

**BUREAU OF RECLAMATION**  
**NAVAJO RESERVOIR COORDINATION MEETING**  
**August 23<sup>rd</sup>, 2022**  
**SUMMARY**

Dear Interested Party:

Enclosed is a summary of our August 23<sup>rd</sup>, 2022 meeting to coordinate Bureau of Reclamation's (Reclamation) operation of the Navajo Unit. The meeting was held simultaneously in-person at the Farmington Civic Center, and via WebEx Video conferencing.

Summary points of the meeting:

- Drought conditions have improved in the Four Corners since this time last year but drought still persists and is still D1 and D2 in the mountain regions and at a D3 level in the downstream parts of the basin.
- Monsoonal precipitation has improved soil moisture conditions and has had some positive impacts to reservoir storage levels. Flash flooding and high sediment loads have occurred multiple times in the San Juan River Basin from June to August.
- April-July runoff in WY 2022 totaled 382 kaf at Navajo Reservoir, which is 61% of average.
- No SJRIP-prescribed Spring Peak Release was conducted in WY 2022. Releases were made to maintain the minimum SJRIP-recommended target baseflow in the critical habitat reach. Releases were reduced when possible to save water during rain events. Summer releases have ranged from 300 cfs to 800 cfs.
- No projected shortage to contracted water users in WY 2022
- Projected End of Water Year Storage ranges from 830 kaf live/204 kaf active (6016 ft, 50% full) to 970 kaf live/344 kaf active (6031 ft, 59% full) with a median projection of 875 kaf live/249 active (6021 ft, 53% full)

Copies of the material presented, and past meeting notes are available online at:

<http://www.usbr.gov/uc/water/crsp/cs/nvd.html>

If you have any suggestions on improving the operation meetings or the summaries of the meetings, please let us know.

**Next meeting date: Tuesday, January 17<sup>th</sup>, 2023 at 1:00 PM. This meeting is currently planned to be held in-person at the Farmington Civic Center, in Farmington, NM with a video and/or phone option for those who would like to attend virtually. This is subject to change based on the situation at the time. Please contact [sbehery@usbr.gov](mailto:sbehery@usbr.gov) for questions or updates. A notice will be sent out in December with meeting updates and details.**

## NAVAJO UNIT OPERATIONS MEETING

August 23<sup>rd</sup>, 2022

**Participation:** This meeting was held virtually via Microsoft Teams. The attendance list is attached.

**Purpose of Meeting:** The purpose of these meetings, held annually in January, April, and August, is to gather input for determining upcoming operations for Navajo Reservoir. This input is used in Reclamation's development of an overall 24-month study for operation of Reclamation projects in the Upper Colorado River Basin, which includes plans for Glen Canyon, Flaming Gorge, Aspinall Unit and Navajo. Input from individuals, organizations, and agencies, along with other factors such as weather, water rights, endangered species requirements, flood control, hydro power, recreation, fish and wildlife management, and reservoir levels, will be considered in the development of these reservoir operation plans. In addition, the meetings are used to coordinate activities and exchange information among agencies, water users, and other interested parties concerning the San Juan River and Navajo Reservoir.

### **Weather Summary and Outlook**

*Aldis Strautins, National Weather Service, Grand Junction*

**Precipitation and Temperature:** Water year 2022 began in October of 2021. The temperatures on average over the water year have been 1-2 degrees above normal in the Four Corners.

It was a dry fall for three quarters of the western slope going into the winter season. Water year precipitation through the end of December was very wet, with a large storm system during the holiday season. After January 1<sup>st</sup>, things really dried out with only a couple of large storm events keeping the snowpack up and long spells of dry weather. Then towards the end of June, monsoonal events picked up, bringing well above average moisture to much of the UC basin, including the Four Corners region. August has not produced as much precipitation as June and July did in this basin, but it has still been active especially on the western and southwestern parts of the basin.

**SNOTEL precipitation:** Cumulative precipitation plots from SNOTEL stations illustrated the nature of our storm systems this year. A large December storm, a February storm, and a smaller March storm were the primary drivers of our snowpack levels, with long stretches of dry weather in between. Then precipitation accumulated in earnest after late July from rainstorms.

**Drought:** Despite the rain, the Four Corners is still in drought conditions, though less severe than this time last year. Drought conditions have lessened in a push from east to west, though some D3 still remains in the western part of the Four Corners.

**ENSO:** We are in our second year of La Nina, with a likelihood of La Nina continuing through this winter, and possibly transitioning to Neutral next spring. This will be the third sequential La Nina, and there are very few historical analogs to guide us. La Nina typically results in a dry weather pattern for the southwest US and a wetter pattern for the Northwest US.

Weather Outlook: CPC is showing potential for slightly above average precip and temperatures over the next 6-10 days, and same for 8-14 days. The September outlook shows continuation of monsoonal pattern in Arizona, and some of that moisture may be able to make its way up to the Four Corners region. The likelihood is high for above average temperatures in September.

Unfortunately, the 3-month outlook (September – November) is for below-average precip and above average temperatures. The seasonal outlook through January is similar, with below-average precip and above average temperatures over the southwest, consistent with a La Nina pattern.

### **Streamflow Summary and Outlook**

*Ashley Nielson, Colorado Basin River Forecast Center, Salt Lake City*

Water Year 2022 Conditions Summary: Overall the San Juan River above Navajo Reservoir during the snow accumulation season averaged 90% of average. However, this average was calculated with highs and lows on a monthly basis. November precipitation was 10% of average while December precipitation was 230% of average.

Similarly, spring and summer precipitation continued with drastic ups and downs, with May precip coming in at 15% of average and June with 450% of average, though it was noted that June is typically our driest year, so the percent of average number can be high with very little precipitation. April and May precipitation this year was in the bottom 5-10 years on record while June to July precipitation was amongst the top 5 years on record.

Peak Snow Water Equivalent (SWE) was below normal over the majority of the basin and near normal above Navajo. SWE peaked early and melted out extremely early this year. Accelerated melt rates were due to warm temperatures, minimal precipitation, and above normal dust. Melt out occurred very early this year, 3-4 weeks earlier than normal.

Baseflow conditions were normal to below-normal prior to spring runoff. Runoff peaks were 3-4 weeks early and below normal in magnitude. Following the spring runoff peaks, there was a rapid decline to much below normal flows during the normal time of peak spring flows. June and July rain increased the flows again back to near or even above normal.

2022 April-July Observed Volumes: Runoff volume totals ranged from 50-70% of average in the San Juan River Basin. Navajo Reservoir inflow was 61% of average. Forecasts decreased from May to June due to the much below normal precipitation. Above normal June and July precipitation resulted in an increase to the forecast. The wet conditions in June and July helped to avoid what could have been a much worse water supply outcome given another warm and dry spring with significant dust conditions.

2022 Water Supply Forecast Performance: Forecast errors fell into the normal range of errors for January-May forecasts for most forecast points in the San Juan River Basin. The Animas-Durango forecast point errors were slightly outside of normal error but were still reasonably handled by the model. The June forecast error was higher than normal due to the above normal

precipitation. The observed April-July volumes would most likely have been near or below the 90% forecast if June and July precipitation had been near normal. The model's soil moisture and snow states seemed to be well represented. Model handled the above average dust conditions.

Current Conditions and Outlooks: Month to date precipitation in August is looking great for the Colorado River Basin as a whole, especially the southwest portion of the basin. Unfortunately the San Juan River Basin doesn't seem to be getting as much of that precipitation this month. The western half the basin has seen 110-150% of average precipitation, but the eastern half of the basin is still below normal, anywhere from 50% to 90% of average. Soil moisture conditions have improved since last year, with soil moisture between 50% and 110% of normal in the basin. Soil moisture conditions are a snapshot in time, and are provisional. CBRFC's soil moisture analysis to set up the next water year forecasts does not occur until November.

### **Operations in WY 2022 so far and Current Conditions in the Basin**

*Susan Behery, Reclamation*

Throughout most of the fall and winter, Navajo released more than the inflow, losing approximately six feet of elevation from October to March. The reservoir elevation peaked on May 24<sup>th</sup> at 6029.43 feet, 58% of live and 32% of active storage.

The release over most of the spring and summer ranged between 300 cfs and 800 cfs, and was the minimum required to maintain the minimum target baseflow (TBF) in the critical habitat reach. The TBF goal range is between 500 cfs and 1,000 cfs on average along the USGS gages from Farmington, NM to Bluff, UT.

The final April-July inflow volumes were as follows:

Navajo: 381 kaf (60% avg)  
Vallecito: 125 kaf (71% avg)  
Lemon: 32 kaf (67% avg)  
Animas: 230 kaf (60% avg)  
McPhee: 144 kaf (56% avg)  
Powell: 3,750 kaf (59% avg)  
*\*1991 –2020 average*

Precipitation described by the CBRFC and NWS presentations were beneficial to storage at Navajo with increased inflow but also by allowing for reduced releases required to maintain the TBF. Reservoir elevation is approximately 8 feet lower today than it was this time last year. Storage is approximately 120 kaf less than it was this time last year.

Monsoonal events between June and August were intense, leading to flashing floods throughout the San Juan River. Flows between the dam and Farmington exceeded 3,000 cfs during at least six distinct storm events, and exceeded 5,000 cfs during three of those storm events. These storms also brought sediment loads into the river channel that have caused numerous safety as well as maintenance issues.

Around the basin, storage levels are as follows: McPhee is at 53% live storage, Lake Nighthorse is at 99% live storage, Lemon is at 36% live storage, Vallecito is at 50% live storage, Jackson Gulch is at 68% live storage, and Navajo is at 55% live storage (27% of active storage).

Looking at the larger Upper Colorado River Basin, Blue Mesa is at 42% live storage, Flaming Gorge is at 75% live storage, and Lake Powell is at 26% live storage.

### **Proposed Operations for remainder of WY 2022 and WY 2023**

Based on operational projections from the inflow forecasts, we expect the release at Navajo to remain between 250 cfs and 850 cfs, depending on irrigation and runoff timing. Pursuant to the Record of Decision (2006), fall and winter releases may be reduced to as low as 250 cfs to conserve water as long as environmental commitments can be maintained at that level.

The currently projected end of water year (Sept 30th, 2022) elevations range from 6015 ft to 6031 ft with a median projection of 6022 ft. If rain continues, we should expect the higher end, if the rains cease and we start getting hot dry weather, expect the lower end of that range.

Projections for runoff in WY 2023 are currently based on current conditions and statistical historical calculations. Based on where we are sitting currently in the basin, and drawing on the last 30 years of snowpack and hydrology, we have a 25% chance of being able to conduct a SJRIP-recommended spring peak release in the spring of 2023. Conversely, we have a 7% chance of seeing a shortage, if we have snowpack years similar to 2002 or 2018. The median projection in 2023 is for no spring peak release and an end of year reservoir elevation of 6045 ft.

Currently there are no plans for releasing water from Navajo to Lake Powell for the purposes of the Drought Response Operations Plan (DROA). DROA plans for Navajo will be revisited during Water Year 2023.

### **Agency Updates**

San Juan River Recovery Implementation Program (SJRIP):

- The FY2023 workplan was recently approved.
- The website has been recently renovated and has a lot of great information in it: <https://coloradoriverrecovery.org/sj/>.
- The program partners are currently crafting the post-2023 plans, stay tuned.
- The next Biology Committee meeting is scheduled for December 6-8 and will be a hybrid meeting.
- The winter Biology Committee meeting is scheduled for February 21-23.
- The joint San Juan-Upper Colorado recovery program's Researchers meeting will be on January 31-Feb 1, and will be in Moab or Grand Junction.

New Mexico Office of the State Engineer (NMOSE): Hiring a Tech 2 position and Assistant Water Master.

Bloomfield Irrigation Ditch (BID): The recent storms caused a 2-week shutdown. Every time it rains since sediment is a continuous issue. The reservoir water is silty and full of sediment.

Navajo Agricultural Products Incorporated (NAPI): Diversions from Navajo to NIIP- shutting the gate October 14<sup>th</sup>.

New Mexico Interstate Stream Commission (NMISC): The Upper Division States are going to send a letter to Commissioner of Reclamation Camille Touton in the next few days to propose a meeting in early September to initiate the early DROA process that is a part of the Upper Basin's 5 Point Plan to respond to the Commissioner's challenge to find 2 to 4 million acre-feet of additional water this year.

Center for Snow and Avalanche Studies: Our season summary for this past winter is available at [codos.org](http://codos.org)

### **Attendance List – August 23<sup>rd</sup>, 2022 Navajo Operations Meeting**

Christina Noftsker	NMISC
Steve Austin	Navajo Nation EPA
Lionel Haskie	NAPI
Helen Sobien	NMISC
Trevor Birt	NMOSE
Jeanette Joe	NAPI
Ali Effati	NMISC
Jenny Dumas	Jicarilla Apache Nation
Colleen Cunningham	NMISC
Dex Lewis	Reclamation
Lee Traynham	Reclamation
Michele Truby Tillen	San Juan County
Scott Durst	FWS, SJRIP
Renae Pablo	NAPI
Ed Warner	Reclamation
Susan Behery	Reclamation
Kathi Smith	Hammond Conservancy District
Adrienne Soder	Arizona Public Service
Dominique Work	NMISC
Jeff Derry	Center for Snow and Avalanche Studies
John Critchfield	William J. Miller Engineers, Inc
Joe Trungale	TNC
Bart Deming	Reclamation
Nabil Shafike	US Army Corps of Engineers
Aaron Chavez	San Juan Water Commission

Robb Carter	Navajo State Park
Jim Dumont	Senator Martin Heinrich's Office
Melissa Mata	San Juan River Recovery Implementation Program
Erik Knight	Reclamation
Tyrell Lee	NAPI
Tom Chart	Water Users rep to the SJRIP Biology Committee
Roselyn Yazzie	NAPI
Carrie Padgett	SWWCD
Clayton Johnston	Turley Manzanares
Robert Wormuth	Turley Manzanares
Scott Miller	APS
Shawn Williams	NMOSE
Ryan Seamus Royer	Reclamation
Ashley Nielson	CBRFC
Linda Corwin	Bloomfield, NM
Dawn Knuppel	San Juan County
Joe Razor	Land Owner
Julie Razor	Land Owner
Evelyn Archuleta	No affiliation
Mike Mestas	San Juan County
Stacy Dodd	Bloomfield Irrigation District
Elizabeth Serrano	Bloomfield Irrigation District
Andrew Sova	City of Farmington
Norman Norvelle	SJWG Steering Committee/Retired NMED Environmental Specialist

