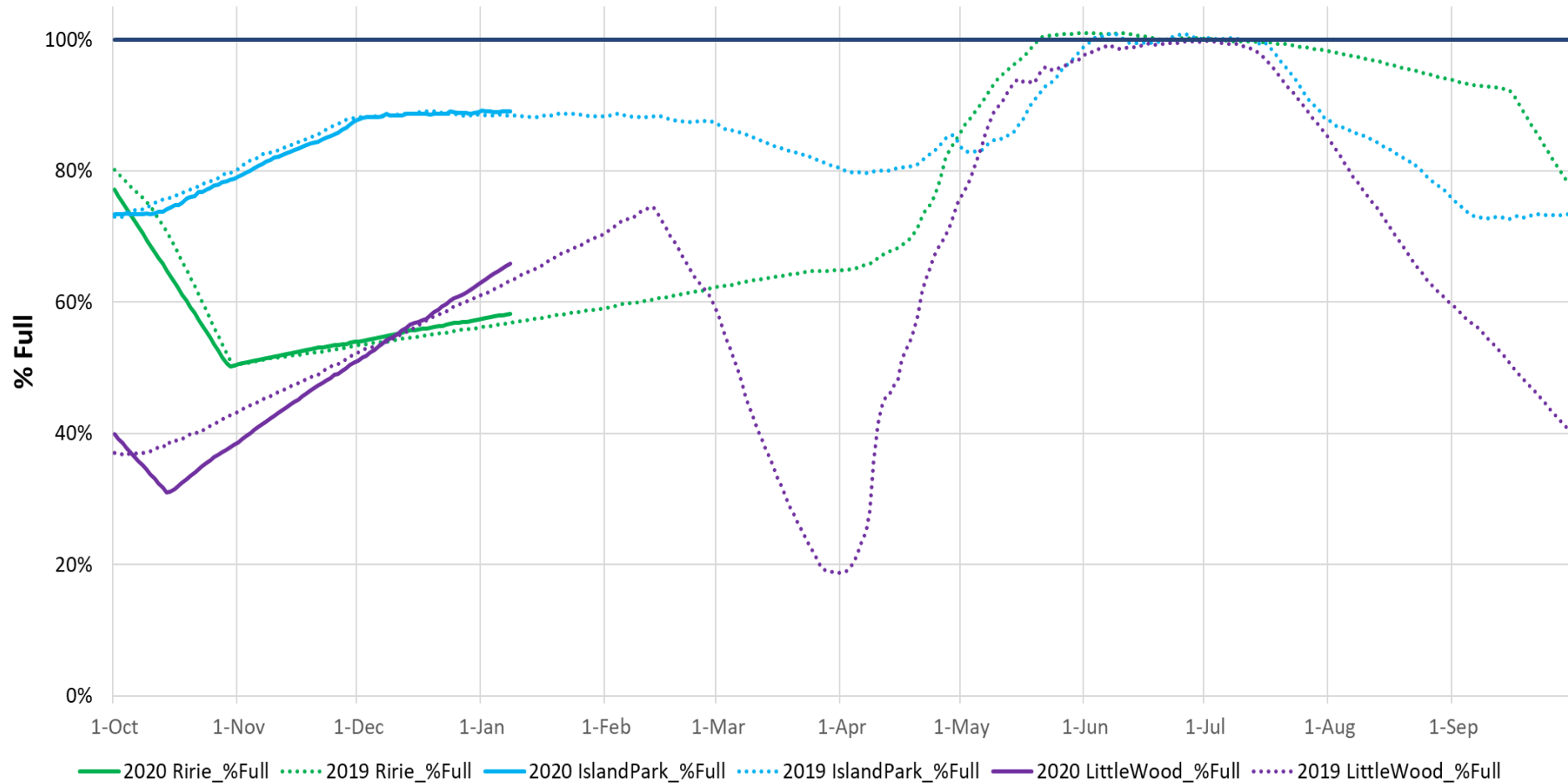
2020 2019 1994 50%



American Falls Storage (1,000 Acre-Feet)



Island Park, Ririe, and Little Wood Storage (% Full)



As of Jan 19,

- Ririe storage content is 47,879 AF, which is 60% full and 1,230 AF higher than 2019
- Island Park storage content is 119,831 AF, which is 89% full and 221 AF higher than 2019
- Little Wood storage content is 20,986 AF, which is 70% full and 958 AF higher than 2019



January 2020 Water Supply Forecasts

CURRENT MONTHLY FORECAST SUMMARY

JAN 1, 2020

FORECAST POINT	FORECAST PERIOD	1981-2010 AVERAGE (KAF)	NORMAL SUBSEQUENT CONDITIONS	
			FORECAST (KAF)	PERCENT NORMAL
*** HEISE	JAN-JUL	3790	3250	86%
JACKSON LAKE	JAN-JUL	861	715	83%
** ISLAND PARK	JAN-JUL	303	277	91%
TETON	JAN-JUL	451	339	75%
*** RIRIE	JAN-JUN	74	50	68%
*** LITTLE WOOD	JAN-JUL	94	75	80%

* PCA Forecast

** PCA & MLR Average

*** Coordinated with USACE

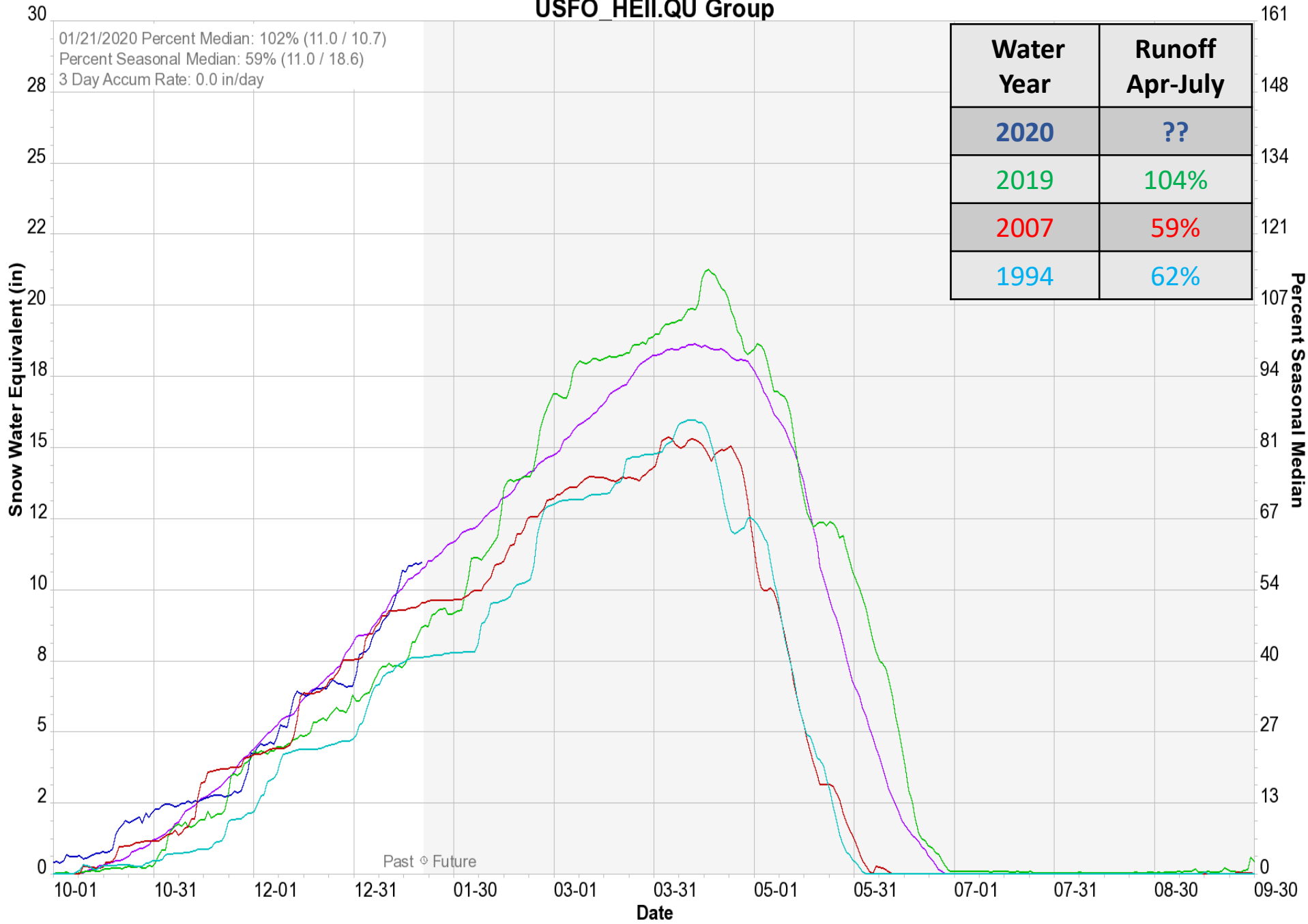
**** RFC



Colorado Basin River Forecast Center USFO_HEII.QU Group

01/21/2020 Percent Median: 102% (11.0 / 10.7)
 Percent Seasonal Median: 59% (11.0 / 18.6)
 3 Day Accum Rate: 0.0 in/day

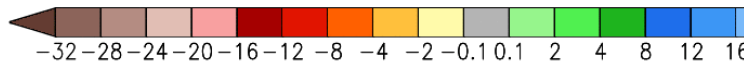
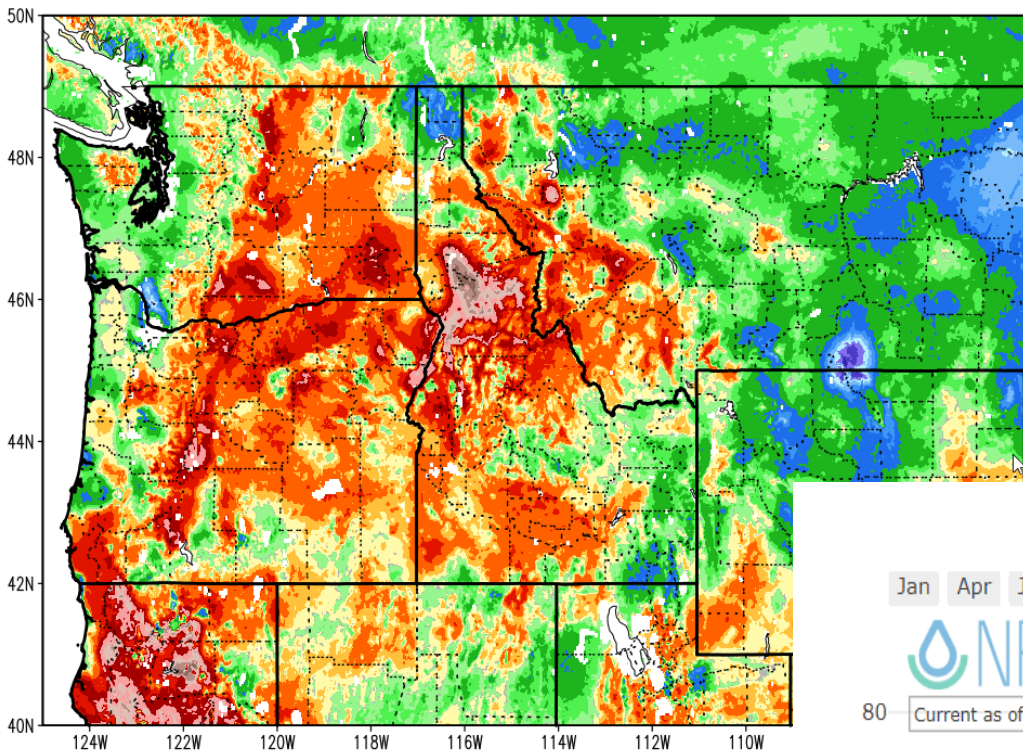
Water Year	Runoff Apr-July
2020	??
2019	104%
2007	59%
1994	62%



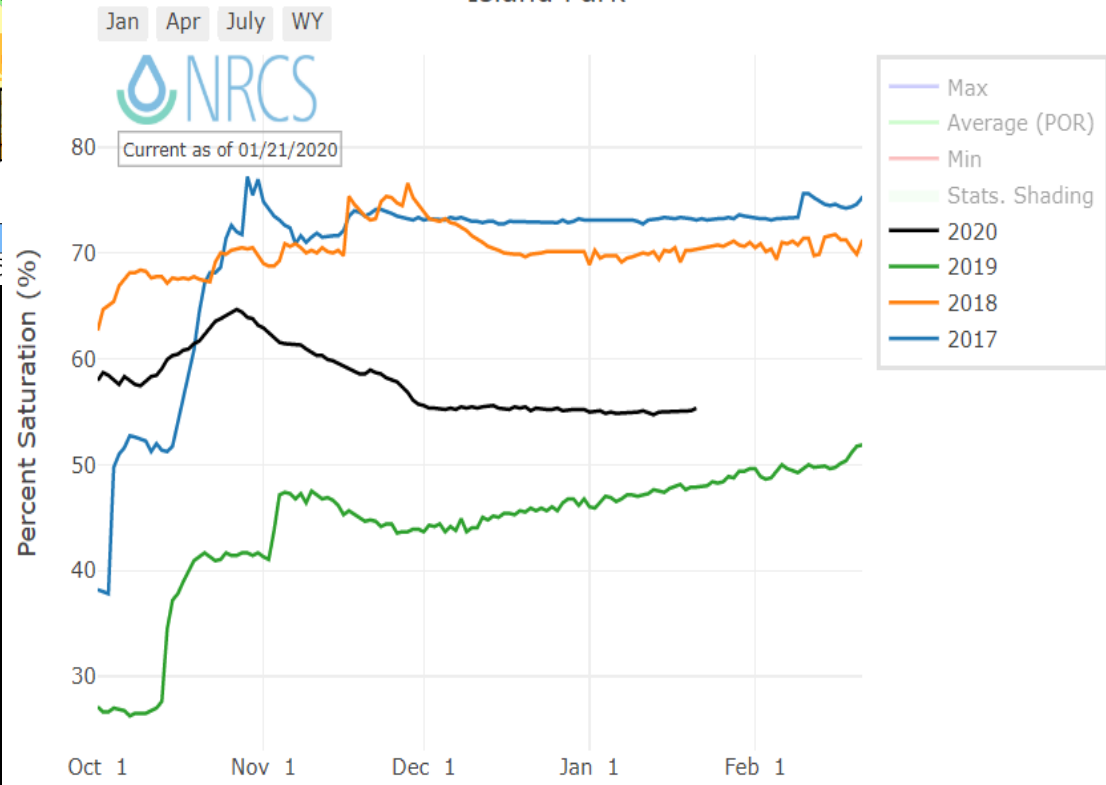
Past ◊ Future

Median 1981-2010 — 2020 — 2019 — 2007 — 1994 —

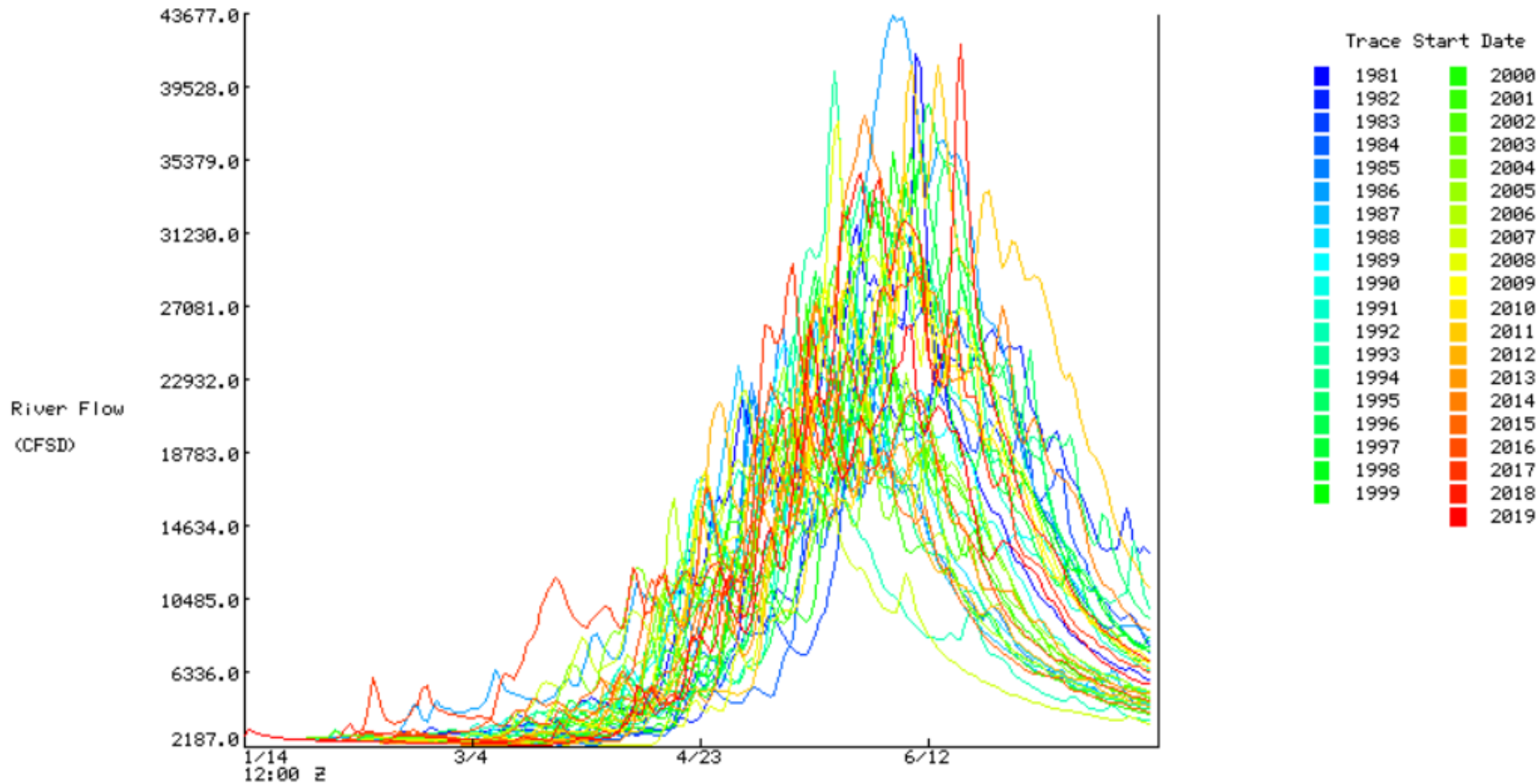
1-Year Difference in Column Relative Soil Moisture (%) valid 12z 21 Jan 2020



Depth Averaged Soil Saturation at Island Park



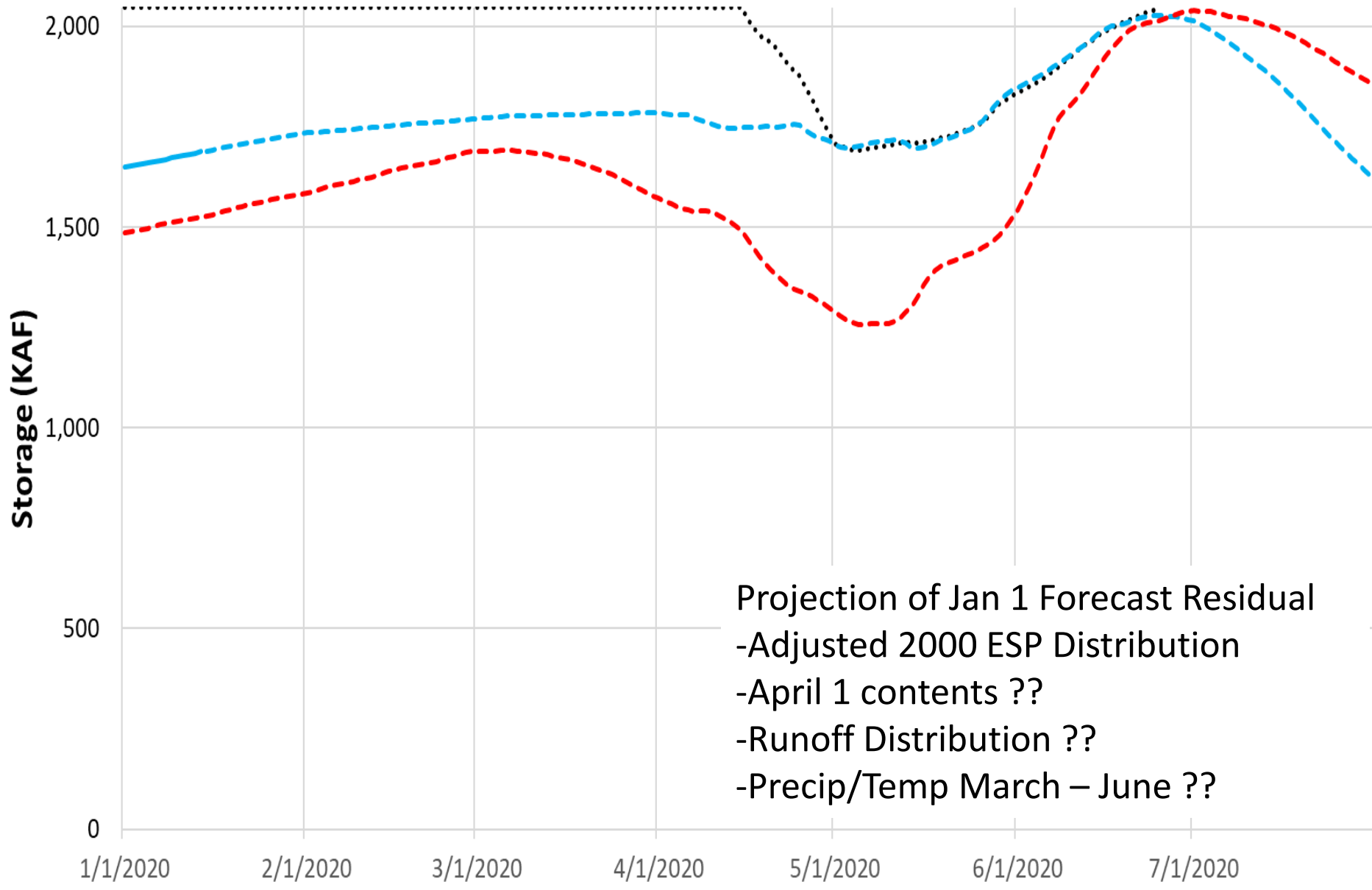
ESP Trace Ensemble of SNAKE RIVER at HEISE, ID
Latitude: 43.6 Longitude: -111.7
Forecast for the period 1/14/2020 12h - 7/31/2020 12h
This is a conditional simulation based on the current conditions as of 1/14/2020



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 mean daily flows each day of the analysis period.

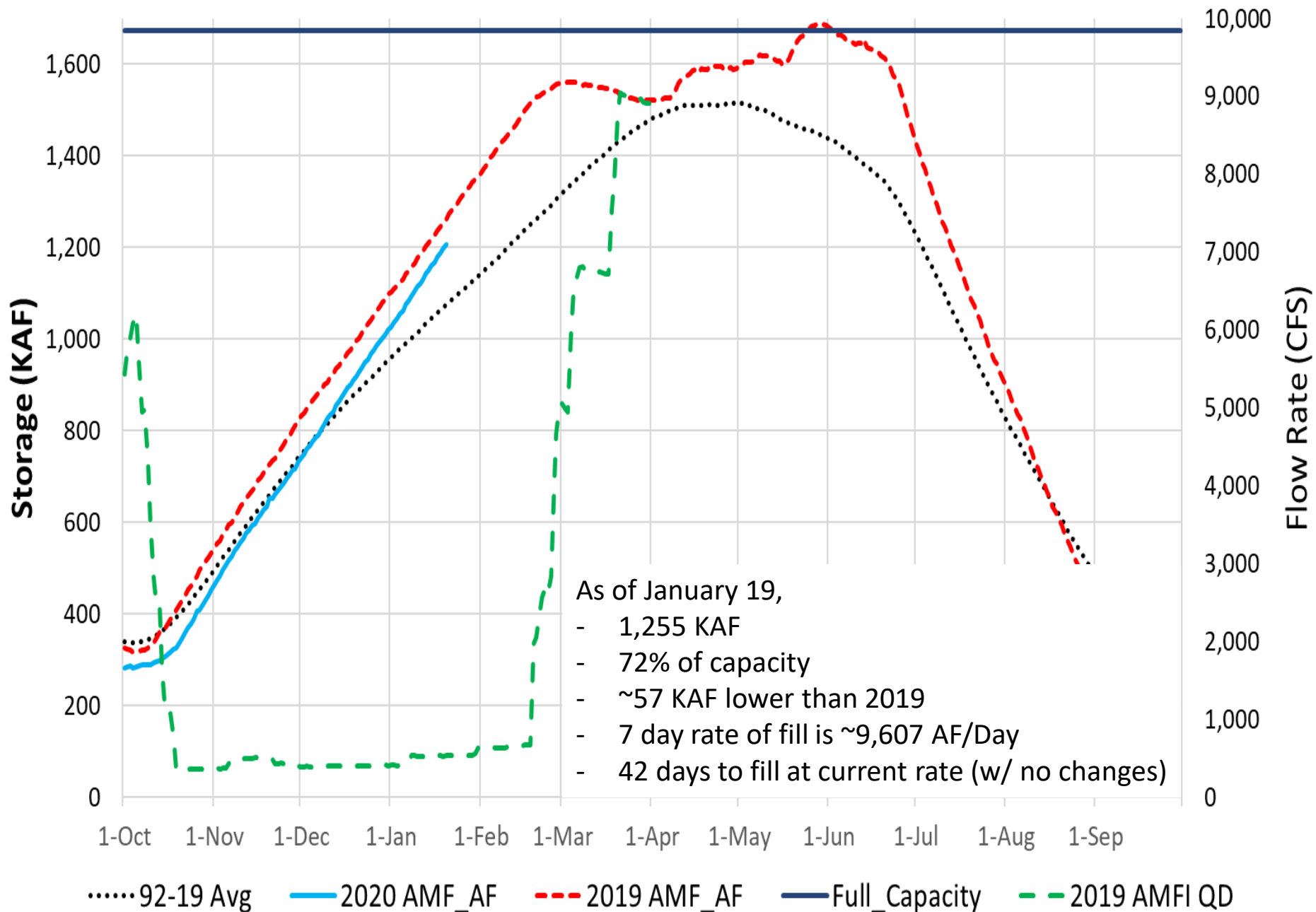
Jackson Lake + Palisades Storage (1,000 Acre-Feet)



Projection of Jan 1 Forecast Residual
-Adjusted 2000 ESP Distribution
-April 1 contents ??
-Runoff Distribution ??
-Precip/Temp March – June ??

— 2020 JCK + Pal Storage Flood Control Requirements - - - Projected - - - 2019

American Falls Storage (1,000 Acre-Feet)



Notable Operations Outlook

- Jackson Lake: Releasing 280 cfs, 7 Day Rate of Fill = 375 AF/Day, Space Available = 238,893 AF
 - Outlook: Maintain 280 cfs for the next several months
- Palisades: Releasing 1,250 cfs, 7 Day Rate of Fill = 1,835 AF/Day, Space Available = 105,117 AF
 - Outlook: Adjust outflow as appropriate to achieve acceptable reservoir levels through April 1.
- Island Park's – Releasing 500-650 cfs, 7 Day Rate of Fill = -85 AF/Day, Space Available: 15,446 AF
 - Outlook: Adjust outflow as needed to maintain acceptable reservoir levels until de-icing around the spillway
- Ririe: Releasing 0 cfs, 7 Day Rate of Fill = 73 AF/Day, Space Available= 32,518 AF
 - Outlook: Projecting to encroach upon restricted space by the end of January. Conditions and outlooks will continue to be monitored.
- American Falls: Releasing 400 cfs, 7 Day Rate of Fill = 8,995 AF/Day, Space Available= 458,499 AF
 - Outlook: Projecting similar operations to last year
- Minidoka: Releasing 550 cfs, 7 Day Rate of Fill = 65 AF/Day, Space Available = 11,460 AF
 - Outlook: Projecting similar operations to last year







For More Information

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Snake River Operations Web Sites

- Upper Snake water information site
<http://www.usbr.gov/pn/hydromet/uppertsnake/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/>

