

BUREAU OF RECLAMATION
NAVAJO RESERVOIR COORDINATION MEETING
August 22, 2023
SUMMARY

Dear Interested Party:

Enclosed is a summary of our August 22nd, 2023 meeting to coordinate Bureau of Reclamation's (Reclamation) operation of the Navajo Unit. The meeting was virtually via Microsoft Teams video and by phone.

Summary points of the meeting:

- WY 2023 April-July runoff was well above average throughout the San Juan River Basin. Navajo Modified Unregulated Inflow totaled 1,028 kaf which was 163% of average.
- The current elevation is 6053.85 ft with a live storage of 1,216 kaf (74% full) and an active storage of 590 kaf (58% full). This is 94% of average for this time of year.
- A spring peak release was conducted that totaled 257 kaf over base, accomplishing three of four ESA goals.
- Summer and early Fall releases will likely range between 500 and 800 cfs during irrigation, subject to weather at the time. Late fall and winter releases will be lowered likely near 300 cfs as long as the downstream target baseflow can be satisfied.
- The current outlook for WY 2024 is wide, ranging from 51% of average to 165% of average.

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 16th, 2024 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 for questions or updates.

NAVAJO UNIT OPERATIONS MEETING

August 22, 2023

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.

Current Conditions – Susan Behery, Reclamation

The elevation as of meeting time is 6053.8 feet with live storage of 1,216 kaf (74% full) and active storage of 590 kaf (58% full). This is 94% of average for this time of year.

Around the basin, reservoirs are at or near their statistical average for this time of year. McPhee is 88% full with a live storage of 337.1 kaf. Lemon is 64% full with a live storage of 25.6 kaf. Vallecito is 72% full with a live storage of 89.8 kaf. Jackson Gulch is 70% full with a live storage of 10 kaf.

Lake Nighthorse is 99% full with a live storage of 113.6 kaf. Lake Nighthorse was filled this year with the Durango Pumping Plant from the Animas River in June. Ample natural hydrology filled much of the reservoir on its own through Basin Creek.

Lake Powell is currently 39% full with a live storage of 8,993 kaf. Most reservoirs in the Upper Colorado Basin are at or near average.

Water Year (WY) 2023 Runoff Review – Ashley Nielson, Colorado Basin River Forecast Center (CBRFC)

Snow in March was significant, with 225% of average in the Animas River Basin and 230% of average in the basin above Navajo. Temperatures were much cooler than average, which helped hold on to the snowpack throughout this month.

April was a dry month but still much below average temperatures. By May, temperatures were near average, but precipitation was still generally below average. June was another cool month with above average precip.

Peak snow water equivalent (SWE) was well above average. In the CBRFC Models, peak SWE was above normal at all elevations. The timing of the peak was near normal above 9500 feet, and late below 9500 feet. Melt out was delayed at all elevations.

The forecast increased from March to April due to much above normal precipitation and below normal temperatures in March. An adjustment to the modeled snow was made in Mid-April resulting in another forecast increase between April and May. The forecast remained steady after May. Final April-July observed Modified Unregulated Inflow into Navajo Reservoir was 1,030 kaf (163% of average).

2023 Forecast error fell into the normal range of errors for the April-June forecasts. January-March forecast errors were higher than normal and fell outside of the min/max forecast range due to March precipitation being in the top 10th percentile. Gages are less reliable in large snow years, so the model did not capture all the March precipitation. The model snow update in mid-April described above accounted for this and put the forecast back on track.

Unsettled spring weather with periods of above and below normal temperatures, cloud cover, and sporadic precipitation produced an extended period of high flows rather than a single well-defined peak. This resulted in the early season peak flow forecasts that assume “normal” spring weather to over forecast the peak flow.

So far in July and August as of this meeting date we are seeing well-below average precipitation. After a longer than normal runoff period, streamflows are dropping back to normal and close to below normal flows for this time of year. The monsoon has been delayed so far this year. Upcoming weather may change that.

For questions, contact Ashley Nielson:

Email: ashley.nielson@noaa.gov

Phone: 801-524-5130 x333

Or for the daily Operational Hydrologist

Available 7 days a week: 6:30am-4pm

Email: cbrfc.operations@noaa.gov

Phone: 801-524-4004

WY 2023 Operations Review – Susan Behery, Reclamation

The elevation on October 1, 2022 (start of the water year), the elevation was 6020.56 ft. The reservoir reached a peak elevation this spring at 6063.8 feet. Over irrigation season that elevation has dropped slowly to its current level of 6053.85 ft. It is expected that by the end of this water year the reservoir will have an overall storage increase of 30 ft over the last water year.

The maximum daily average inflow into the reservoir occurred this May and was 8,882 cfs. The maximum daily average release was 4,500 cfs (with a maximum instantaneous release of 4,600 cfs).

So far this year the Navajo Indian Irrigation Project (NIIP) has diverted 158 kaf and the San Juan-Chama Project has diverted 144 kaf.

Throughout the year, the minimum SJRIP-recommended target baseflow (TBF) has been maintained at 500 cfs in the critical habitat reach.

Spring Peak Release 2023

The Navajo Dam Record of Decision (ROD, 2006) states that the Navajo Dam will be operated to meet Endangered Species Act (ESA) related Flow Recommendations for the San Juan River or a reasonable alternative to those recommendations, in a manner which enables both current and future water depletions to proceed in compliance with the ESA. The 2018 SJRIP Flow Recommendations Update presents a decision tree that is used as a guide to aid in determining annually if there is water available for a spring peak release. The final volume, shape, and timing is subject to conditions at the time of the release.

This spring the spring peak release began in May and concluded in late June. The peak of the release was 4,600 cfs, but the peak was held at 4,300 cfs. The goals for the release were to move sediment in the channel, make room for incoming inflows, and to fulfill the ROD as written. The SJRIP's recommended flow goals were met as follows:

At the San Juan River at Four Corners

- At least 10 days at 2,500 cfs – this goal was met with a total of 74 days
- At least 21 days at 5,000 cfs – this goal was met with a total of 38 days
- At least 10 days at 8,000 cfs – this goal was met with a total of 12 days
- At least 5 days at 10,000 cfs – this goal was not met, there were 0 days at 10,000 cfs

It is important to note that the Animas had five peaks, lowering the potential peak flow. The 10,000 cfs flow goal would not have been able to be met under any operation from the dam.

On June 13, the peak of the SJRIP-recommended portion of the spring peak release concluded. At this point, The Nature Conservancy (TNC) and New Mexico Interstate Stream Commission (NMISC) requested that the water they had subleased from the Jicarilla Apache Nation (JAN) be released as a 48-hour high flow event. From June 13 at 12:00 PM to June 15 at 12:00 PM, the release of 4,000 cfs occurred, with a total volume over base of 14.7 kaf.

After the JAN sublease release concluded, the release began ramping back down to the base release. The total spring peak release volume, including the JAN sublease, totaled 256.9 kaf.

Following spring operations, summer irrigation releases began. The release remained at 500 cfs through end of July. In early August the release was increased to offset irrigation losses and lack of precipitation in the critical habitat reach. So far the summer release and inflows have been at or worse than the Min Probable forecast.

Seasonal Weather Outlook – Erin Walter, National Weather Service (NWS)

The last 30 days in the basin have seen 2-4 degrees above normal temperatures for this time of year and average to just below average precipitation. A delayed monsoon has finally started arriving with some increased precipitation in the past week.

Soil moisture is drying out in the surface layer but is less dramatically dry in the lower layers, owing to a long runoff period. Soil moisture at all depths are still below average.

The single week of “no drought classification” for the State of Colorado lasted just about a week before D0 and D1 conditions started creeping back in. Currently much of the Colorado Basin is in D0 or D1 with a small area of D2 in Northwest New Mexico, including parts of San Juan County.

Temperatures are expected to cool off and precipitation is expected to pick up as remnants from storm systems to our south play out. A half inch to an inch is expected over the remainder of the week with potential systems in the coming days. CPC is showing a good chance of above average temperatures and slight chances for above average precipitation over the next 6-10 and 8-14 day periods. The September outlook shows a good chance for above average temperatures and equal chances for above or below average precipitation in September.

We are currently under an ENSO advisory, and its likely El Nino conditions will persist through fall and early winter. This designation does not have guaranteed results in terms of weather in our area. Often El Nino results in a cool wet southwest, but it depends on exactly where the jet stream sets up whether or not we will see those impacts in the San Juan Basin. Remember that 2022-2023 was a big snow year and it was a La Nina.

For questions contact Erin Walter:
email: erin.walter@noaa.gov
office phone: 970-256-9463
cell phone: 720-384-7792

WY 2023-2024 Planned Operations – Susan Behery, Reclamation

For the remainder of the summer, releases will most likely be between 500 cfs and 800 cfs, depending on weather. If things dry out dramatically, it's possible the release could go even higher. The fall and winter releases will likely drop to 300 or 350 cfs, depending on what is necessary to maintain the minimum target baseflow.

Based on current streamflow conditions, storage levels, and statistical outlooks based on 30 years of historical hydrology, runoff projections for WY 2024 range from 465 kaf (51% avg) – 1,500 kaf (165% avg) with a median projection of 845 kaf (93% avg). There is a 60% chance of having sufficient available water to conduct a spring peak release. There is a <3% chance of falling below 5990 ft (min active storage).

Maintenance Update – Susan Behery, Reclamation

Drilling work will be occurring this fall and winter and will last 3-6 months. You will see Reclamation personnel drilling on all sides and the crest as part of a data collection effort and ongoing study. During this time, roads 539 and 511 will be alternately closed (dates TBD). A notice will be sent out and posted to our website as plans and dates are finalized.

Updates and Reports from Agencies

San Juan River Recovery Implementation Program:

Upcoming Meetings:

- Coordination Committee (virtual) 1 September
- Biology Committee (Durango) 28-30 November
- Researchers Meeting (Grand Junction) 30-31 January

Contact Scott Durst scott_durst@fws.gov for more information.

New Mexico Interstate Stream Commission (NMISC):

First release of the NMISC and The Nature Conservancy's (TNC) subleased water from the Jicarilla Apache Nation (JAN) occurred this June during the spring peak release. This water was acquired with lease partners for the purposes of compact compliance and species management. The release in June was for species management. There is just over 5 kaf remaining of that subleased volume. Post-release analysis is ongoing with relevant parties.

Crop surveys will be taking place next week. Expect NMISC engineering vehicles in fields all around San Juan County.

San Juan Watershed Group:

Watershed based plan for Navajo Dam to Hogback. Meetings are 3rd Monday of each month in Aztec at the San Juan Soil and Water Conservation District (SJSWCD) office in Aztec. Contact SJSWCD or Ed Bulloch hedward@bullochgallery.com for more information

Links

- Navajo Project Notices: https://www.usbr.gov/uc/wcao/water/rsvrs/notice/nav_rel.html
- Navajo Monthly Forecast Update: <https://www.usbr.gov/uc/water/crsp/cs/nvd.html>
- Reclamation Colorado River Basin Facebook Page: <https://www.facebook.com/coloradoriverbasin>
- UC Water Operations Home: <https://www.usbr.gov/uc/water/index.html>
- DROA: <https://www.usbr.gov/dcp/droa.html>

Attendance:

Aaron Chavez	San Juan Water Commission
Andrew Strasser	William J. Miller Engineers, Inc
Ashley Nielson	CBRFC
Brandt Hart	BLM Utah River Ranger
Carrie Padgett	SWWCD
Chad Niehaus	BLM San Juan River Ranger
Christina Noftsker	NMISC
Clayton Johnston	Turley Manzanares
Colleen Cunningham	NMISC
Crystal Tulley-Cordova	Navajo Nation Department of Water Resources
Dex Lewis	Reclamation FCCO
Ed Bulloch	San Juan Watershed Group
Ed Warner	Reclamation
Elizabeth Serrano	Bloomfield Irrigation District
Erik Knight	Reclamation WCAO
Erin Walter	National Weather Service, Grand Junction
Ernie Rheume	Reclamation
Hank Adair	City of Farmington
Jamie Shockey	City of Farmington

Jason Sullivan	RSI
Jeanette Joe	NAPI
Jen Dumas	Jicarilla Apache Nation
Julie and Joe Rasor	Land Owners
Justyn Liff	Reclamation
Kathi Smith	Hammond Conservancy District
Lee Traynham	Reclamation
Les Larson	Hillside Irrigation District
Linda Corwin	Bloomfield, NM
Marc Miller	Reclamation WCAO
Michele Truby-Tillen	San Juan County
Mike Mestas	San Juan County
Moncef Tihami	Reclamation FCCO
Pam Norris	APS
Pauline Ellis	Fiver Rivers TU
Reece Carpenter	Bureau of Reclamation
Robert Kirk	Navajo Nation
Rochelle Brown	City of Farmington
Roland Becenti	BIA
Scott Durst	FWS, SJRIP
Scott Miller	APS
Shrestha Sanskriti	Keller-Bliesner Engineering
Stacy Dodd	Bloomfield Irrigation District
Susan Behery	Reclamation
Trevor Birt	NMISC