



— BUREAU OF —
RECLAMATION

Navajo Unit Operations Coordination Spring Meeting Slides

August 18, 2020

Reclamation

Western Colorado Area Office



MEETING NOTICE



In response to the recommendations from the CDC, local authorities, and Department of Interior guidance, the spring coordination meeting for the operation of the Navajo Unit, scheduled for Tuesday, April 21st, at 1:00 pm, was canceled.



These slides are being provided in lieu of the meeting, along with an operational summary document. Please contact Susan Behery (sbehery@usbr.gov, 970-385-6560) for any questions or comments you might have.



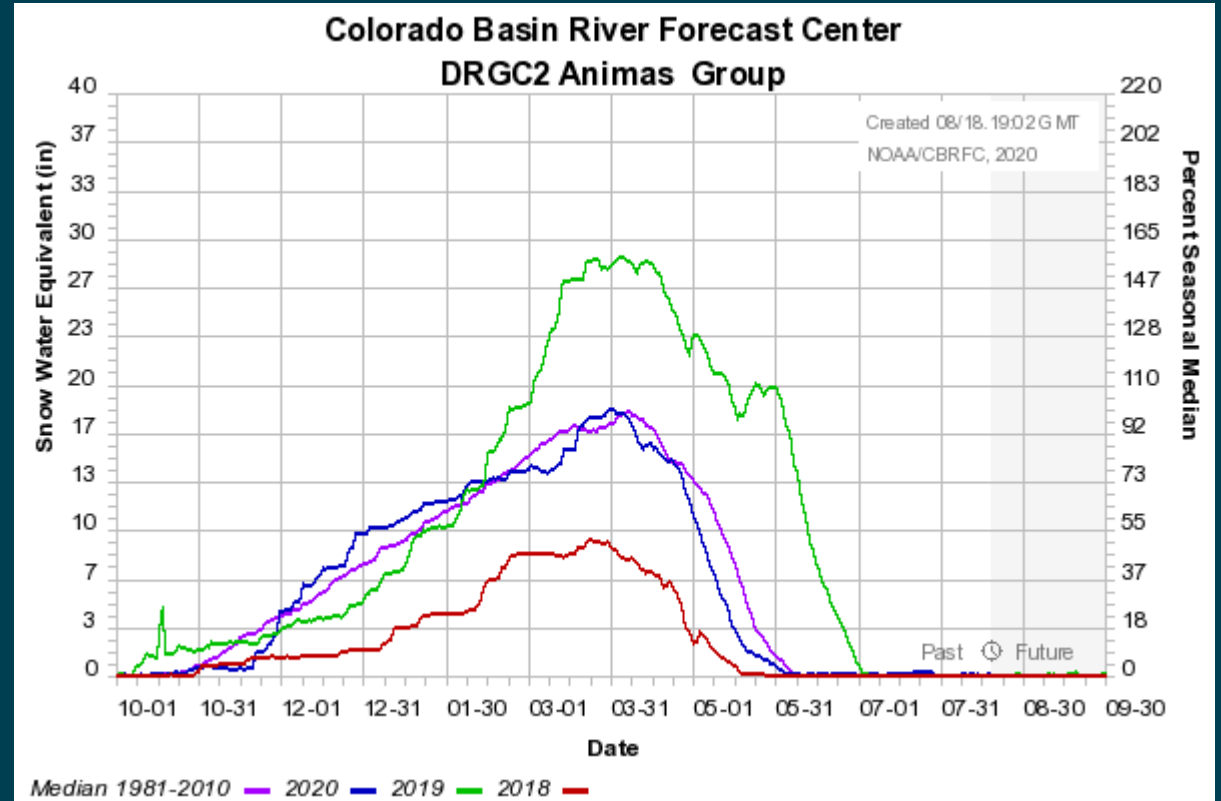
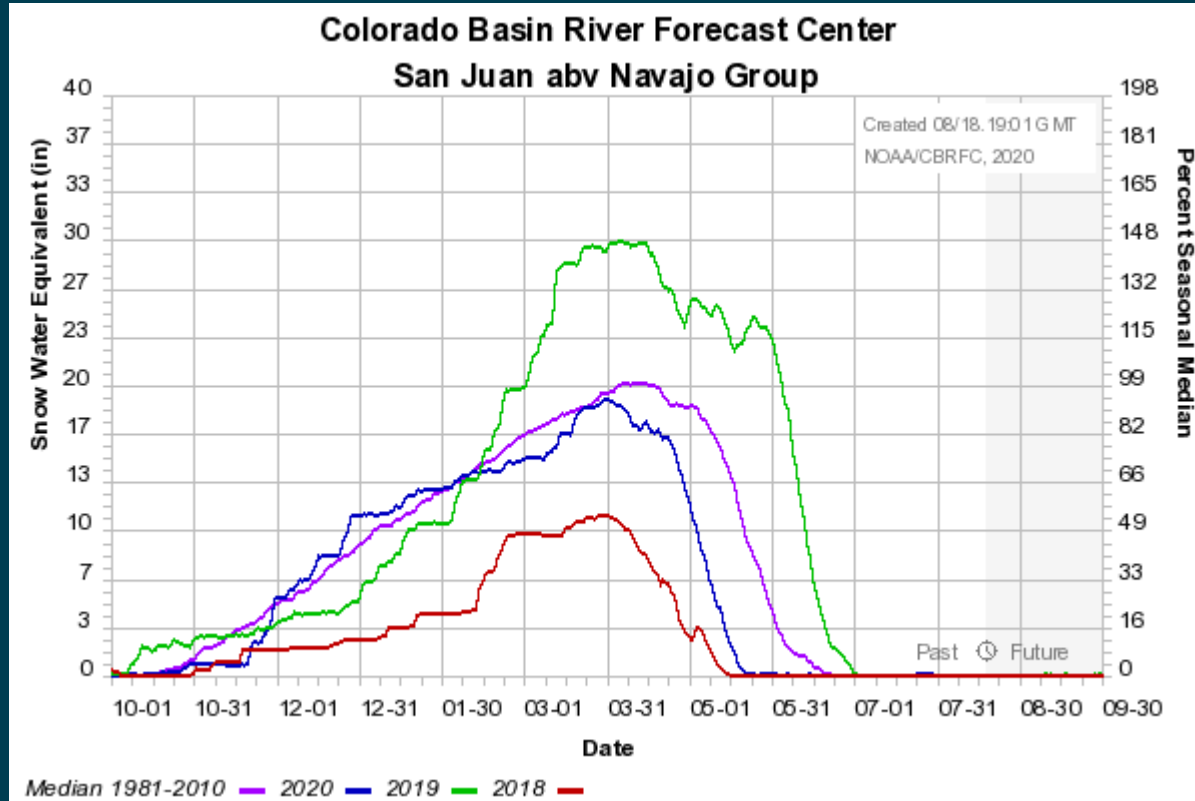
The next coordination meeting for the Navajo Unit is being scheduled for January 2021. A notice will be sent out when the date is finalized.

Summary

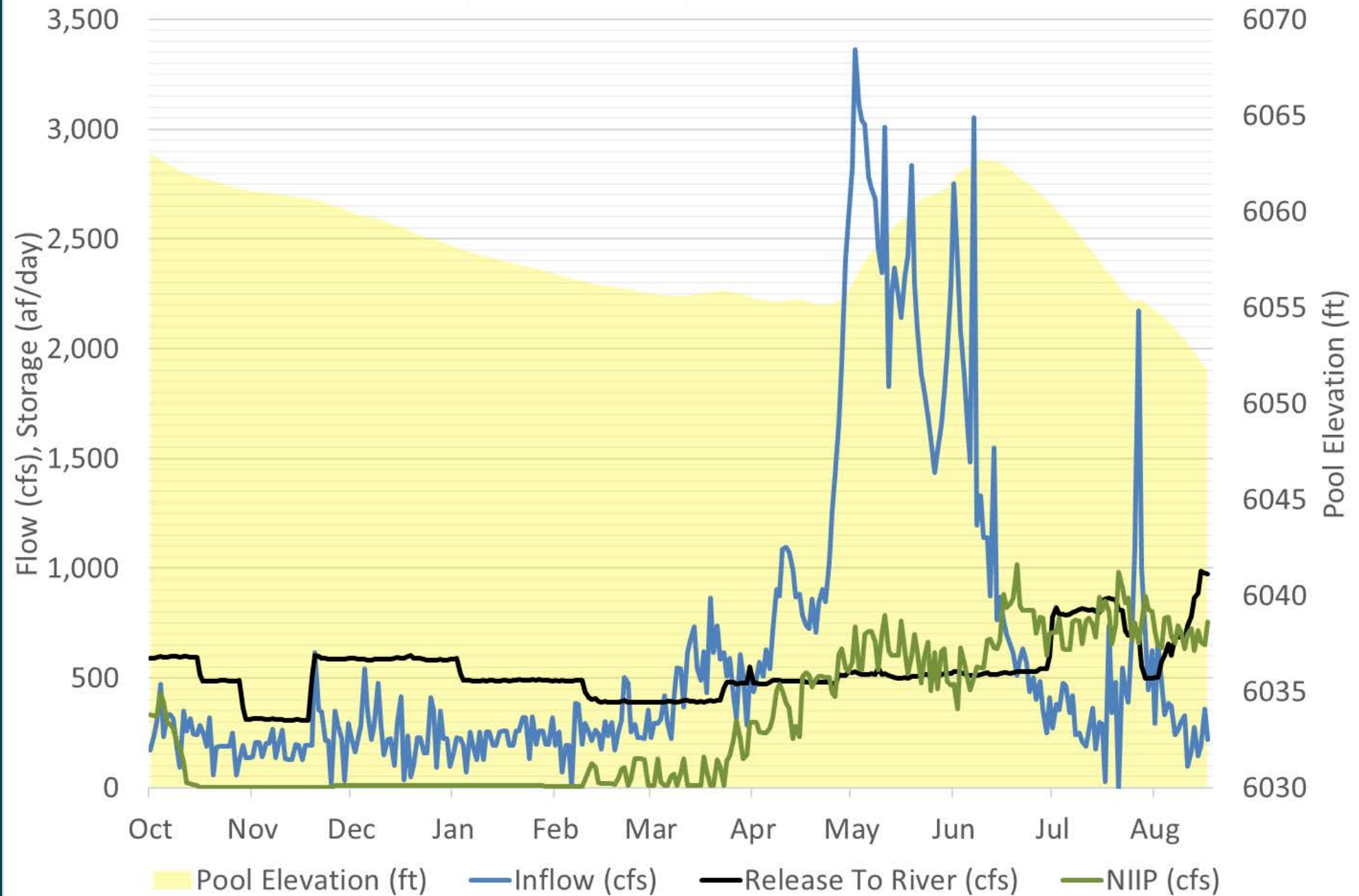
- Despite near-average snowpack, runoff throughout the basin was well below-average.
- Navajo Reservoir peaked at elevation 6062.7 ft on June 9th. There was no spring peak release.
- After runoff, flows decreased dramatically in the basin. High releases have been required to maintain the target baseflow in the critical habitat reach. The release has varied from 500 cfs to 1,000 cfs over the summer. Monsoonal moisture so far has been limited to an event in the last week of July.
- The long-term forecast is hot and dry, with a below-average winter expected in WY 2021.



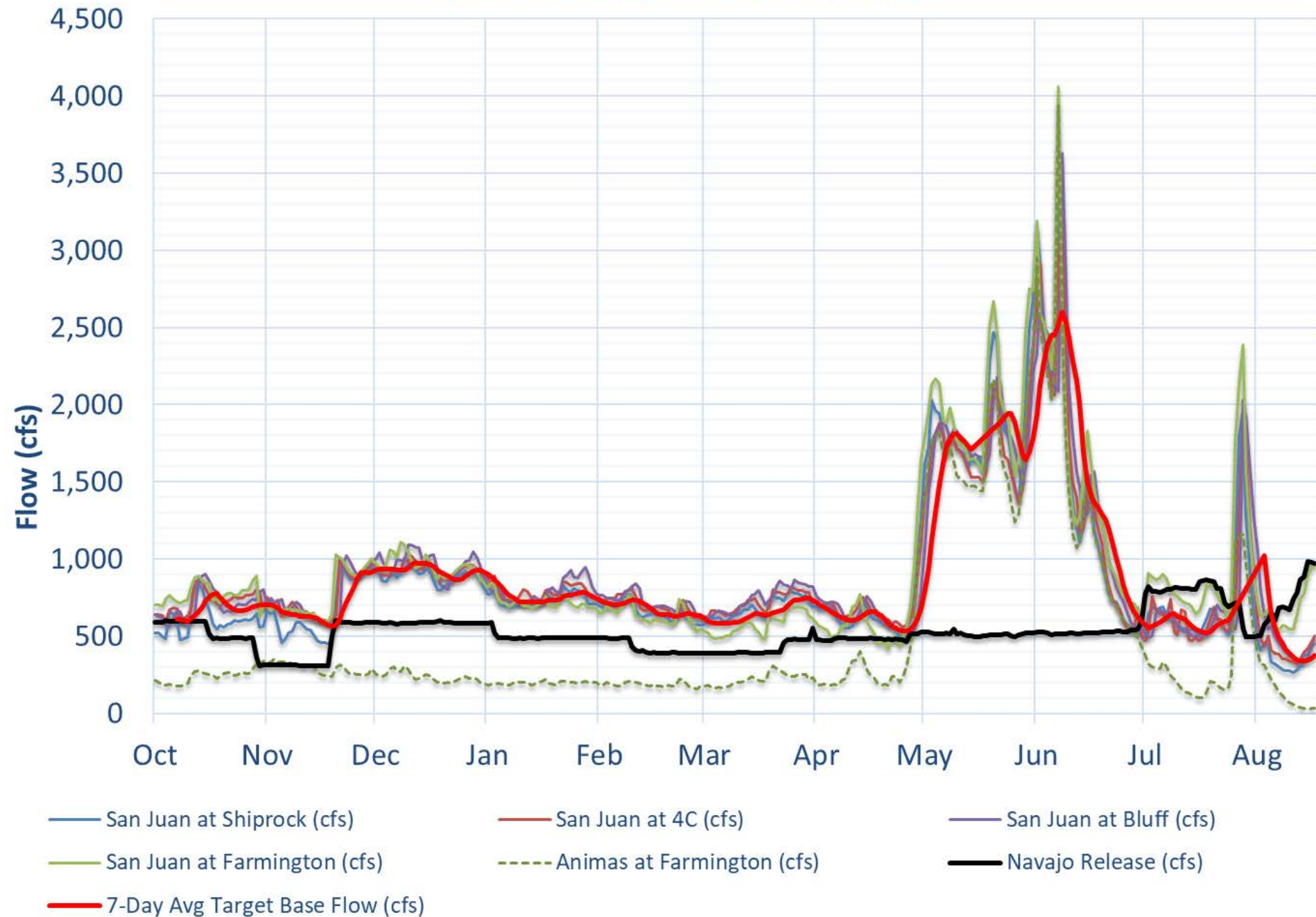
WY 2020 Snowpack



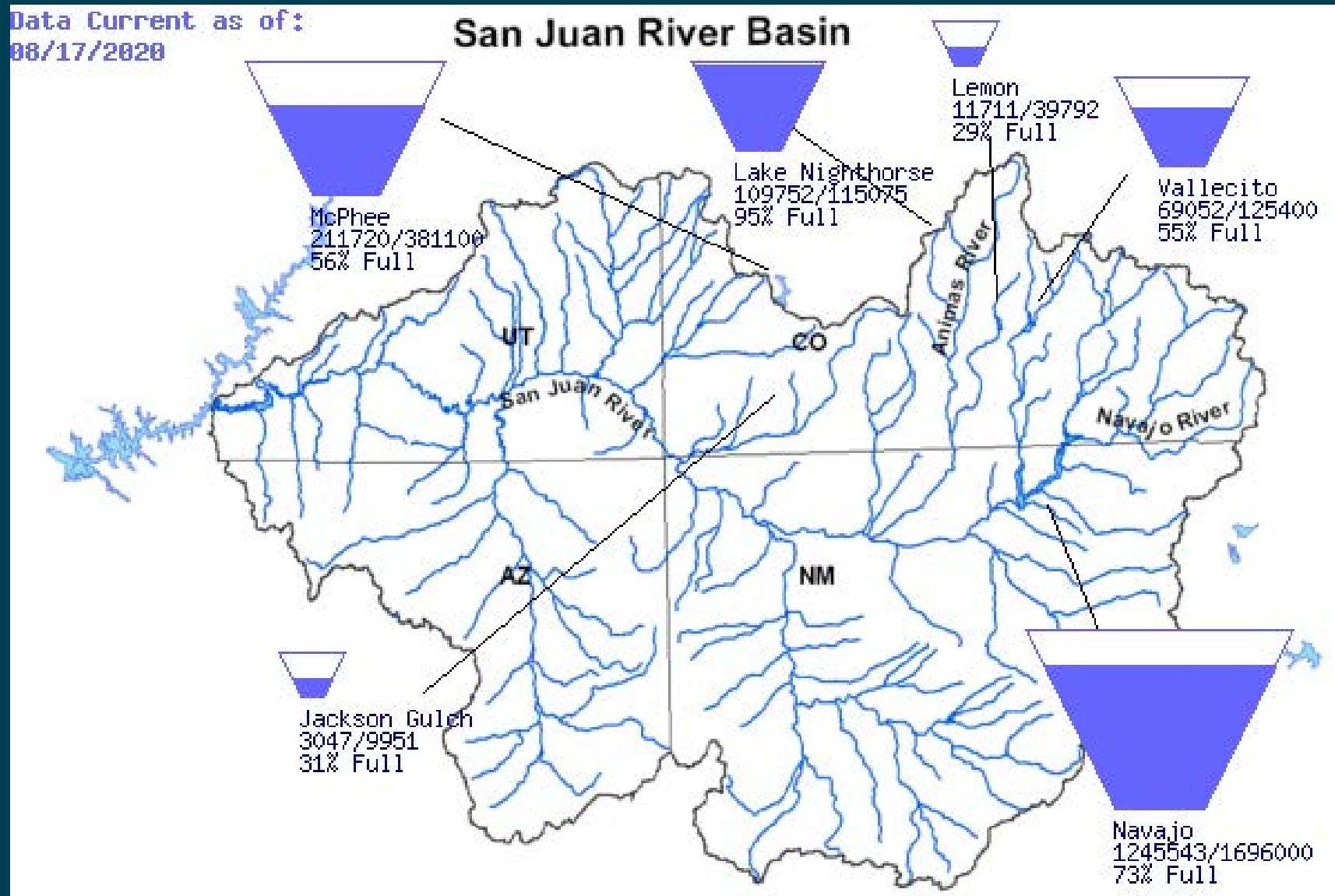
Navajo Reservoir Operations WY 2020



San Juan River Flows WY 2020

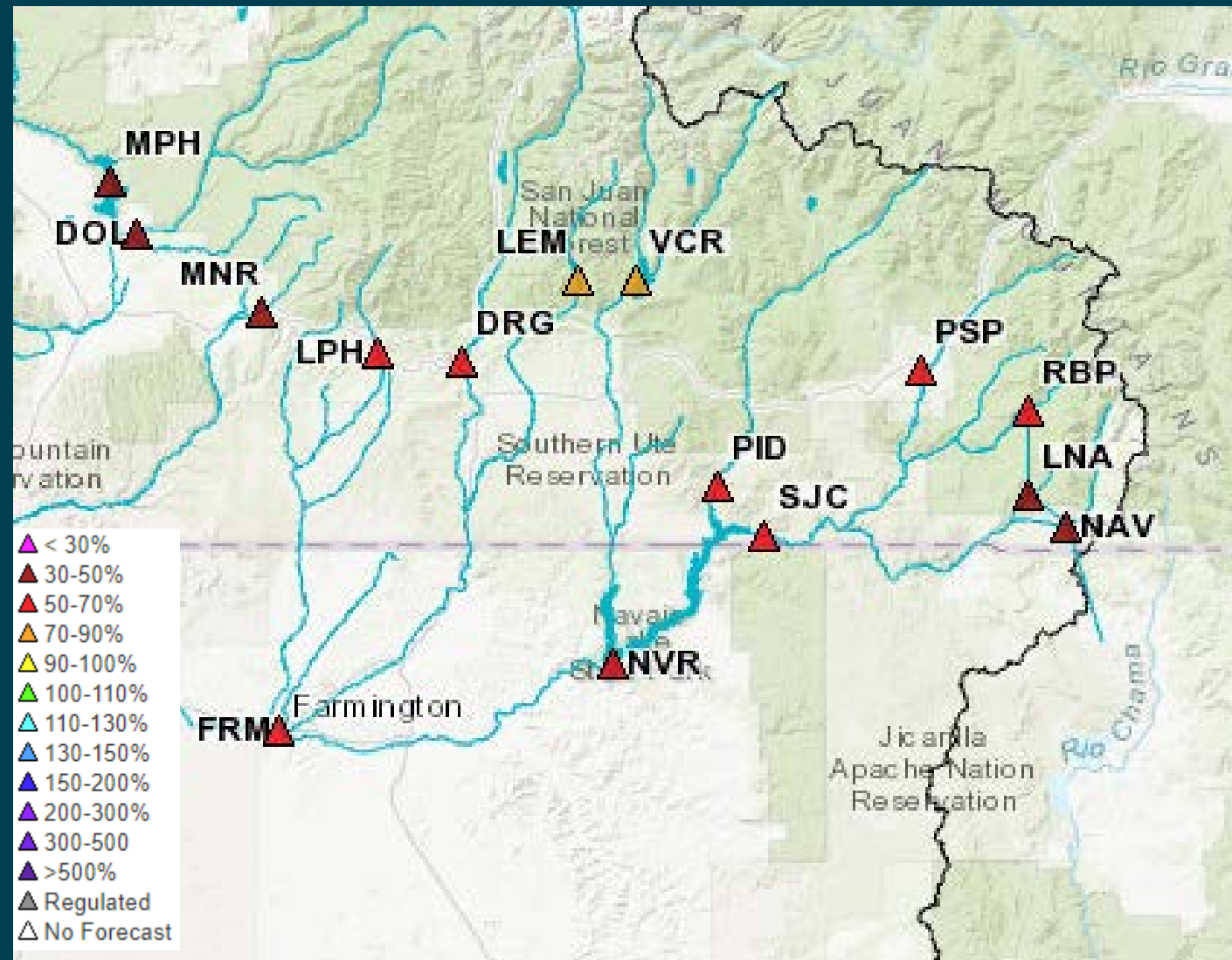


Current Reservoir Status



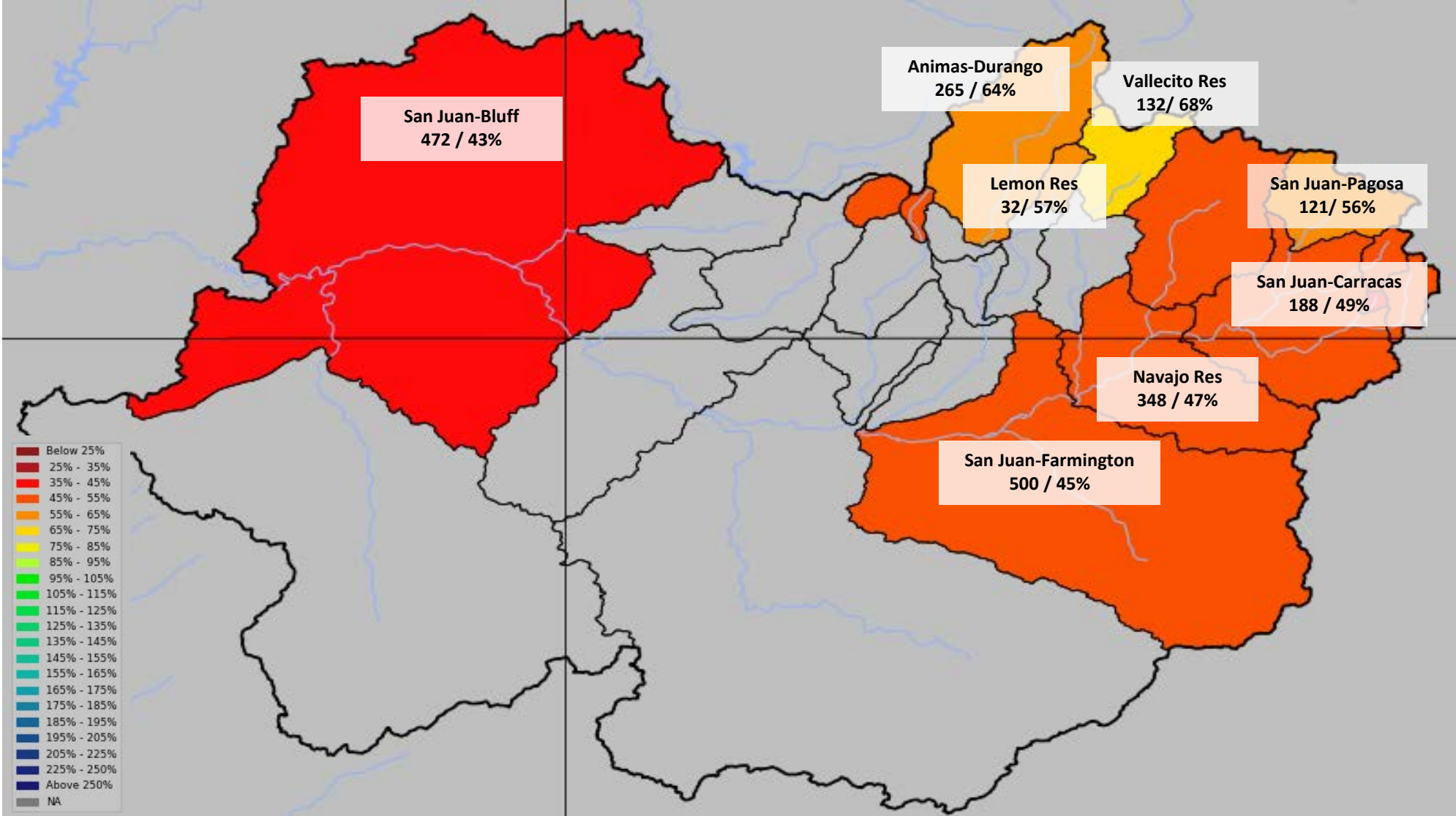
Final April – July Runoff

Navajo: 347 kaf (47% avg)
Vallecito: 131 kaf (68% avg)
Lemon: 32 kaf (58% avg)
Animas: 265 kaf (64% avg)
McPhee: 94 kaf (32% avg)
Powell: 3,759 kaf (53% avg)



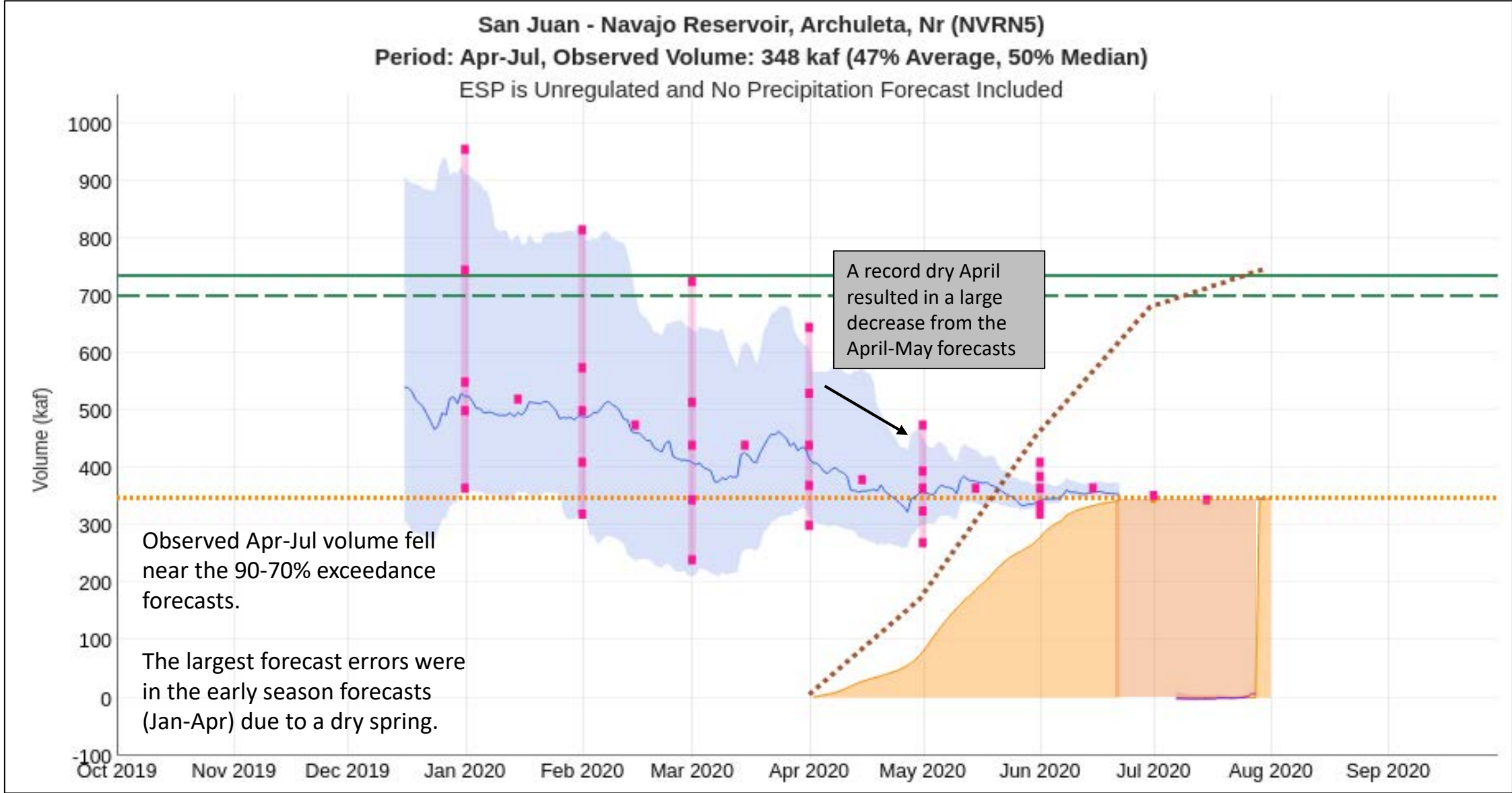
San Juan River Basin 2020 Water Supply

Preliminary April-July 2020 observations
Volume in 1000's acre-feet / % of 1981-2010 average

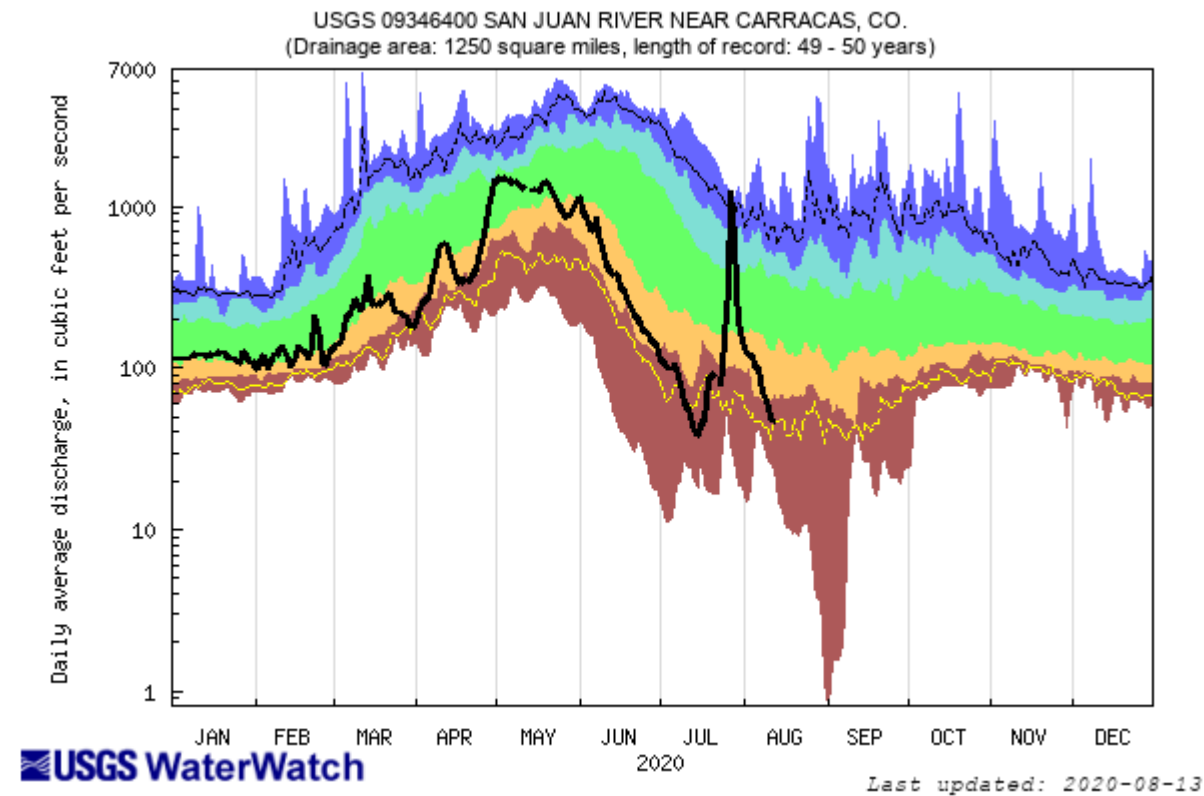
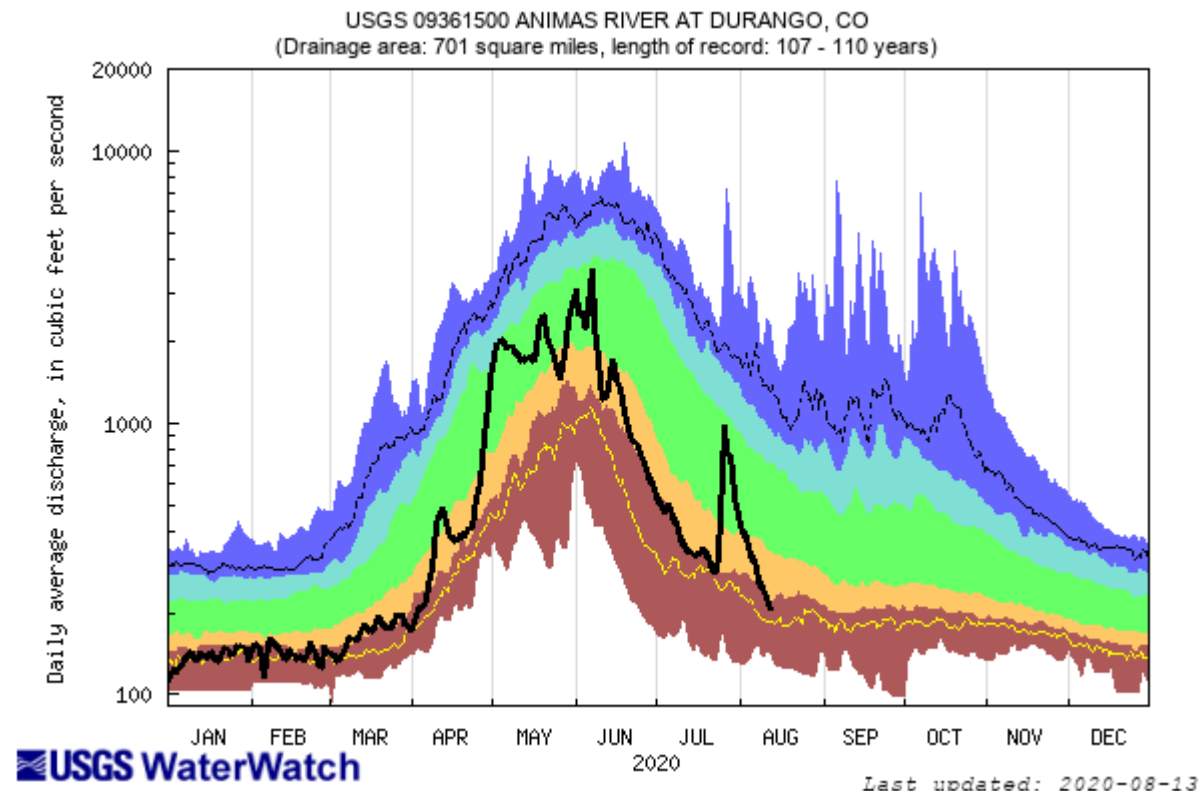


Seasonal Forecast Progression for Navajo Reservoir Inflow

(Range of forecast probabilities throughout the season. Official forecast shown in red)



2020 Observed Streamflow: San Juan River Basin



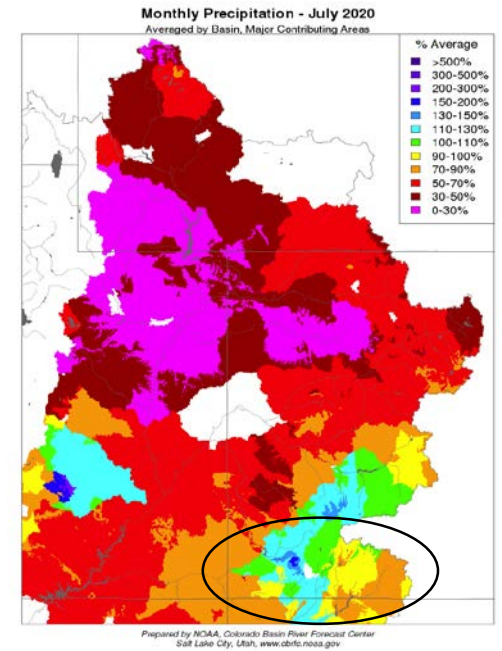
Explanation - Percentile classes						Flow
lowest-10th percentile	5	10-24	25-75	76-90	95	
Much below Normal	Below normal	Normal	Above normal	Much above normal	90th percentile - highest	

Spring and Summer Highlights:

- Early, rapid and efficient snowmelt.
- Rain in late May and early June kept flows elevated longer than expected.
- Flow decreased rapidly after mid June to much below normal conditions.
- Minimal monsoon impacts; only one precipitation event in late July.
- Hot and dry conditions have prevailed since snowmelt runoff ended.

Where is the Monsoon?

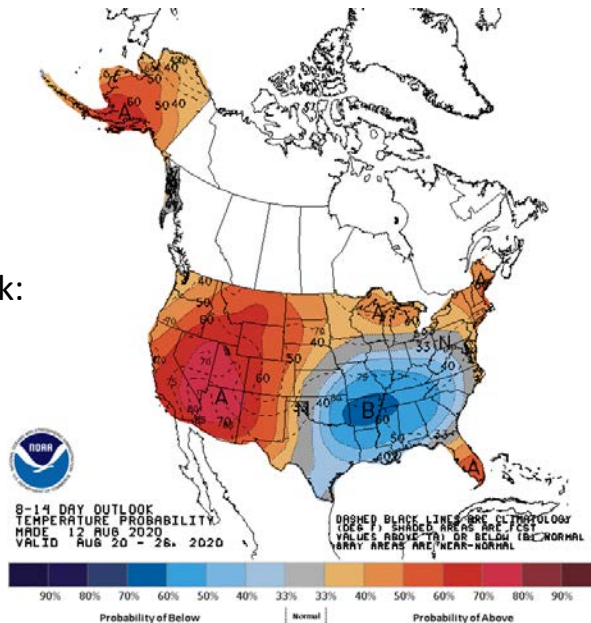
- So far it has been an underwhelming Monsoon season.
- High pressure has been in a favorable position over the region for limiting moisture.
- However, the single event in July resulted in average to above average monthly precipitation in some areas of the basin.
- Monsoon surges still possible into September



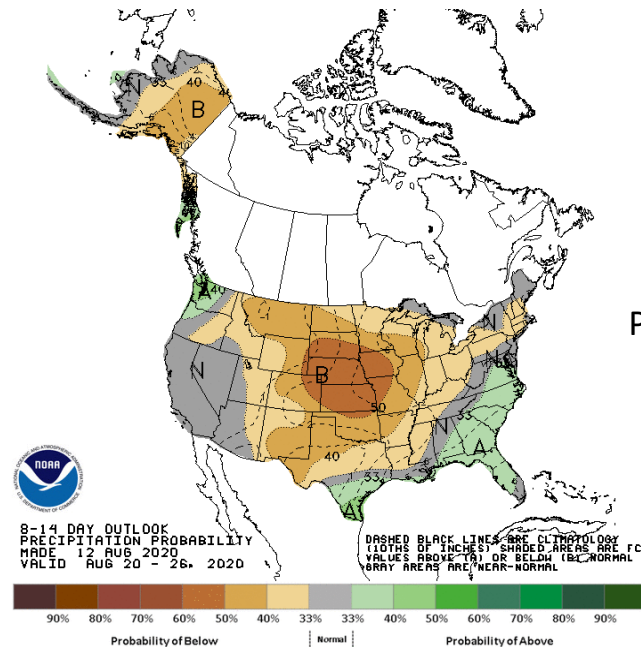
Upcoming Weather

- Continued hot and dry conditions through the end of the month

Temperature Outlook:
August 20-26



Precipitation Outlook:
August 20-26

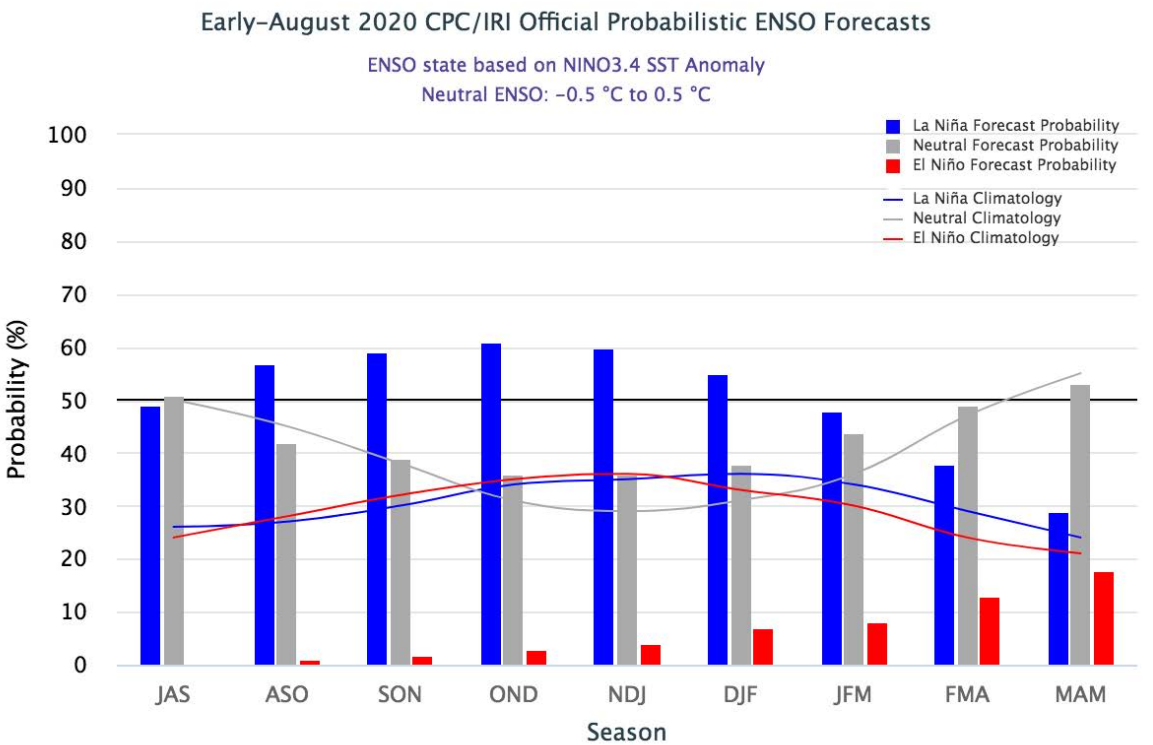


Any insight into Winter 2021?

Latest ENSO discussion from the Climate Prediction Center has most models indicating La Niña conditions developing by fall with a 55-60% chance of La Niña conditions during the winter of 2020-2021.

CPC/IRI Early-Month Official ENSO Forecast Probabilities

Season	La Niña	Neutral	El Niño	
JAS 2020	49%	51%	0%	
ASO 2020	57%	42%	1%	
SON 2020	59%	39%	2%	
OND 2020	61%	36%	3%	
NDJ 2020	60%	36%	4%	November-December-January
DJF 2020	55%	38%	7%	December-January-February
JFM 2020	48%	44%	8%	
FMA 2020	38%	49%	13%	
MAM 2020	29%	53%	18%	



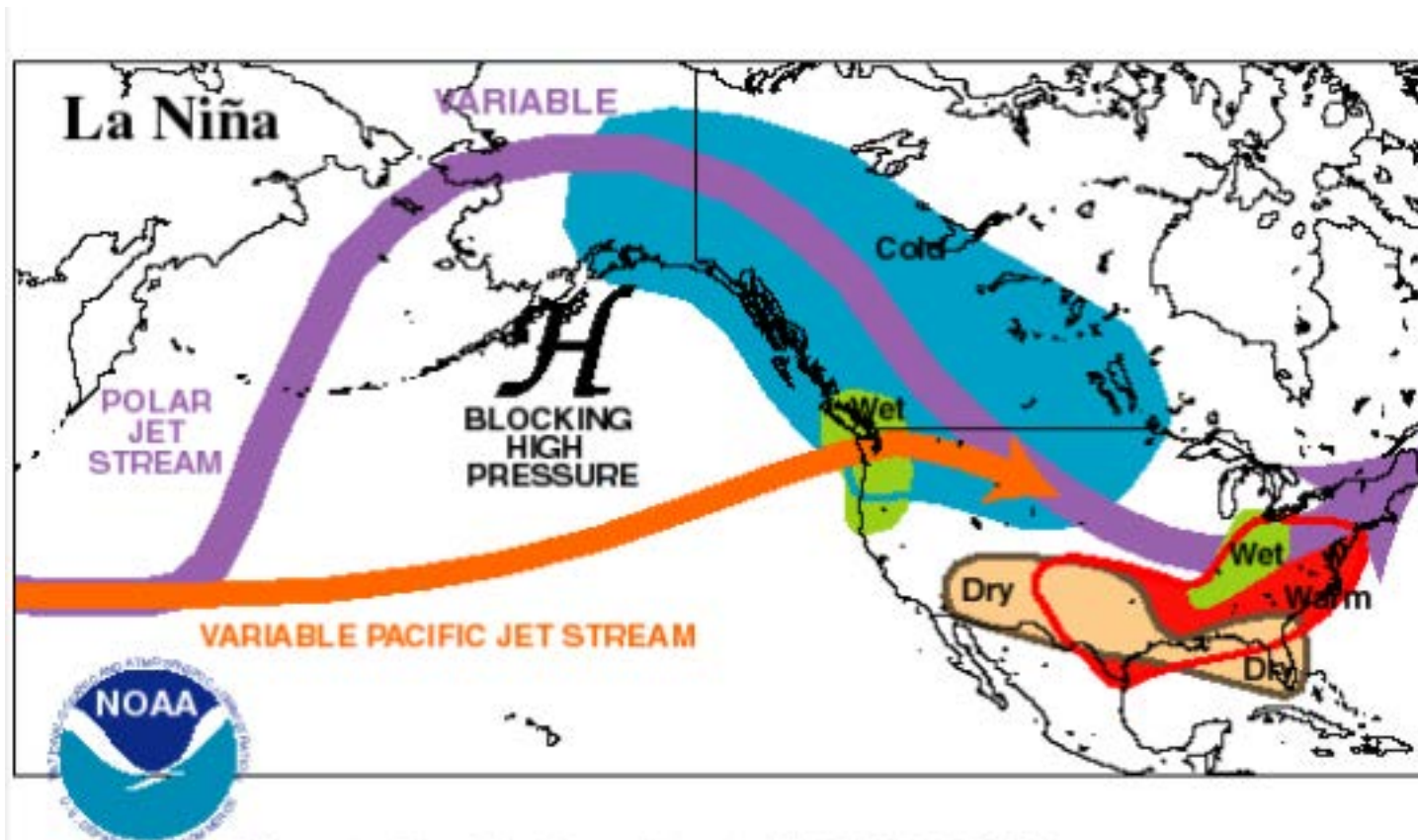
Typical La Niña impacts

Persistent and active northern Jet stream. Typically favors drier conditions over the southern tier of the U.S.

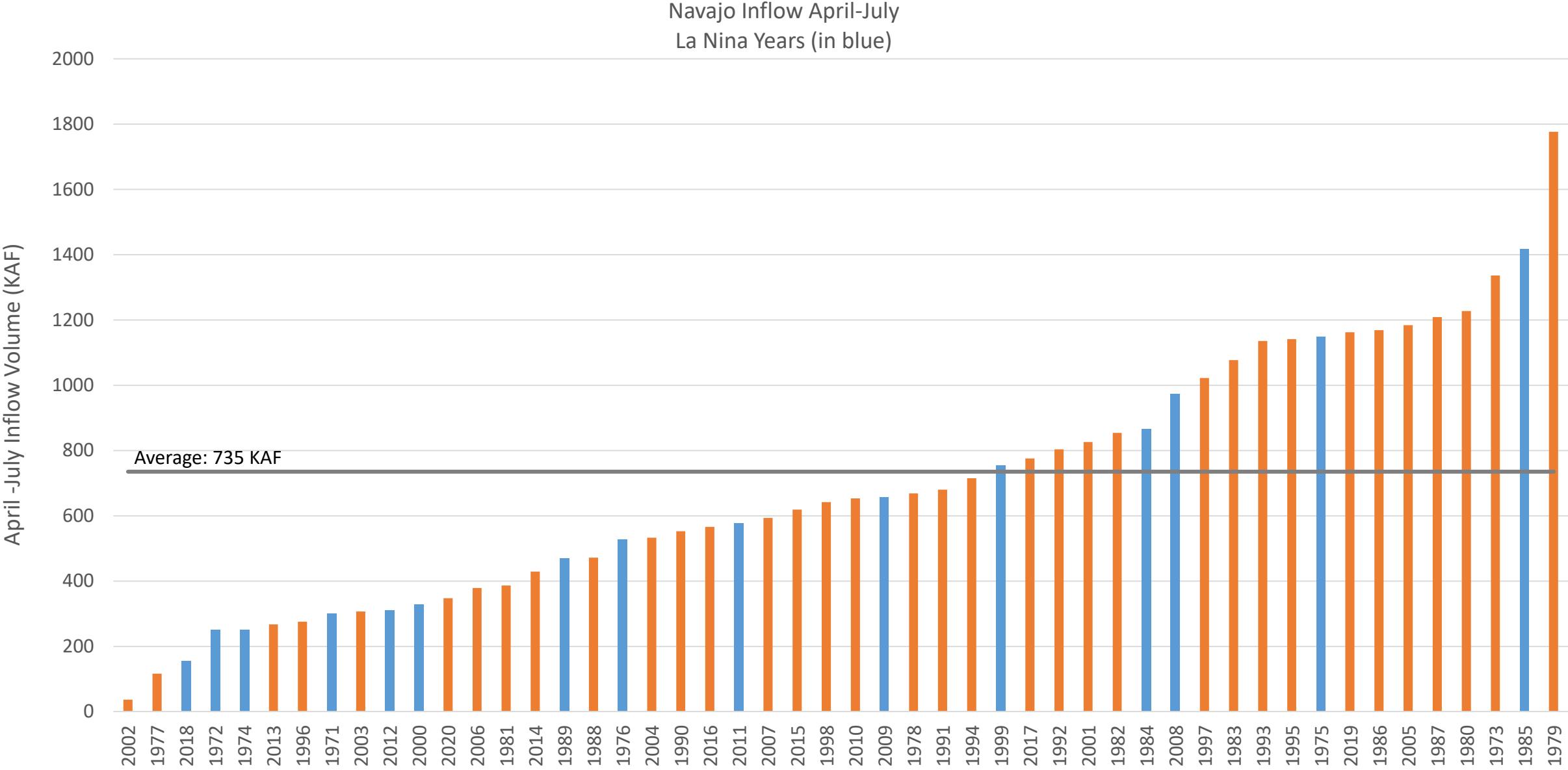
For the San Juan Basin

Impacts have been mixed looking at historical runoff results.

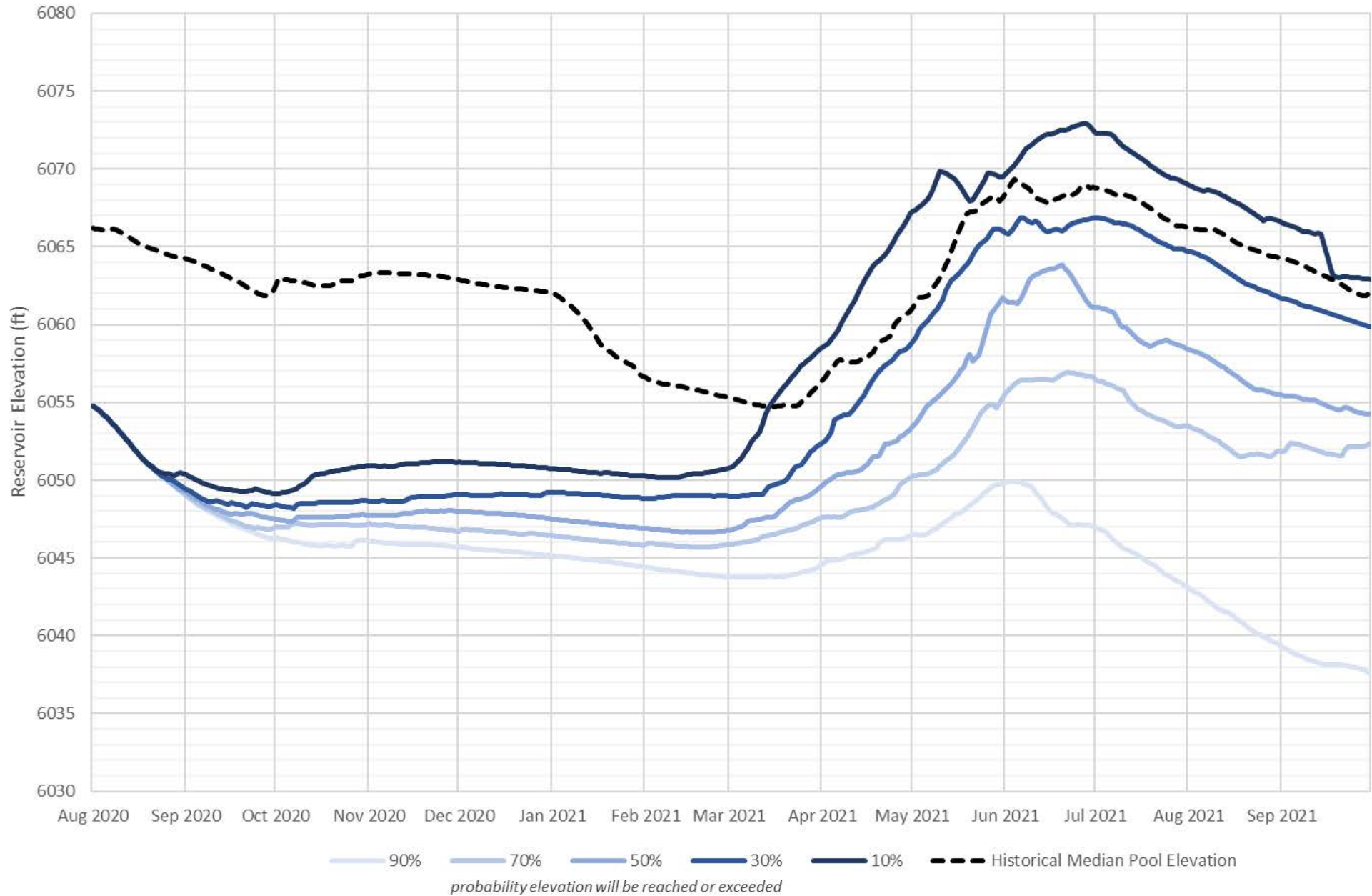
Some tendency towards below average runoff volumes during La Nina years.



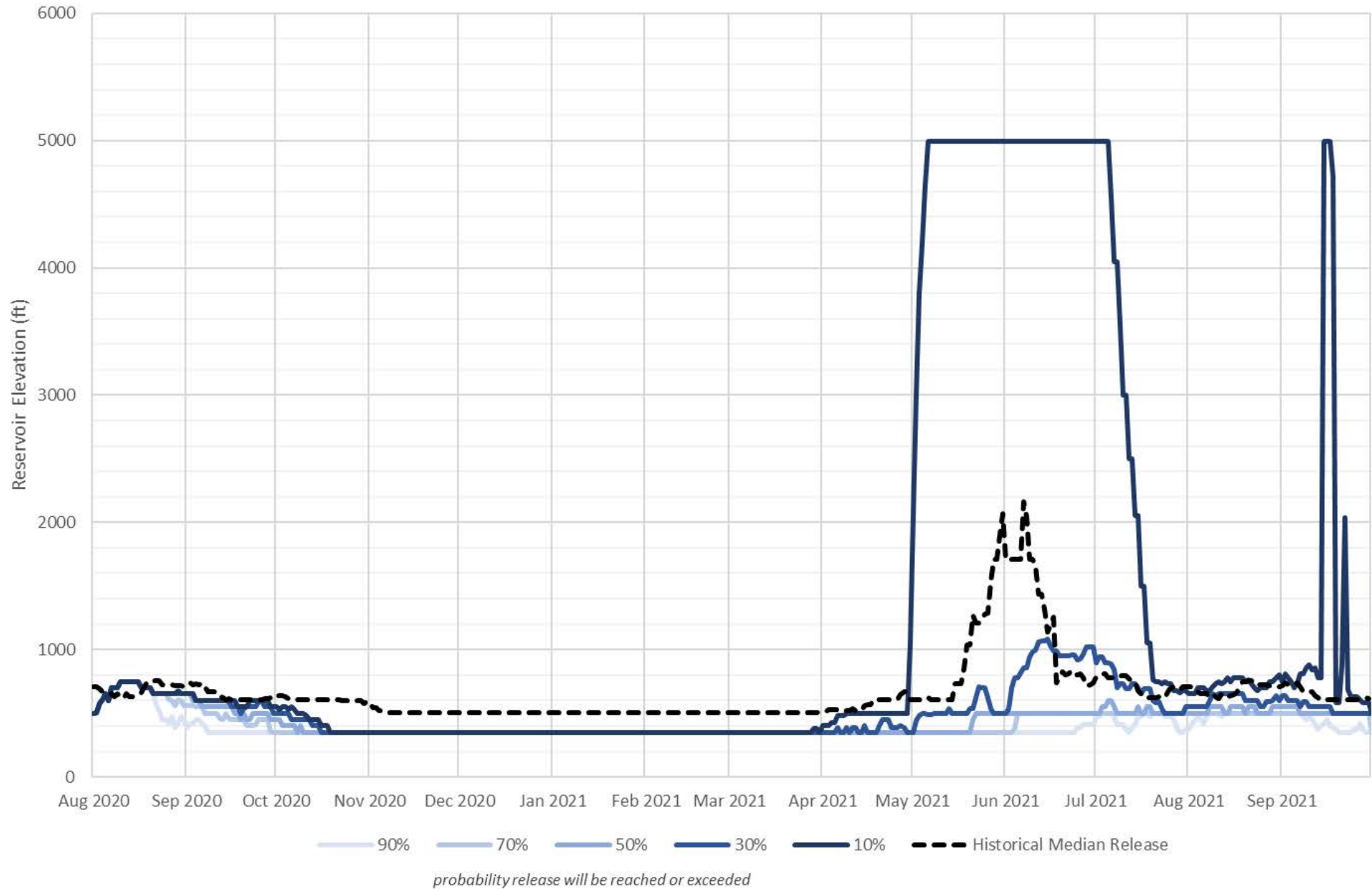
Navajo Inflow during the Apr-Jul period following winters with moderate, strong, or very strong La Niña signatures



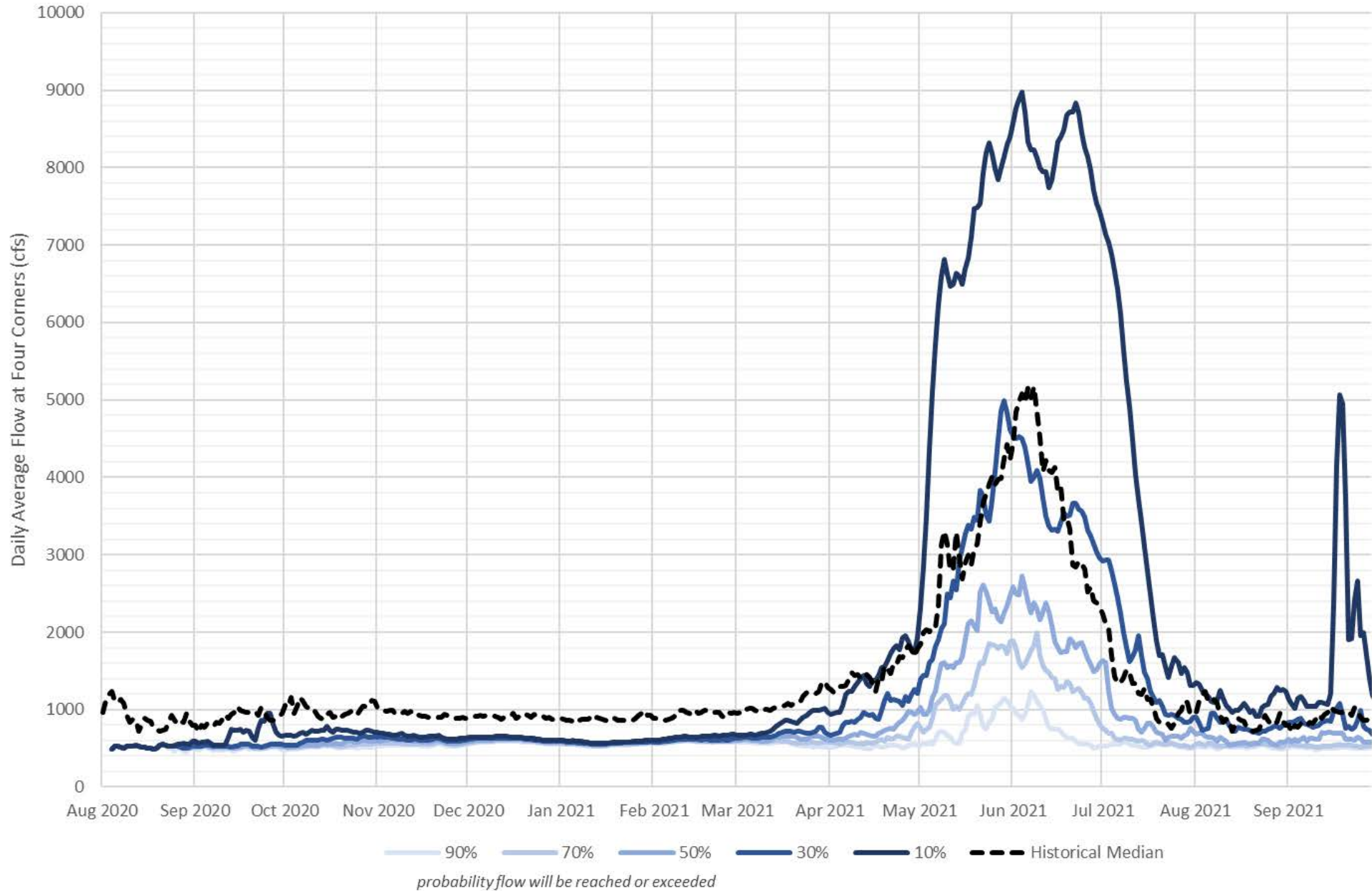
Navajo Pool Elevation Probabilities through WY 2021



Navajo Release Probabilities through WY 2021



Flows by Exceedance Probability at Four Corners through WY 2021



Summary

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Useful Links

Reclamation: www.usbr.gov/uc

USGS: water.usgs.gov/nwis

CBRFC: cbrfc.noaa.gov