

# **BUREAU OF RECLAMATION NAVAJO UNIT FORECAST FOR OPERATIONS WATER YEAR 2021**

**Sent Via Email  
August 18, 2020**

In response to the recommendations from the CDC, local authorities, and Department of Interior guidance, the August Navajo Unit Coordination meeting has been canceled.

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.

A forecast and operational plan summary follows below. In keeping with the spirit and purpose of this meeting as a time for coordination, we request that you provide any updates you may want to share that would be relevant to this audience from your organization or agency, and they will be added to this document, which is posted to our website. As always, you are welcome to contact us directly if you have any questions or comments on the hydrologic conditions, inflow forecast or operation plan. We regret that we are unable to hold this meeting in-person. If the situation persists through January, we plan to convert the next meeting to an all-webinar format.

If you have questions, please call Susan Behery at 970-385-6560, or email [sbehery@usbr.gov](mailto:sbehery@usbr.gov). Visit the Navajo Dam website at <https://www.usbr.gov/uc/water/crsp/cs/nvd.html> for operational updates.

## **Review of Water Year 2020 Operations**

The release at the beginning of October was 600 cfs. By early November, the release was decreased to 300 cfs for a period of time to allow baseflows in the critical habitat to drop to their minimum of 500 cfs. During this time some instream work was performed by a variety of entities who required low flows. The release was increased back to 600 cfs after the work was completed in mid-November. Navajo has been slowly losing storage over the winter, as is typical. The reservoir began the water year (October 1st, 2019) at 6063.0 ft (1,386,548 af live storage). This is 43 feet higher than the reservoir elevation at the start of the previous water year.

Despite the long and late spring runoff season last year, summer and fall baseflows in the basin were average to below-average.

Releases are made to target the San Juan River Basin Recovery Implementation Program's (SJRIP) recommended target base flow of between 500 cfs and 1,000 cfs through the critical habitat area. The target base flow is calculated as the weekly average of gaged flows throughout the critical habitat area (Farmington to Lake Powell).

Snowpack peaked at 95% of average with 19.1 inches of SWE on average over the basin. The total April through July runoff into Navajo Reservoir was 347 kaf, or 47% of average. Very dry soils and a dry spring contributed to the below-average runoff. Snowmelt was early, rapid, and efficient. Rain in late May and early June kept flows elevated longer than expected.

There was no spring peak release at Navajo in WY 2020. The release through the summer has been made to maintain the minimum target baseflow and has ranged between 500 cfs and 1,000 cfs. The reservoir peaked at 6062.7 ft on June 9<sup>th</sup>.

Flows decreased rapidly after mid-June to much-below average conditions. The monsoons have been minimal so far, only one precipitation event in late July impacted flows in the basin. Hot and dry conditions have prevailed for most of the summer. Monsoon surges are still possible through September.

### **Current Conditions and Operations for remainder of WY 2020**

Reservoirs in the San Juan River Basin are all at below average storage levels for this time of year. Navajo Reservoir is 73% full, or 56% of active storage. Other area reservoirs are as follows: Vallecito, 55% full; Lemon, 29% full; Nighthorse, 95% full; McPhee, 56% full (26% of active), and Jackson, 31% full.

The release from Navajo is expected to continue running relatively high, between 800 and 1,100 cfs through the end of the water year to maintain the target baseflow, due to the hot and dry conditions throughout the basin. As of August 17<sup>th</sup>, inflows to the reservoir at 220 cfs, and the release is at 1,000 cfs. The Animas at Farmington gage is reading 30 cfs. The flows at Four Corners are just holding at 500 cfs. NIIP diversions have averaged 690 cfs over the last week.

The current ridge over the west is expected to stay in place through Monday August 25<sup>th</sup>. After that, limited moisture will enter the ridge producing some isolated showers and thunderstorms. One model indicates the possibility of a system moving over the northern Rockies late next week. That event is too far out for any confidence yet.

As irrigation tapers off, the release will be reduced. The reservoir is expected to end the water year near 6041 ft.

### **Water Year 2021 Weather and Hydrologic Forecast**

Aldis Strautins of the NWS and Ashley Nielson of the CBRFC provided flow and forecast updates for this report.

Hot and dry conditions are expected to continue overall moving into the fall. There are some early indications of a large ridge setting up over the Western US in late fall and early winter. If this happens it could reduce precipitation over southwest Colorado.

The latest ESNO prediction has most models indicating La Niña conditions developing by fall with a 55-60% chance of La Niña conditions during winter of 2020-2021. While historically, the impacts of La Niña are mixed in the San Juan River Basin, there is some tendency towards below average runoff volumes in La Niña years. Coupled with the previously mentioned large ridge over Western US that is projected this fall, a below average winter seems likely for the San Juan River Basin.

The runoff forecast for WY 2021 currently casts a wide net, but skews towards a below-average year. The latest long-range runoff forecast for next year ranges from 42% of average to 130% of average. The median forecast is for 80% of average runoff into Navajo Reservoir.

### **Water Year 2021 Forecast Operations**

Based on the projections for a potentially dry year, coupled with the below-average carryover storage, releases from Navajo Dam this fall and winter will likely be the minimum necessary to maintain the target baseflows in the critical habitat reach. Releases could be as low as 250 cfs this winter if that flow satisfies the flow goals downstream.

With the latest inflow forecast, there is 30% chance of a spring peak release from Navajo Dam in the spring of 2021. The median projection for peak pool elevation in the spring is 6060 ft. The end of water year 2021 water surface elevation projections are as low as 6005 ft and as high as 6063 ft. The median projection is for an end of water year storage at an elevation of 6055 ft at the end of WY2021.

### **Updates from other entities:**

NIIP: Planning to close the Navajo Dam Headwork gates for the season on October 12<sup>th</sup>.

SJRIP: Because of COVID related travel restrictions most field work on the San Juan River has not happened in 2020. Larval monitoring has occurred over a truncated portion of the river. Plan are set for small-bodied monitoring to occur in September. This is important because of the expectation of wild razorback sucker recruitment given the low flow year. The Demographic Monitoring trips are still up in the air, but UDWR is looking to salvage some effort with work in the lower canyon. All stockings for razorbacks and pikeminnow planned in the San Juan River have permission from the Navajo Nation to proceed. The FY2021 workplan was recently approved and discussions are on-going for funding the SJRIP post-2023 The end of year BC meeting will occur via conference call/webinar.

Please see attached slides for more information and feel free to call for more information.

Please feel free to call or email (sbehery@usbr.gov, 970-385-6560) with questions and updates to operations plans. I will be doing my best to keep the Navajo Unit website updated with current status. <https://www.usbr.gov/uc/water/crsp/cs/nvd.html>

**The next coordination meeting is planned for January, either in-person or in webinar format, pending local restrictions and conditions at the time. A notice will be sent out when this meeting is scheduled.**